सत्यमेव जयते

Department of Science & Technology
Govt. of India

A Report on

DST(ICPS DIVISION) Sponsored Two Week Faculty Development Programme

On

"MACHINE LEARNING *in* SPEECH PROCESSING"

11 - 22 November, 2019

Organized by

Department of CSE

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE

(An Autonomous Institute under Kakatiya University, Warangal)

Opp : Yerragattugutta, Bheemaram (V), Hasanparthy (Mandal), WARANGAL - 506 015, Telangana State, INDIA.

काकतीय प्रौद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५ तेलंगाना राज्य, भारत

కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - 506 015. తెలంగాణ రాష్ట్రం, భారతదేశము

Estd : 1980
K I T S W

Tel: (870)2564888, Fax :(0870)2564320

Website: www.kitsw.ac.in

NAAC

NAAC-'A' Grade Accredited Institute (CGPA:3.21)

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

MHRD NIRF-2019

Rank-180

ABOUT WORKSHOP

This faculty development programme (FDP) is devoted to fundamental theory, recent developments and research outcomes addressing the related theoretical and practical aspects of Machine learning algorithms. Machine Learning describes algorithms for writing computer programs that automatically improve their performance with experience. Speech Processing is a scientific discipline as well as a technology frontier with immense applications. As a scientific discipline it has a long history and as a technology area it is intensively explored both by industry and academia. Research in speech processing has always involved machine learning. Current research is benefited from closer interaction between these fields and is continuously mining new ideas from ML.

DST Sponsored Two Week Faculty Development Programme On " MACHINE LEARNING in SPEECH PROCESSING " was hosted by Kakatiya Institute of Technology and Science, Warangal organized by Department of Computer Science and Engineering 11th to 22nd **November 2019**.

Objective of Program

The objective of the FDP is to contribute to the cross fertilization between the research on Machine Learning methods and their applications to Speech Processing.

Outcome of Program

This workshop covered the basic algorithm that helped to build and apply prediction functions with an emphasis on practical applications. This FDP gave technically competent in the basics and the fundamental concepts of Machine Learning such as:

- Understanding components of a Machine learning algorithm.
- Applying Machine learning tools to build and evaluate predictors.
- How Machine learning uses computer algorithms to search for patterns in data.
- How Machine learning is used in speech processing.

This FDP was helpful for all the domains of people related to Faculty, Research Scholars, PG and UG Students from the Departments of CSE, IT and related branches/disciplines in their further development.

Table of Contents

1. SANCTION LEETER

No. DST/ICPS/Training/ST/2019- AI
Government of India
Departments of Science & Technology
(ICPS Division)

Technology Bhavan
New Mehrauli Road
New Delhi - 110016
Date: 31.03.2019

Sanction Order

Subject: National level Training programmes: In-house Short term training/FDP Programmes for Faculty/UG/PG/Doctoral students of two weeks duration under ICPS Programme of DST.

Sanction of the President is hereby accorded to conduct National Level Training programmes: In-house Short term training/FDP Programmes for Faculty/UG/PG/Doctoral students of two weeks duration under ICPS Programme of DST @ Rs.9,00,000/- (Rupees Nine Lakh Only) per training programme by the following host Institutes/Universities as per Budget given below:

I. Uniform budget allocation and head of accounts applicable to all the sanctions programme:

II. The following are the Host Institutes/Universities:

S No	Budget Head (Training Program)	Amount in Lakh
1.	TA, Local Transport, Accommodation& Boarding Honorarium to out station invited subject experts and Participants	3.00
2.	Training Material and kit, soft copy, Books.	1.50
3.	Working Lunch, Two times Tea/Coffee, Snacks and Dinner for 30 Participants, Organising team and invited speakers for 10 days	2.50
4.	Miscellaneous	0.50
5.	Contingencies	0.50
6.	Certificate printing, Audio, Video etc.	0.50
7.	Institutional overheads	0.50
	Total (Rupees in lakh)	9.00

Topic : Artificial Intelligence(AI),Machine Learning(ML)and Deep Learning(DL):

S.N.	TPN Number & File Number PI & Affiliation with mobile number and Email Address	Approved Amount (in Lakh)	Present Release (in Lakh)	Balance Amount (in Lakh)
1	25638 DST/ICPS/SCST/2019/385, Ms. Swath J, PSG COLLEGE OF TECHNOLOGY POST BOX NO. 1611, PEELAMEDU, COIMBATORE PEELAMEDU Tamilnadu (641004) swath.js@gmail.com 9677771012 **(Government)**	9:00	9:00	Nil
2.	26301 DST/ICPS/SCST/2019/568 Dr. VIJAYAKUMAR MANUPATI NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL , KAZIPET Warangal Telangana (506004) manupati.vijay@nitw.ac.in 9775627564**(Central Government)**	9:00	9:00	Nil
3.	26359 DST/ICPS/SCST/2019/580 Mr. GAURAV MEENA CENTRAL UNIVERSITY OF RAJASTHAN NH-8, Bandar Sindri, Dist-Ajmer, Rajasthan Bandar Sindri Rajasthan (305817)	9:00	9:00	Nil

19/3/19

	gaurav.meena@curaj.ac.in 8107560099 **(Government)**			
4.	26524 DST/ICPS/SCST/2019/281 Dr. Priyanka Dhurvey MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY BHOPAL Link Road Number 3, Near Kali Mata Mandir, Bhopal Madhya Pradesh(462003) pdhurvey@gmail.com 9826364187 **(Government)**	9.00	9:00	Nil
5	26561 , DST/ICPS/SCST/2019/440, Mr. DEVULAL BHUKYA , VNR VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY BACHUPAKKY (VIA)KUKATPALLY Hyderabad Telangana (500090) devulal_b@vnrvjiet.in 9032672362 **(Private)**	9.00	9:00	Nil
6	26650 DST/ICPS/SCST/2019/406, Mr. B SRINIVAS , KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE Near Yerragattu Hillock, Bheemaram (vil), Hasanparthy (Mandal), Warangal. URBAN Telangana (506015) srinu1032@gmail.com ,9989321422 **(Private)**	9.00	9:00	Nil
7	26700 DST/ICPS/SCST/2019/360 , Dr. JARABALA RANGA RAMACHANDRA COLLEGE OF ENGINEERING NH5, Vatluru (V), Eluru Eluru rural Andhra Pradesh (534007) jarabalaranga@gmail.com 9441676834 **(Private)**	9.00	9:00	Nil
8	26705 DST/ICPS/SCST/2019/348 , Dr. Nagaraju Naik , CMR COLLEGE OF ENGINEERING AND TECHNOLOGY KANDLAKOYA,MEDCHAL ROAD,HYDERABAD MEDCHAL Telangana (501401) nagarajunaik1976@cmrcet.org 9441809595 **(Private)**	9.00	9:00	Nil
9	26794 DST/ICPS/SCST/2019/55 , Dr. RAVI KUMAR JATOTH , NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL NIT WARANGAL, KAZIPET Warangal Telangana(506004) jrk.nitw@gmail.com 8332969363 **(Government)**	9.00	9:00	Nil
10	26861 DST/ICPS/SCST/2019/127 , Dr. Korra Sathya Babu, NIT ROURKELA National Institute of Technology, Rourkela, Odisha, 769008 prof.ksb@gmail.com 9439432489 **(Government)**	9.00	9:00	Nil
11	26925 DST/ICPS/SCST/2019/101 , Ms. BADVATH DHANA LAXMI ,	9.00	9:00	Nil

31/8/19

7. A Utilization Certificate and Statement of Expenditure will be submitted to DST immediately after completion of the Training programmes : in-house Short term training/FDP Programmes for Faculty/UG/PG/Doctoral Students of two weeks duration

8. Host Institute will be provided Terms of Reference (ToR) and broad programme structure in due course of time.

9. This sanction issues in exercise of the powers conferred on this Department and in consultation with the IFD vide their **Concurrence Dy. No. C/6515/IFD/2018-19 dated 29.03.2019.**

10. It has been entered at **Sl. No.** 119 in the Register of Grants (2018-19).

(K R Murali Mohan)
Scientist-G 31/3/19

To

The Pay and Accounts Officer,
DST, New Delhi.

Copy forwarded for information and necessary action to:

1. The Director of Audit (CW & M-II), Indraprastha Estate, AGCR Building, New Delhi.
2. The Drawing and Disbursing Officer, DST with one spare copy, for making necessary payment to Grantee.
3. IF Division, DST, New Delhi.
4. Ms. Swath J, PSG College Of Technology Post Box No. 1611,peelamedu,coimbatore Peelamedu Tamilnadu (641004)
5. Principal, PSG College Of Technology Post Box No. 1611,peelamedu,coimbatore Peelamedu Tamilnadu (641004)
6. Dr. Vijayakumar Manupati, National Institute Of Technology Warangal, Kazipet Warangal Telangana (506004)
7. Registrar, National Institute Of Technology Warangal, Kazipet Warangal Telangana (506004)
8. Mr. Gaurav Meena, Central University Of Rajasthan NH-8, Bandar Sindri, Dist-ajmer, Bandar Sindri ,Rajasthan (305817)
9. Registrar, Central University Of Rajasthan NH-8, Bandar Sindri, Dist-ajmer, Bandar Sindri ,Rajasthan (305817)
10. Dr. Priyanka Dhurvey, Maulana Azad National Institute Of Technology Bhopal Link Road Number 3,near Kali Mata Mandir, Bhopal Madhya Pradesh (462003)
11. Registrar, Maulana Azad National Institute Of Technology Bhopal Link Road Number 3,near Kali Mata Mandir, Bhopal Madhya Pradesh (462003)
12. Mr. DEVULAL BHUKYA,VNR Vignana Jyothi institute of engineering and technology bachupakky (via) kukatpally Hyderabad Telangana (500090)
13. Registrar, VNR Vignana, Institute Of Engineering Technology, Jyothi Institute Of Engineering And Technology Bachupakky (via) kukatpally Hyderabad Telangana (500090)
14. Mr. B Srinivas ,Kakatiya Institute Of Technology And Science Near Yerragattu Hillock, Bheemaram (vil), Hasanparthy (mandal), Warangal Urban Telangana (506015)
15. Principal, Kakatiya Institute Of Technology And Science Near Yerragattu Hillock, Bheemaram (vil), Hasanparthy (mandal), Warangal Urban Telangana (506015)
16. Dr. JARABALA, Ranga Ramachandra College Of Engineering Nh5, Vatluru (V), Eluru rural Andhra Pradesh(534007)
17. Registrar, Ramachandra College Of Engineering Nh5, Vatluru (V), Eluru rural Andhra Pradesh(534007)
18. Dr. Nagaraju Naik , CMR college of engineering and technology kandlakoya, medchal road,hyderabad medchal telangana (501401)
19. Principal, CMR College of engineering and technology kandlakoya ,medchal road, hyderabad medchal Telangana (501401)
20. Dr. Ravi Kumar Jatoth ,National Institute Of Technology Warangal , Kazipet Warangal Telangana (506004).
21. Registrar, National Institute Of Technology Warangal , Kazipet Warangal Telangana (506004)
22. Dr. Korra Sathya Babu, NIT Rourkela National Institute of Technology Rourkela, Odisha, India, 769008 Rourkela Orissa(769008)
23. Director, NIT Rourkela National Institute of Technology Rourkela, Odisha, India, 769008 Rourkela Orissa(769008)

2. BROUCHER

REGISTRATION FORM:

Name:_____

Designation:_____

College:_____

_____

Branch:_____

Address:_____

_____

Phone:_____

E-Mail:_____

Accommodation required: Yes/No:_____

Registration Fee: NIL

Category: Academic/Industry/Others

Participant's Signature:

Date:

Place:

Signature of Head of Institution
Sponsoring Authority
(With Date and Seal)

Chief Patron

Sri Capt. V. LAKSHMIKANTHA RAO

Honorable M.P (Rajya Sabha)
Secretary & Correspondent

Patron

Sri P. NARAYANA REDDY

Treasurer, KITSW

Chairman

Dr. K. ASHOKA REDDY

Principal

Convener

Dr. P. NIRANJAN

Professor & Head, Department of CSE

Coordinator

Sri B. SRINIVAS

Assistant Professor

Organizing Committee Members

Dr. V. Shankar, Professor
Sri. S. Naga Raju, Associate Professor
Sri. C. Srinivas, Associate Professor
Sri. S. Venkatramulu, Associate Professor
Sri. V. Chandra Sekhar Rao, Associate Professor
Dr. S. Narasimha Reddy, Associate Professor

Address for Correspondence:

Coordinator

Sri. B. SRINIVAS

Mobile No. : +91 9989321422, +91 9885508384
Email id: kitswcsefdp@gmail.com

deepa graphics, wgl-9849235297

Department of Science & Technology
Govt. of India

DST Sponsored
Two Week
Faculty Development Programme
on

"MACHINE LEARNING *in* SPEECH PROCESSING"

11 - 22 November, 2019

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DEPARTMENT OF CSE

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE
KITSW
Tel: 0870 - 2564888, Fax : 0870 - 2564320
Website: www.kitsw.ac.in

NAAC - 'A' Grade accredited Institute (CGPA : 3.21)

MHRD NIRF-2019
Rank - 180

About Institution

Kakatiya Institute of Technology & Science (KITS), Warangal was established in 1980 with affiliation to Kakatiya University and it became Autonomous Institution under Kakatiya University in the year 2014. It is one of the famous institutions in the state of Telangana. It has attracted academicians of proven competence onto its faculty, placed its products in reputed organizations all over the World and gained recognition amongst academic circles. The Institute aims to prepare the students for meeting the challenges of the growing and changing needs of industry through delivering high quality technical education blended with training and research. The college is approved by All India Council for Technical Education (AICTE), approved by NAAC 'A' Grade with a CGPA of 3.21, MHRDs NIRF-2019 Rank 180 and all the UG Engineering programme are accredited by National Board of Accreditation (NBA) New Delhi.

About Department

The Department of CSE was established in the year 1994 with the intake of 60 and increased to 180. In the year2019,we got approval for intake of 60 with specialization in Networks called Computer Science and Engineering (Networks) from AICTE. The department also offers one PG course M.Tech (SE). The department is recognized as research center by Kakatiya University. Department is having well experienced faculty with high qualifications and most of the staff are in the pursuit of Ph.D's, has produced many under graduate and post graduate students who have settled in most prestigious organizations around the globe. The Department is accredited by NBA, New Delhi.

About Workshop

This faculty development programme (FDP) is devoted to fundamental theory, recent developments and research outcomes addressing the related theoretical and practical aspects of Machine learning algorithms. Machine Learning describes algorithms for writing computer programs that automatically improve their performance with experience. Speech Processing is a scientific discipline as well as a technology frontier with immense applications. As a scientific discipline it has a long history and as a technology area it is intensively explored both by industry and academia. Research in speech processing has always involved machine learning. Current research is benefited from closer interaction between these fields and is continuously mining new ideas from ML.

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Outcome of Program

This FDP will cover the basic algorithm that helps us to build and apply prediction functions with an emphasis on practical applications. Will be technically competent in the basics and the fundamental concepts of Machine Learning such as:

- Understand components of a Machine learning algorithm.
- Apply Machine learning tools to build and evaluate predictors.
- How Machine learning uses computer algorithms to search for patterns in data.
- How Machine learning uses in speech processing.

Major Course Contents:

- Introduction to Machine Learning
- Decision Tree Learning
- Artificial Neural Networks
- Bayesian Learning
- Deep Learning
- Instance-Based Learning
- Regression Techniques
- Support Vector Machines
- Reinforcement Learning
- Ensemble Learning Algorithms and implementation
- Deployment of Machine Learning and Deep Learning Models
- Machine Learning Applications
- Basics of Speech Processing
- Speech Production and Analysis
- Speech Enhancement and Coding
- Machine Learning for Speech Processing
- Audio Processing
- Speech Recognition using Advanced APIs and cloud Libraries

Hands on session on the above topics will be provided

Eligibility:

Faculty, Research Scholars, PG and UG Students from the Departments of CSE, IT and related branches/disciplines. As the programme is specifically aimed for Schedule Tribal participants, preference will be given to them first and remaining seats will be filled by others

Registration Fee:

Faculty, Research Scholars, PG and UG Students : Free

The Registration include Registration Kit, Course material, Lunch, Tea & Snacks.

Important Dates:

Course Duration: **11-11-2019 to 22-11-2019**

Last Date for Submission of Applications: **02-11-2019**

Intimation of selection to participants:**04-11-2019**

How to Apply and Register:

Based on "First Come First Serve"

Registration form may be submitted through e-mail (kitswcsefdp@gmail.com) OR through hardcopy.

Facilities for Participants:

All the selected Participants will be provided free boarding and lodging in the institute guest house. TA will be paid for the participants.

Resource Persons

1. Dr. S G Sanjeevi, NITW
2. Dr. K. Ramesh, NITW
3. Dr. Manjubala Bisi, NITW
4. Dr. Suryakanth V Gangashetty, IIITH
5. Dr. Anil Kumar Vuppala, IIITH
6. Dr. S. Suresh Kumar, JNTUCEJ
7. Dr. Gourav Kumar, Director of Magma Consultancy
8. Sri. Prabhakar Kaila, Machine Learning Expert
9. Sri. S. Nagaraju, KITSW
10. Dr. S. Narasimha Reddy, KITSW
11. Sri. Md. Sharfuddin Waseem, KITSW
12. Dr. D. Kumar, KITSW

3.COMMITTEE LIST

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

NO. /DST-FDP/2019 **Date: 07-11-2019**

The following faculty members of the department are assigned to the various committees to organize Two-Weeks DST sponsored FDP on **"Machine learning in speech processing"**, which will be held on **11th November to 22nd November, 2019.**

1. **Organizing Committee**

1.	Dr V. Shankar	*Prof & Head*	*Chairman*
2.	Dr P. Niranjan	*Professor*	*Convener*
3.	B. Srinivas	*Assistant professor*	*Coordinator*
4.	S. Naga Raju	*Associate professor*	*Member*
5.	C. Srinivas	*Associate professor*	*Member*
6.	S. Venkatramulu	*Associate professor*	*Member*
7.	Dr. V. Chandra Shekar Rao	*Associate professor*	*Member*
8.	Dr. S. Narsimha Reddy	*Associate professor*	*Member*

2. Program Committee

1.	S. Naga Raju	*Associate Professor*	*Convener*
2.	M.S.B. Pridhviraj	*Assistant Professor*	*Co-Convener*
3.	G. Sridhar	*Assistant Professor*	*Member*
4.	K. Vinay Kumar	*Assistant Professor*	*Member*
5.	P. Vijay Kumar	*Assistant Professor*	*Member*
6.	B. Raju	*Assistant Professor*	*Member*
7.	K. Johnson	*Assistant Professor*	*Member*
8.	S. Kiran	*Assistant Professor*	*Member*
9.	P. Srinivas	*Programmer*	*Member*
10.	B. Suresh	*Programmer*	*Member*

3. Anchoring Committee

1.	Dr. V. Chandra Sekhar Rao	*Associate Professor*	*Convener*
2.	M. Preethi	*Assistant Professor*	*Co-Convener*
3.	V. Swathy	*Assistant Professor*	*Member*
4.	N. C. Santhosh Kumar	*Assistant Professor*	*Member*
5.	V. Gouthami	*Assistant Professor*	*Member*
6.	E. Rajitha	*Assistant Professor*	*Member*
7.	U. Vijay Kumar	*Assistant Professor*	*Member*

4. Invitation Committee

1.	C. Srinivas	*Associate Professor*	*Convener*
2.	B. Sridhara Murthy	*Assistant Professor*	*Co-Convener*
3.	P. Srinivas	*Assistant Professor*	*Member*
4.	Dr. P. Anil	*Assistant Professor*	*Member*

5.	D. Ramesh	*Assistant Professor*	*Member*
6.	C. Madan Kumar	*Assistant Professor*	*Member*
7.	V. Jaya Kumar	*Programmer*	*Member*

5. Registration committee

1.	S. Venkatramulu	*Associate Professor*	*Convener*
2.	B. Sridhara Murthy	*Assistant Professor*	*Co-Convener*
3.	Dr. N. Gayathri	*Assistant Professor*	*Member*
4.	S. Swapna	*Assistant Professor*	*Member*
5.	G. Rekha	*Assistant Professor*	*Member*
6.	G. Ashmita	*Assistant Professor*	*Member*
7.	D. Ramesh	*Assistant Professor*	*Member*
8.	S. Sranvathi	*Assistant Professor*	*Member*
9.	M. Niharika	*Assistant Professor*	*Member*
10.	E. Rajitha	*Assistant Professor*	*Member*
11.	G.Rama devi	*Computer Operator*	*Member*

12. Media and Mailing Committee

1.	Dr. S. Narasimha Reddy	*Associate Professor*	*Convener*
2.	Md. Sharfuddin Waseem	*Assistant Professor*	*Co-Convener*
3.	Dr. D. Kumar	*Assistant Professor*	*Member*
4.	Syed Abdul Mooed	*Assistant Professor*	*Member*
5.	U. Vijay Kumar	*Assistant Professor*	*Member*
6.	T. Kiran	*Computer Operator*	*Member*
7.	V. Prasad	*Programmer*	*Member*

13. Hospitality Committee

1	S. Nagaraju	Associate Professor	Convener
2	B. Raju	Assistant Professor	Co-Convener
3	G. Rekha	Assistant Professor	Member
4	C. Madan Kumar	Assistant Professor	Member
5	S. Kiran	Assistant Professor	Member
6	T. Kiran	Programmer	Member

14. Refreshment Committee

1.	Dr. V. Chandra Shekar Rao	*Associate Professor*	*Convener*
2.	B. Raghuram	*Assistant Professor*	*Co-Convener*
3.	K. Johnson	*Assistant Professor*	*Member*
4.	C. Madan Kumar	*Assistant Professor*	*Member*
5.	R. Rajesh	*Assistant Professor*	*Member*
6.	D. Naveen	*Assistant Professor*	*Member*
7.	A. Praveen	*Assistant Professor*	*Member*
8.	S. Kiran	*Assistant Professor*	*Member*
9.	Ch. Kiran Kumar	*Programmer*	*Member*
10.	Y. Yellaiah	*Attender*	

15. Stationary and Print Committee

1.	G. Sridhar	*Assistant Professor*	*Convener*
2.	K. Vinay Kumar	*Assistant Professor*	*Co-Convener*
3.	P. Rajitha	*Assistant Professor*	*Member*

4.	P. Vijay Kumar	*Assistant Professor*	*Member*
5.	B. Raju	*Assistant Professor*	*Member*
6.	S. Kiran	*Assistant Professor*	*Member*
7.	M. Srilatha	*Programmer*	*Member*
8.	V. Gayathri	*Jr. Assistant*	*Member*

16. FDP Venue Committee (IBM Lab)

1.	K. Vinay Kumar	*Assistant Professor*	*Convener*
2.	Dr. P. Anil	*Assistant Professor*	*Co-Convener*
3.	Dr. D. Kumar	*Assistant Professor*	*Member*
4.	K. Johnson	*Assistant Professor*	*Member*
5.	Syed abdul moeed	*Assistant Professor*	*Member*
6.	M. Sowmya	*Assistant Professor*	*Member*
7.	S. Sravanthi	*Assistant Professor*	*Member*
8.	B. Suresh	*Programmer*	*Member*
9.	Ch. Kiran	*Programmer*	*Member*
10.	T. Kiran	*Computer Operator*	*Member*

17. Report Preparation Committee

1.	N.C. Santhosh	*Assistant Professor*	*Convener*
2.	Syed abdul moeed	*Assistant Professor*	*Co-Convener*
3.	D. Ramesh	*Assistant Professor*	*Member*
4.	U. Vijay Kumar	*Assistant Professor*	*Member*
5.	E. Rajitha	*Assistant Professor*	*Member*
6.	M. Niharika	*Assistant Professor*	*Member*
7.	V. Prasad	*Programmer*	*Member*

This is for your information.

Dr. V. Shankar
Head, Dept. of CSE

1. Copy to the Principal
2. Copy to Dean Academics
3. Copy to Dean Administration

4. INVITATION OF INAUGURAL FUNCTION

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE
(An Autonomous Institute under Kakatiya University, Warangal)
(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)
Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.
काकतीय प्रैद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५
కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ – ౫౦౬ ౦౧౫
Estd : 1980
KITSW

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Invitation

The Management, Principal, Faculty and Staff
Cordially invite you to the

INAUGURAL FUNCTION

of

Department of Science & Technology

Sponsored

Two Week Faculty Development Programme

on

MACHINE LEARNING IN SPEECH PROCESSING

Monday, 11th November, 2019 at 09:30 a.m.

Venue: Silver Jubilee Seminar Hall, KITSW, Block-IV

Prof. T. Srinivasulu

Dean, Faculty of Engineering, Kakatiya University, Warangal
has kindly consented to be Chief Guest

Dr. S.G. Sanjeevi

Professor, Dept of CSE, NIT, Warangal
has kindly consented to be Guest of Honour

Capt. V. Lakshmikantha Rao

MP (Rajyasabha)
Secretary & Correspondent, KITSW
will preside over the function

Sri P. Narayana Reddy

Treasurer, KITSW
will grace the occasion

Dr. K. Ashoka Reddy	Dr. V. Shankar	Dr. P. Niranjan	Mr. B. Srinivas
Principal	Head, Dept. of CSE	Convener	Coordinator

Estd : 1980
KITSW

PROGRAMME SCHEDULE

09:40 a.m.	:	Inviting dignitaries on to the dais
09:45 a.m.	:	Jyothi Prajwalana & Invocation Song
09:50 a.m.	:	Report by Program Coordinator
09:55 a.m.	:	Address by HOD
10:00 a.m.		Address by Principal
10:05 a.m.	:	Introduction of Guest of Honour
10:10 a.m.	:	Address by Guest of Honour
10:15 a.m.	:	Introduction of Chief Guest
10:20 a.m.	:	Address by Chief Guest
10:25 a.m.	:	Presidential Remarks
10:30 a.m.	:	Vote of Thanks

5. LIST OF REGISTERED PARTICIPANTS

KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DST-FDP (Machine Learning In Speech Processing) Participate List November 2019

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6. SCHEDULE OF THE EVENT

Estd : 1980
KITSW

Department of Science & Technology , Sponsored, Govt. of India

Two Week Faculty Development Programme on

"Machine Learning in Speech Processing"

11th to 22nd November, 2019

Organised by

DEPARTMENT OF CSE

Govt. of India

Date	SESSION - I 10:00 am to 11:30 am		SESSION - II 11:40 am to 1:00 pm		SESSION - III 2:00 pm to 3:30 pm		SESSION - IV 3:40 pm to 5:00 pm
11/11/2019 (Monday)	Registration and Inauguration	BREAK	Key note on Machine Learning SGS	LUNCH	Research methodology - An overview SNR	BREAK	Research methodology SNR
12/11/2019 (Tuesday)	Machine Learning Applications MBB		Introduction to Artificial Neural Networks MBB		Classification Techniques SNR		Implementation of Classification Techniques SNR
13/11/2019 (Wednesday)	Deep Learning, Data Science and its Applications GK		Open Source Frameworks and Tools for Data Science and Analytics GK		Machine Learning Library of WEKA and its features GK		-Installation and Working with WEKA -Training and Validation with WEKA Library GK
14/11/2019 (Thursday)	Introduction to Python Language, installation and Working Environment GK		-PyPi Package Installer -Real Time Weather Analytics GK		-Supervised and Unsupervised Learning with Case Studies GK + BKR		-Key Implementations with Python based on Machine Learning PK
15/11/2019 (Friday)	-Clustering Data using K-Means Algorithm and its implementation in Python GK		Ensemble Learning and Algorithms GK		Building Classification Models and Evaluation of Performance GK + BS		Building Classification Models and Evaluation of Performance GK + BS
16/11/2019 (Saturday)	-Decision Tree Introduction SSK		-Decision Tree Learning with Case Studies SSK		-Machine Learning using Statistical Analytics with R Tools -Python Tools for Machine Learning GK + BS		-Machine Learning using Scikit Learn -Online Assessment Test GK + BS

SGS: Prof. S. G. Sanjeevi, NIT Warangal
SNR: Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW
BS: Sri. B. Srinivas, Assistant Professor, Dept of CSE, KITSW
SSK: Dr. S. Suresh Kumar, HoD, Dept. of IT, JNTUCEJ

GK: Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.
MBB: Dr. Manjubala Bisi, Assistant Professor, Dept of CSE, NIT Warangal
BKR:Dr.Bukya Raju, Assistant Professor,Dept. of CSE NITW
PK:Sri.Prabhakar Kaila, Machine Learning Expert-HYD

Department of Science & Technology , Sponsored, Govt. of India

Two Week Faculty Development Programme on

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Date	SESSION - I 10:00 am to 11:30 am		SESSION - II 11:40 am to 1:00 pm		SESSION - III 2:00 pm to 3:30 pm		SESSION - IV 3:40 pm to 5:00 pm
18/11/2019 (Monday)	-Working with OpenCV for Machine Learning in Computer Vision -Machine Learning using High Performance Julia Tools GK		-Open Source Tools for Deep Learning -Neural Networks Algorithms Using TensorFlow GK		-Artificial Neural Networks as Key Base of Deep Learning -Architecture of CNN, Creating CNN and Fine Tuning of CNN Performance GK + BS		-Working with TensorFlow, PyTorch and Keras GK + BS
19/11/2019 (Tuesday)	-Implementation of Machine Learning on Cloud: BigML, Neptune and others GK	B R E A K	-Deep Learning on Google Cloud -Implementation of Deep Learning on Google Colaboratory GK	L U N C H	-Computer Vision Applications using Deep Learning -Recurrent Neural Networks and Associated Functions GK + NCS	B R E A K	Basic Speech Processing -Speech recognition with tensorflow -Training and testing -Exploring different speech recognition datasets Waseem
20/11/2019 (Wednesday)	Speech processing current challenges AKV		Machine Learning for Audio Processing. AKV		Implementation of Speach recognition using GMMs AKV		Implementation of Speach recognition using DNNs AKV
21/11/2019 (Thursday)	Machine Learning Approaches for Speech Recognition SVG		Implementation of Speech Processing and recognition SVG		Speech Synthesis and Voice Conversion SVG		Speech Synthesis and Voice Conversion SVG
22/11/2019 (Friday)	Reinforcement Learning SN		Regression Techniques DK		-Assessment Test -Feed Back BS + BR +SAM		Valedictory

AKV: Dr. Anil Kumar Vuppala, IIIT Hyderabad

SVG: Dr. Suryakanth V Gangashetty, IIIT Hyderabad

Waseem: Sri. Sharfuddin Waseem Assistant Professor, Dept of CSE, KITSW

DK: Dr. D. Kumar, Assistant Professor, Dept of CSE, KITSW

SAM: Sri. Syed Abdul Moeed, Assistant Professor, Dept of CSE, KITSW

GK:Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.

BS: Sri. B. Srinivas, Assistant Professor, Dept of CSE, KITSW

SN: Sri. S. Nagaraju, Associate Professor, Dept of CSE, KITSW

BR: Sri. B.Raju, Assistant Professor, Dept of CSE, KITSW

7.DAY WISE REPORT

Day 1. 11.11.2019

Registration :(9am-10:00am)

At silver jubilee seminar hall as per the given schedule registration committee started registration. Total number of registrations was 66. Here, the registration kit is distributed for all the participants and registration committee here collected the registration forms and supporting documents as shown in the following figures.

Inauguration :(10am-11:30am)

Now, Let us move with the agenda of the program. It is my privilege to welcome the personality who is the driving force behind the success of KITS, Warangal, Capt. Sri V.Laxmikantha Rao Garu, Secretary & Correspondent, MP (Rajyasabha) onto the days.

The session started with welcoming of Chief guest T.Srinivasulu Prof & Dean University College of engineering and Principal, Guest of Honor Prof G.Sanjeevi, Dept of CSE, NIT Warangal, Prof K.Ashoka Reddy principal KITSW, Head of CSE Dept Prof V.Shankar, the convener of FDP Prof.P.Niranjan Reddy and Coordinator of FDP B.Srinivas. Sir always believes that the strength of an institute lies in its activities concerned with sharing of knowledge through publications and with organizing these kinds of programs.

I deem it as a privilege to invite Shri P.Narayan Reddy garu, Treasurer onto the days. Sir always encourages the administration to go with this kind of programmes. Thank you sir

Now I take the privilege of inviting today's chief guest Prof T.Srinivasulu Garu, Dean, Faculty of Engineering, Kakatiya University, and principal, women's college of engineering KU onto the days.

Presentation of bouquet to the chief guest

Sir has readily accepted our invitation to be the chief guest despite his demanding schedule. Thank you sir.

Now let us invite the guest of honor of today's function, Dr S.G.Sanjeevi garu, Dept of CSE ,NITW on to the days.

Presentation of bouquet

Sir inspite of his hard schedule has consented to be a part of this program. Thank you sir.

I extend the invitation to our beloved Principal, Dr K.Ashoka Reddy Garu, who is a dynamic and profound scholar on to the days. Sir, with his unconditional support always encourages us to get success in every aspect of the department. Thank you sir.

Presentation of bouquet

Now, it is my turn to invite our beloved Head of the Department of CSE, Prof. V.Shankar Garu on to the days. Thank you sir.

Presentation of bouquet

Now I would like to invite the convener of this program Prof P.Niranjan Reddy garu who have worked day-in and day-out since the inception of the idea to organize this program. Thank you sir.

Presentation of bouquet

Finale in invitation I would like to invite the coordinator of this FDP B.Srinivas garu on to the days. Thank you sir.

Presentation of bouquet

Now, I request all the dignitaries on the days to proceed for the lighting of the lamp.

Now, we shall invite the convener, Prof P.Niranjan Reddy garu to present the brief report of today's FDP. Thank you sir.

We hope that the audience rightly acknowledges your efforts which reflect the quality of this FDP. Now, I would like to invite our beloved Head of the Department Prof V.Shankar garu to present a brief profile of the department.

Lamp Lightning

Group Photo

--------- TEA BREAK----------

Session 2-KeyNote (11:40-1:00pm)

The Guests have discussed about the importance of machine learning Artificial intelligence in today's life. Keynote is given by Prof G.Sanjeevi, Dept of CSE; NIT Warangal on Concept called Adaline machine learning application has been discussed. Under this concept definition, importance & applications of machine learning are discussed. How machine learning is used in Recognizing spoken words & drive autonomous vehicle, play backgammon, play chess and classify astronomical structures using decision trees Sir has explained about algorithm& steps involved in checkers learning problem.

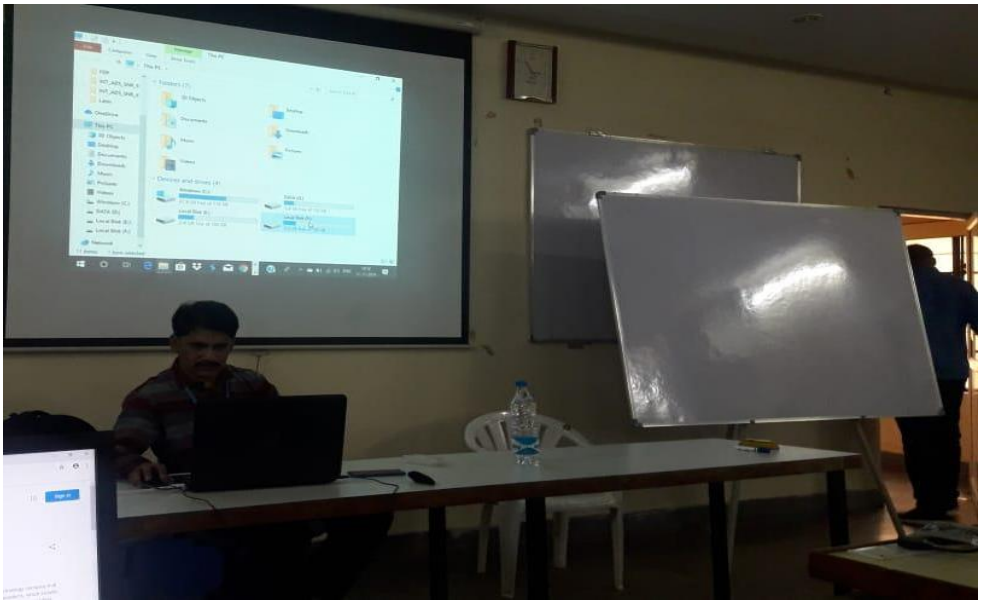
Session 3-Research methodology- An overview (2:00pm-3:30pm)

An overview on Research methodology is given by Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW. Sir has explained Meaning, objectives, motivation of research & different research approaches like

1. Quantitative Approach
2. Inferential Approach
3. Experimental approach
4. Simulation
5. Qualitative

Session 4-Research Methodology (3:40-5:00pm)

A session is given by Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW on research methodology.



Sir has discussed about Criteria on good research, problems encountered by researchers in India and types of researches like clinical, decision oriented etc.,

Day 2. 12.11.2019

Session1: Machine Learning Applications (10:00Am-11:30pm)

A Session is taken by Dr.Manjubala Bisi, Assistant Professor, NIT Warangal on machine learning applications based on the problem.

1. Clustering
2. Classification
3. Recommendation

Examples on above applications are discussed.

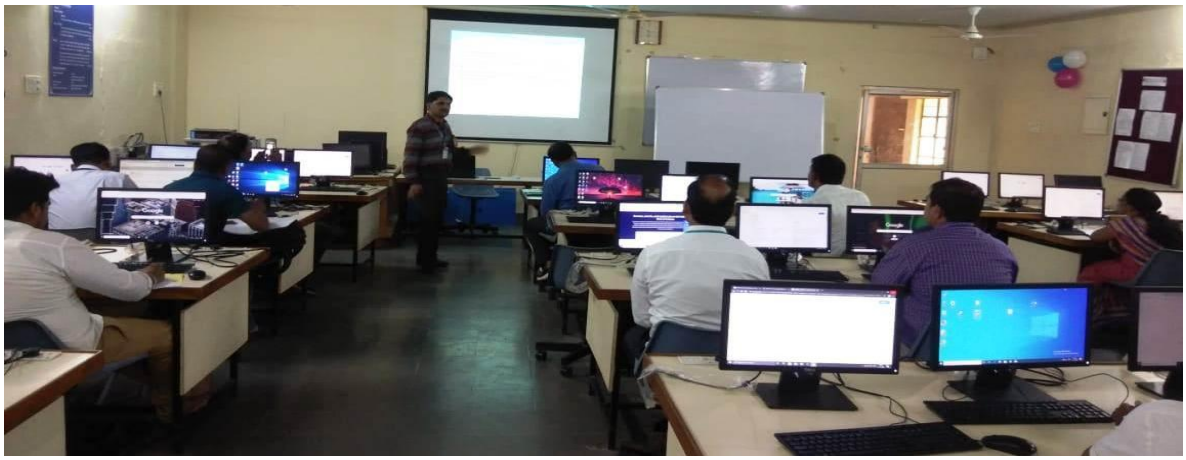
Session2: Introduction to Artificial Neural Networks (11:40-1:00pm)

A Session is taken by Dr.Manjubala Bisi, Assistant Professor, NIT Warangal.

The topics discussed are biological inspiration, artificial neurons and neural networks and Applications. Learning Principle for artificial neural networks, perceptron application, multi perceptron are discussed.

Session 3- Classification Techniques (2:00pm-3:30pm)

A session is given by Dr.S.Narasimha Reddy, Associate Professor, Dept of CSE, KITSW. Classification techniques like feature extraction, Gaussian base classification, chi-square, Anova are discussed in the session.



Session4-Implementationof Classification Techniques (3:40-5:00pm)

A session is given by Dr. S.Narasimha Reddy, Associate Professor, Dept of CSE, KITSW.

Sir has explained the implementation of classification techniques like one-way ANOVA and SVM (support vector machine).

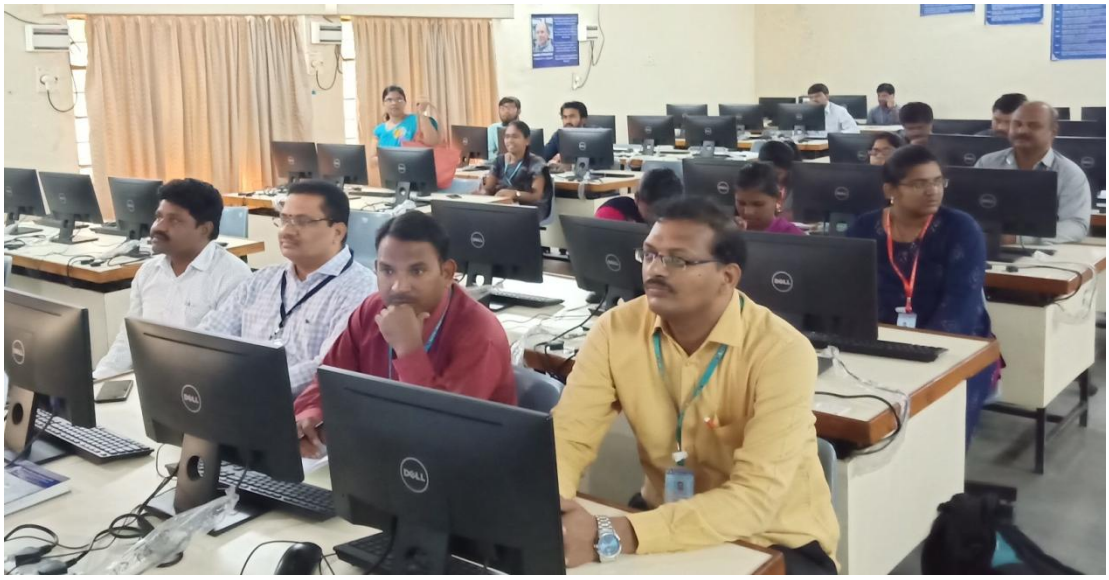
Day 3. 13.11.2019

Session1-Deep Learning Data Science and its Applications

A session is taken Dr. Gourav Kumar, Managing Director, Magma Research & Consultancy. Deep Learning data science and its applications are discussed.

Session 2: Open Source Frameworks and tools for data science and analytics (11:40-1:00pm)

A session is taken Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy. Sir has explained about the open source frameworks & tools available for data science and analytics. Introduction to WEKA and Different file formats in WEKA Like ARFF, CSV and Dat are in the discussed in the session.

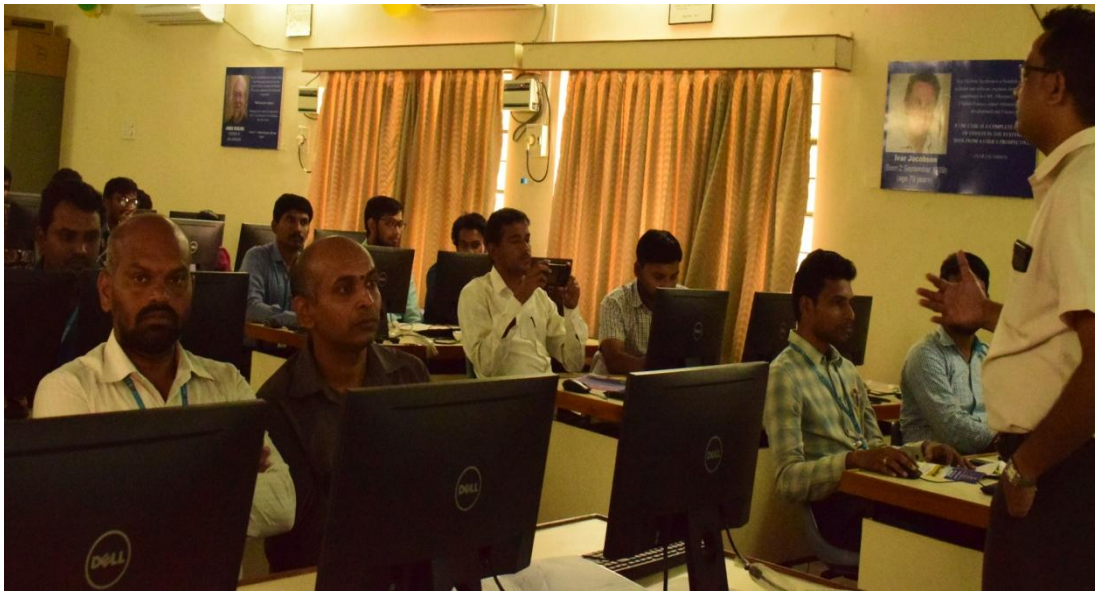


Session 3- Machine learning library of WEKA and its features (2:00pm-3:30pm)

A session is taken Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy. WEKA offers converters to convert the files and Databases and windows databases, Sparse ARFF files, Generating random datasets are discussed.

Session4- Installation and working with WEKA training and validation with WEKA library (3:40-5:00pm)

A session is taken Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy. How to download unique datasets, unique datasets and problems, Random Forest approach, are discussed.

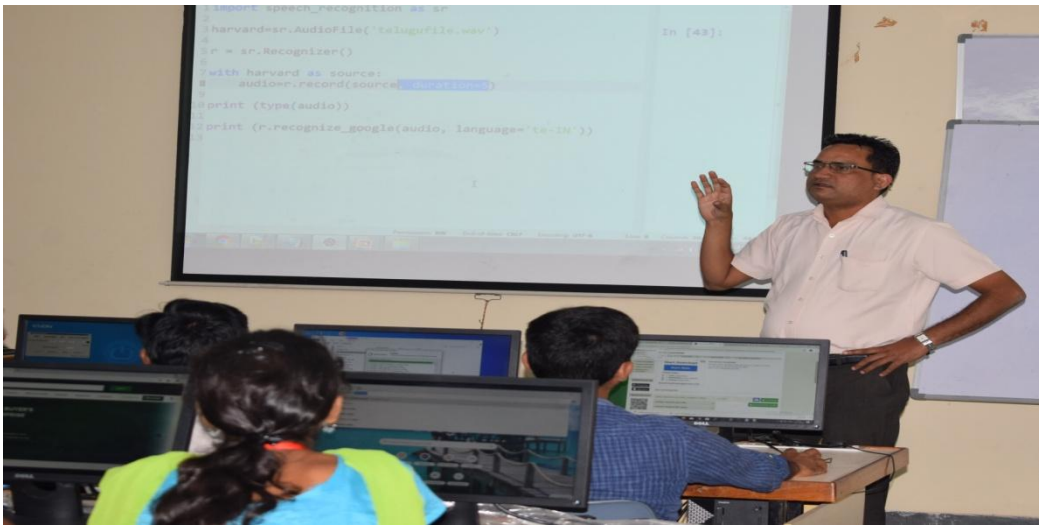


Day 4. 14.11.2019

Session1-introduction to python language, installation and working environment

A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy on Introduction to python language, installation and working environment.

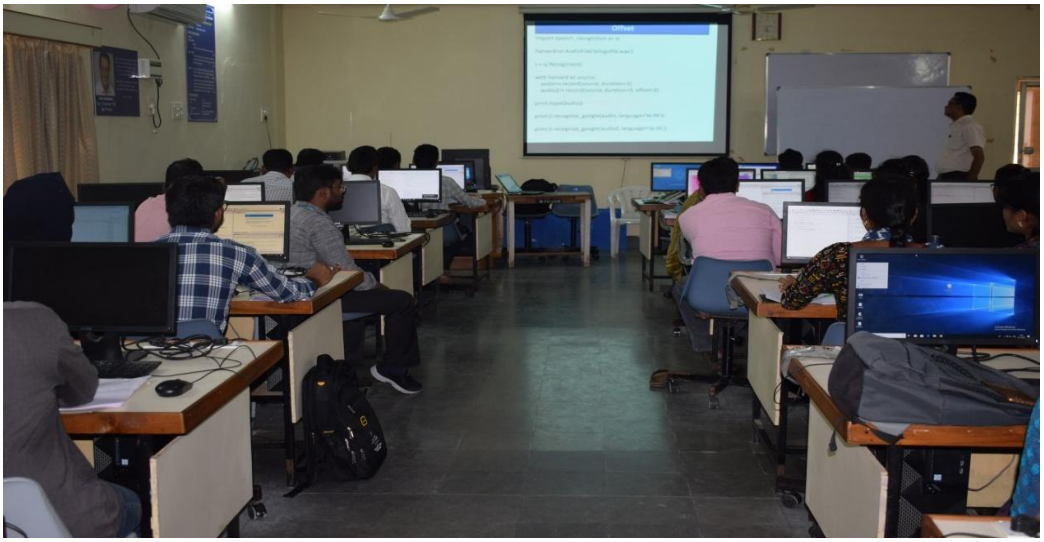
- Difference Between other languages and Python Programming Language
- Python Language advantages and applications
- Why is Python the Best-Suited Programming Language for Machine Learning?
- NumPy in Python
- Array in Python
- Python Virtual Environment
- Python Introduction to Web development using Flask



Session 2 - Pypi Package Installer, Real-Time Weather Analytics

https://openweathermap.org/appid#get, using openweathermap A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy. From The Python Package Index (PyPI) repository of software for the Python programming language is shown. How PyPI helps user in finding and installing software developed and shared by the Python community is learnt. Learned about installing packages.

- 208,231 projects
- 1,574,199 releases
- 2,358,635 files
- 390,306 users are shown



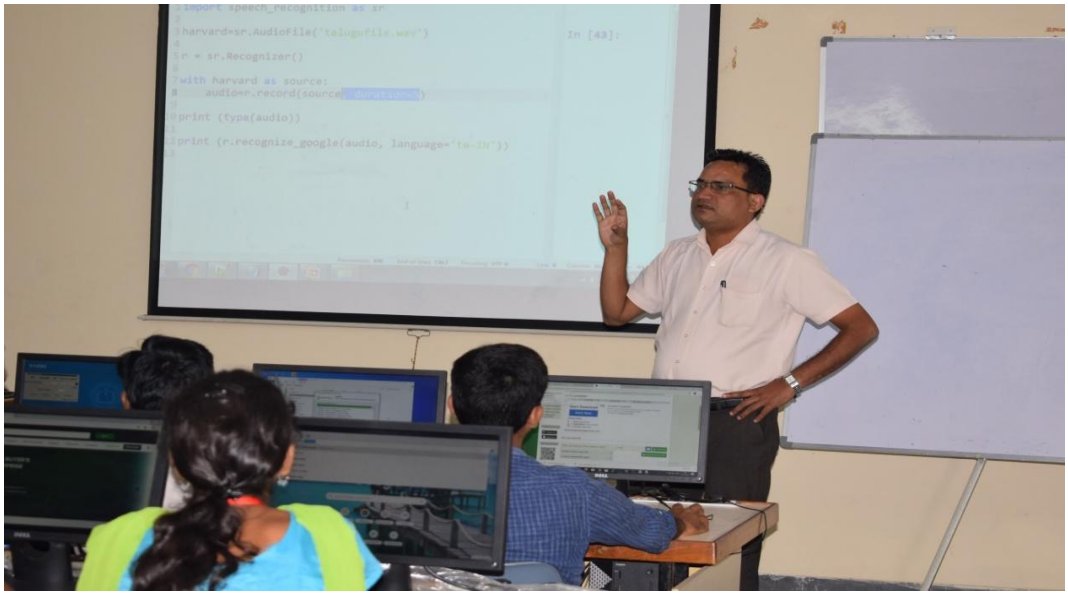
Session 3 - Supervise and unsupervised learning with case studies

A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy and Bukya Raju NIT Warangal on Supervise and unsupervised learning with case studies. Gourav sir has give introduction to business analytics, introduction to Python platform for data analysis, introduction to supervised machine learning algorithms. An introduction to unsupervised machine learning algorithms with different examples is given

- Understanding of various sampling strategies and its efficacy in learning process
- An introduction to ensemble methods for handling imbalanced data
- Gradient descent algorithm and its application in finding the optimal solution
- Hands-on using the Python code and the real life dataset
- This day will be primarily cover introduction to business analytics, introduction to Anaconda
- platform and regression concepts implementation using Python
- Introduction to Business Analytics
- Introduction to Python platform
- Logistic regression

Session 4- Key Implementation with Python based on ML

A session is taken by Prabhakar Kaila Machine learning Expert Hyderabad and Dr.Gourav Kumar Understanding Anaconda Framework platform and other useful packages in Python, Understanding machine learning and its implementation using Python. Day is primarily devoted to concept building on supervised and unsupervised machine learning and hands-on using Python code for the same



Introduction to Decision Trees and its uses is simply given with different examples.KNN (K-Nearest Neighbors) and K-means using Machine learning–Sampling strategies and Machine learning–Ensemble methods is shown

Day 5. 15.11.2019

A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy

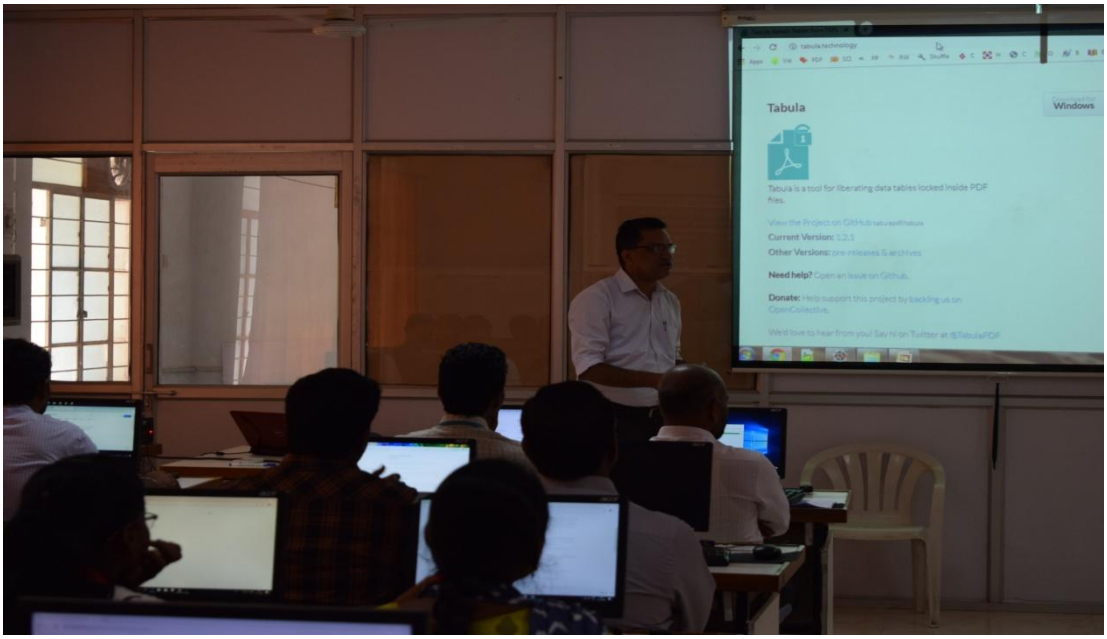
Session 1: Session on clustering data using K-Means algorithms and its implementation in Python

The speaker has discussed that K-Means Clustering is an unsupervised machine learning algorithm. In contrast to traditional supervised machine learning algorithms, K-Means attempts to classify data without having first been trained with labeled data. Once the algorithm has been run and the groups are defined, any new data can be easily assigned to the most relevant group.

The real world applications of K-Means include: customer profiling, market segmentation, computer vision, search engines, astronomy.

How it works

1. Select K (i.e. 2) random points as cluster centers called centroids
2. Assign each data point to the closest cluster by calculating its distance with respect to each centroid
3. Determine the new cluster center by computing the average of the assigned points
4. Repeat steps 2 and 3 until none of the cluster assignments change



Session 2: In the second session choosing the right number of clusters procedure is shown. Ensemble learning and algorithms is explained. Often times the data you'll be working with will have multiple dimensions making it difficult to visual. As a consequence, the optimum number of clusters is no longer obvious. Fortunately, we have a way of determining this mathematically.

We graph the relationship between the number of clusters and Within Cluster Sum of Squares (WCSS) then we select the number of clusters where the change in WCSS begins to level off (elbow method).

Even though we already know the optimal number of clusters, I figured we could still benefit from determining it using the elbow method. To get the values used in the graph, we train multiple models using a different number of clusters and storing the value of the intertia_ property (WCSS) every time. Simple Ensemble Techniques are explained. In this section, namely:

- Max Voting
- Averaging
- Weighted Averaging
- Max Voting

The max voting method is generally used for classification problems. In this technique, multiple models are used to make predictions for each data point. The predictions by each model are considered as a 'vote'. The predictions which we get from the majority of the models are used as the final prediction. For example, when you asked 5 of your colleagues to rate your movie (out of 5); we'll assume three of them rated it as 4 while two of them gave it a 5. Since the majority gave a rating of 4, the final rating will be taken as 4. You can consider this as taking the mode of all the predictions.

The result of max voting would be something like this:

	Colleague 1	Colleague 2	Colleague 3	Colleague 4	Colleague 5
Final rating	5	4	5	4	4

Session 3: In this session sir explained to build classification models and evaluations of performance. after session 2 continuation of topic how to categorize the data using the optimum number of clusters (4) determined in the last step. Sir explained k-means++

ensures that don't fall into the random initialization trap. Data Preprocessing is performed before Data Wrangling. Data preprocessing data is prepared exactly after receiving the data from the data source. In these initial transformations, Data Cleaning or any aggregation of data is performed. It is executed once. It is the concept that is performed before applying any iterative model and will be executed once in the project. Data Wrangling is performed during the iterative analysis and model building. This concept at the time of feature engineering. The conceptual view of the dataset changes as different models is applied to achieve good analytic model.

Data Extraction and Transformation. explained missingpy and Using ffill() on Column Axis. When ffill() is applied across the index then any missing value is filled based on the corresponding value in the previous row

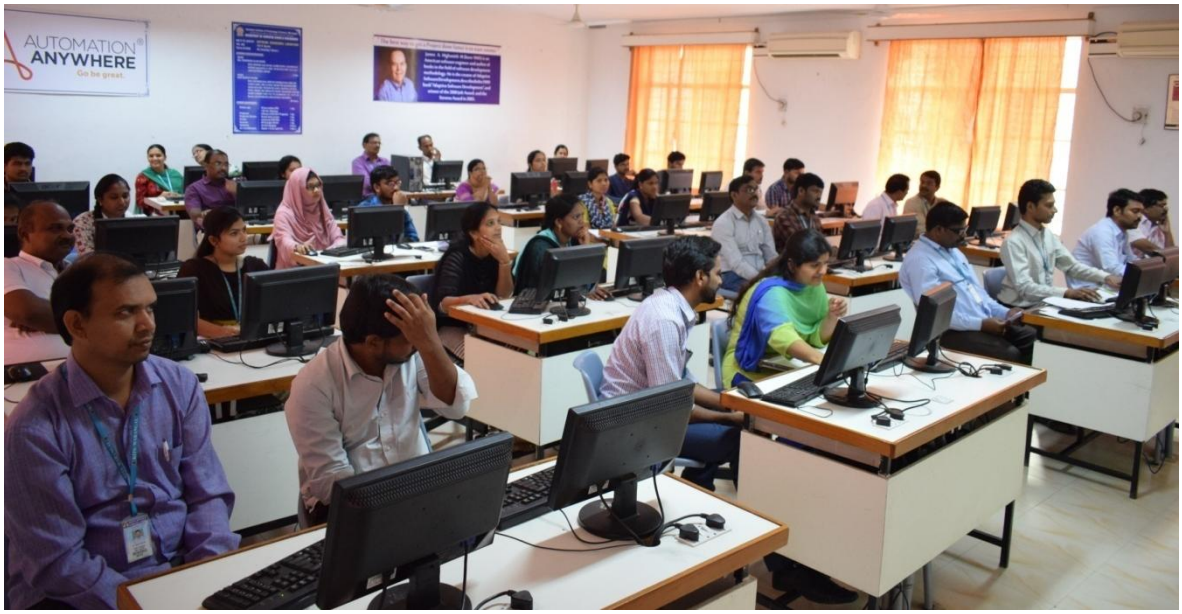
Session 4: In this session sir explained to build classification models and evaluations of performance.

In machine learning, sir explained frequent use of classification models to get a predicted result of population data. Classification which is one of the two sections of supervised learning, deals with data from different categories. The training dataset trains the model to predict the unknown labels of population data. There are multiple algorithms, namely, Logistic regression, K-nearest neighbour, Decision tree, Naive Bayes etc. All these algorithms have their own style of execution and different techniques of prediction. But, at the end, we need to find the effectiveness of an algorithm. To find the most suitable algorithm for a particular business problem, there are few model evaluation techniques. In this session different model evaluation techniques will be discussed by gaurav sir Confusion Matrix

Probably it got its name from the state of confusion it deals with. If you remember the hypothesis testing, you may recall the two errors we defined as type-I and type-II. type-I error occurs when null hypothesis is rejected which should not be in actual. And type-II error occurs when although alternate hypothesis is true, you are failing to reject null hypothesis. It is depicted clearly that the choice of confidence interval affects the probabilities of these errors to occur. But the fun is that if you try to reduce either if these errors that will result the increase of the other one. So, what is confusion matrix? Is explained clearly.

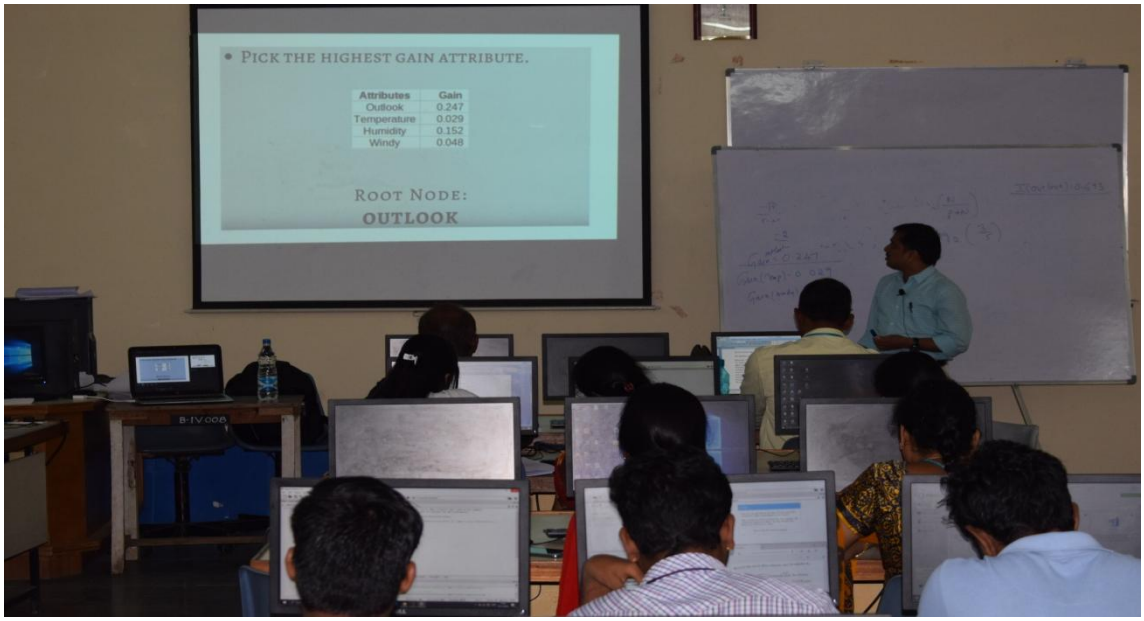
Confusion matrix is the image given in the diagrammatic representation. It is a matrix representation of the results of any binary testing. Sir explained Data Transformation using CSVKIT, pip install csvkit is explained. Random Forest Approach is explained with large number of decision trees and with every observation fit to every

decision tree. Most common outcome for each observation -> Final Output. then finally New Observation fit to all the trees and Majority Vote is taken.



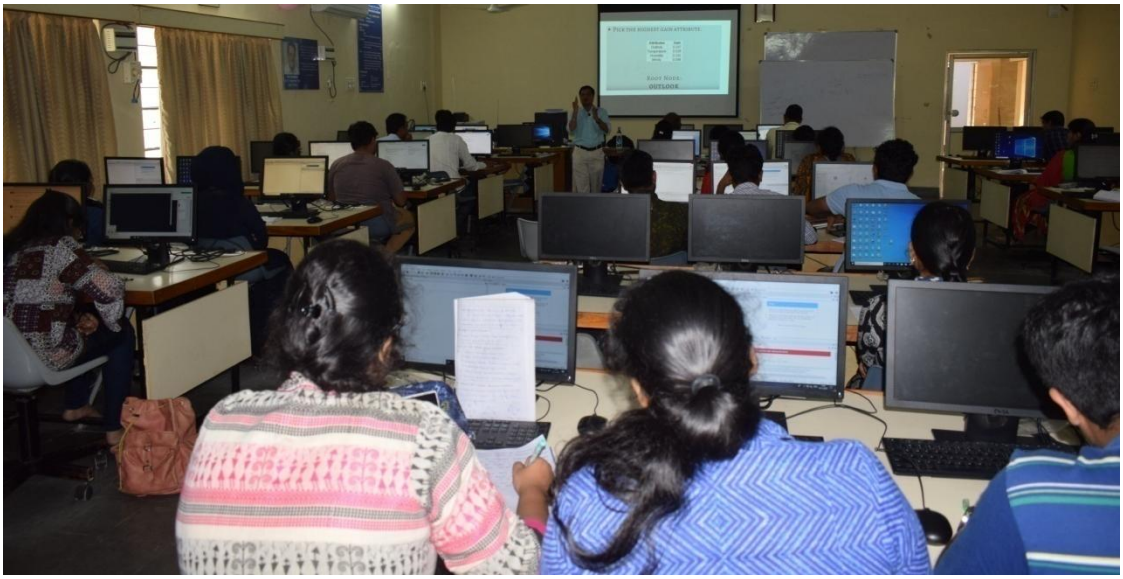
Day 6. 16.11.2019

Session 1: Dr. S Suresh Kumar, Head of IT, JNTUH College of Engineering Jagtial. The speaker has discussed what classification, Decision tree learning with case studies is. Machine Learning technique decision tree, Binary classification and multi class classification, decision tree terminologies, calculation of entropy, information gain and of the data set.



Session 2:

Sir explained what is decision tree with a clear definition, Decision Trees Terminologies, prunning, branching, parent / child node, splitting, root node, leaf node. Sir explained with a example by making A decision tree that predicts whether tennis will be played on the day. How to choose the best attribute, root node. Calculations on entropy, average information, avg. Gain are explained. Sir explained how to pick the highest gain attribute. With calculation of humidity and wind, finally how the complete tree will look like is shown.

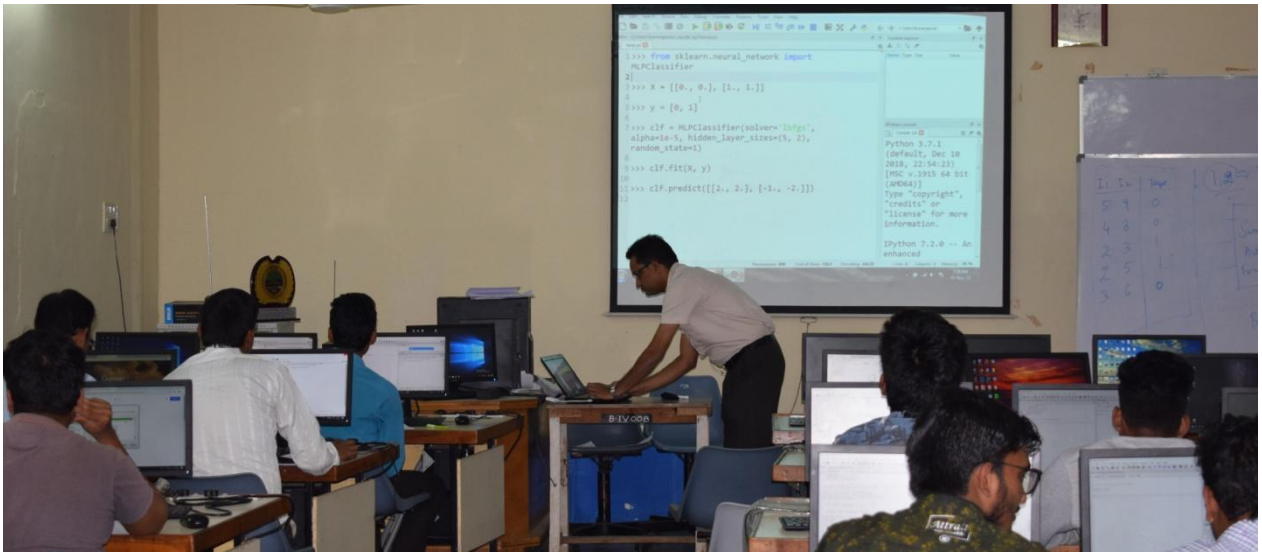


Session 3: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy and B. Srinivas, Asst Prof, CSE KITSW, on Machine Learning using Statistical Analytics with R Tools. Python Tools for Machine Learning. Sir explained why R is one of the major languages for data science. What is the reason that It provides excellent visualization features, which is essential to explore the data before submitting it to any automated learning, as well as assessing the results of the learning algorithm.

Sir explained that Many R packages for machine learning are available off the shelf and many modern methods in statistical learning are implemented in R as part of their development.

In supervised learning (SML), the learning algorithm is presented with labeled example inputs, where the labels indicate the desired output. SML itself is composed of classification, where the output is categorical, and regression, where the output is numerical.

In unsupervised learning (UML), no labels are provided, and the learning algorithm focuses solely on detecting structure in unlabelled input data. Other that SML , UML sir gave semi-supervised learning approaches that use labeled data to inform unsupervised learning on the unlabelled data to identify and annotate new classes in the dataset (also called novelty detection). Sir explained that Reinforcement learning is the learning algorithm that performs a task using feedback from operating in a real or synthetic environment.



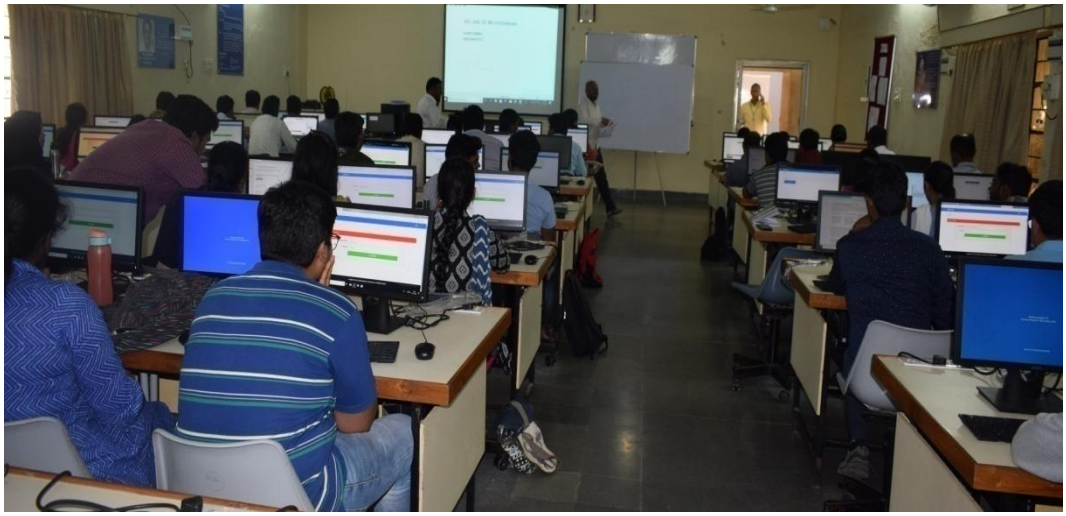
Session 4: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy and B. Srinivas, Asst Prof, CSE KITSW

On Machine learning using Scikit Learn In this Session Sir gave a Scikit-learn tool. It is a free machine learning library for Python. It features various algorithms like support vector machine, random forests, and k-neighbours, and it also supports Python numerical and scientific libraries like NumPy and SciPy.

In this Session we learned to code python and apply Machine Learning with the help of the scikit-learn library, which was created to make doing machine learning in Python easier and more robust. To do this, we used the Sales_Win_Loss data set from IBM's Watson repository. We imported the data set using pandas, explore the data using pandas methods like head(), tail(), dtypes(), and then try our hand at using plotting techniques from Seaborn to visualize our data.

Then we dive into scikit-learn and use preprocessing.LabelEncoder() in scikit-learn to process the data, and train_test_split() to split the data set into test and train samples.

We also used a cheat sheet to decide which algorithms to use for the data set. Finally, we used three different algorithms (Naive-Bayes, LinearSVC, K-Neighbors Classifier) to make predictions and compare their performance using methods like accuracy_score() provided by the scikit-learn library. We also visualized the performance score of different models using scikit-learn and Yellowbrick visualization.



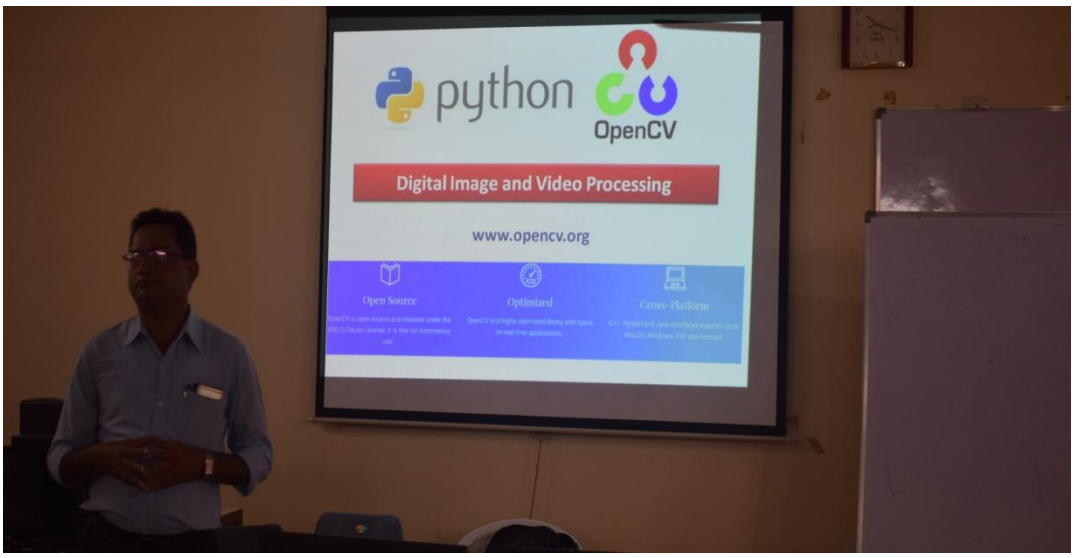
Conducted Online Assessment Test-1

Day 7. 18.11.2019

Session 1: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy

On Working with OpenCv for Machine Learning in Computer Vision, Machine Learning using Hihj performance Julia Tools

Implementation of Machine / Deep Learning using different tools like keras tensorflow pytorch numpy scipy openCV is explained using Cloud. In this session we Configuration: GPU Based Remote System is explained. In this Session, Deep Learning and Transfer Functions in Keras is shown: Activation Function or Transfer Function is used to determine the output of node to determine the output of neural network like Yes or No. this session helped in maping the results values in between 0 to 1 or -1 to 1 etc. (depending upon the function). Categories of Activation / Transfer Functions like Linear Activation Function and Non-linear Activation Functions is clearly given.



Session 2: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy on OpenSource Tools for Deep Learning, Neural Network Algorithm using TensorFlow.

Because of rapid advancements, massive amounts of talent and resources are dedicated to accelerating the growth of the technologies. in this session list of 8 best open source AI technologies are shown to take machine learning projects to the next level. in these few are explained

1. TensorFlow

Initially released in 2015, TensorFlow is an open source machine learning framework that is easy to use and deploy across a variety of platforms. It is one of the most well-maintained and extensively used frameworks for machine learning.

Created by Google for supporting its research and production objectives, TensorFlow is now widely used by several companies, including Dropbox, eBay, Intel, Twitter, and Uber. TensorFlow is available in Python, C++, Haskell, Java, Go, Rust, and most recently, JavaScript. You can also find third-party packages for other programming languages. The framework allowed us to develop neural networks (and even other computational models) using flowgraphs.

2. Keras

Initially released in 2015, Keras is an open source software library designed to simplify the creation of deep learning models. It is written in Python and can be deployed on top of other AI technologies such as TensorFlow, Microsoft Cognitive Toolkit (CNTK), and Theano. Keras is known for its user-friendliness, modularity, and ease of extensibility. It is suitable if you need a machine learning library that allows for easy and fast prototyping, supports both convolutional and recurrent networks, and runs optimally on both CPUs (central processing units) and GPUs (graphics processing units).

3. Scikit-learn

Initially released in 2007, scikit-learn is an open source library developed for machine learning. This traditional framework is written in Python and features several machine learning models including classification, regression, clustering, and dimensionality reduction. Scikit-learn is designed on three other open source projects—Matplotlib, NumPy, and SciPy—and it focuses on data mining and data analysis.

4. Microsoft Cognitive Toolkit

Initially released in 2016, the Microsoft Cognitive Toolkit (previously referred to as CNTK), is an AI solution that can empower you to take your machine learning projects to the next level. Microsoft says that the open source framework is capable of "training deep learning algorithms to function like the human brain". Some of the vital features of the Microsoft Cognitive Toolkit include highly optimized components capable of handling data from Python, C++, or BrainScript, ability to provide efficient resource usage, ease of integration with Microsoft Azure, and interoperation with NumPy.

5. Theano

Initially released in 2007, Theano is an open source Python library that allows you to easily fashion various machine learning models. Since it's one of the oldest libraries, it is regarded as an industry standard that has inspired developments in deep learning.

At its core, it enables you to simplify the process of defining, optimizing, and assessing mathematical expressions. Theano is capable of taking your structures and transforming them into very efficient code that integrates with NumPy, efficient native libraries such as BLAS, and native code (C++). Furthermore, it is optimized for GPUs, provides efficient symbolic differentiation, and comes with extensive code-testing capabilities.

6. Caffe

Initially released in 2017, Caffe (Convolutional Architecture for Fast Feature Embedding) is a machine learning framework that focuses on expressiveness, speed, and modularity. The open source framework is written in C++ and comes with a Python interface. Caffe's main features include an expressive architecture that inspires innovation, extensive code that facilitates active development, fast performance that accelerates industry deployment, and a vibrant community that stimulates growth.

7. Torch

Initially released in 2002, Torch is a machine learning library that offers a wide array of algorithms for deep learning. The open source framework provides you with optimized flexibility and speed when handling machine learning projects—without causing unnecessary complexities in the process. It is written using the scripting language Lua and comes with an underlying C implementation

8. Accord.NET

Initially released in 2010, Accord.NET is a machine learning framework entirely written in C#. The open source framework is suitable for production-grade scientific computing. With its extensive range of libraries, you can build various applications in artificial neural networks, statistical data processing, image processing, and many others. Before starting to build a machine learning application, selecting one technology from the many

options out there can be a difficult task. Therefore, it's important to evaluate several options before making a final decision.

Session 3: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy and B. Srinivas, Asst Prof, CSE KITSW on Artificial Neural Network as key base of deep learning, architecture of CNN, Creating CNN and Fire Tuning of CNN Performance

In deep learning, a convolution neural network (CNN, or ConvNet) is a class of deep neural networks, is explained. It is most commonly applied to analyzing visual imagery. They are also known as shift invariant or space invariant artificial neural networks (SIANN), based on their shared-weights architecture and translation invariance characteristics.

Sir explained that the applications in image and video recognition, recommender systems, image classification, medical image analysis, and natural language processing. CNNs are regularized versions of multilayer perceptrons. Multilayer perceptrons usually mean fully connected networks, that is, each neuron in one layer is connected to all neurons in the next layer.

The "fully-connectedness" of these networks makes them prone to overfitting data. Typical ways of regularization include adding some form of magnitude measurement of weights to the loss function. However, CNNs take a different approach towards regularization: they take advantage of the hierarchical pattern in data and assemble more complex patterns using smaller and simpler patterns. Therefore, on the scale of connectedness and complexity, CNNs are on the lower extreme. Sir explained the definition, design, convolution way, pooling, full connected and receptive fields in CNN Architecture.

In this section, Sir has used a simplified CNN to build a classifier. So first use Beautiful Soup in order to remove some HTML tags and some unwanted characters. GloVe is an unsupervised learning algorithm for obtaining vector representations for words. Training is performed on aggregated global word-word co-occurrence statistics from a corpus, and the resulting representations showcase interesting linear substructures of the word vector space

Session 4: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy and B. Srinivas, Asst Prof, CSE KITSW on working with tensorflow, pytorch and keras

In this session B. Srinivas Sir has given a deep explanation on Keras, TensorFlow and PyTorch. These are among the top three frameworks that are preferred by Data Scientists as well as beginners in the field of Deep Learning. In this session comparison of these tools is stated and this comparison on Keras vs TensorFlow vs PyTorch provided participants with a crisp knowledge about the top Deep Learning Frameworks and helped in finding out which one is suitable for research.

Keras is an open source neural network library written in Python. It is capable of running on top of TensorFlow. It is designed to enable fast experimentation with deep neural networks.

TensorFlow is an open-source software library for dataflow programming across a range of tasks. It is a symbolic math library that is used for machine learning applications like neural networks.

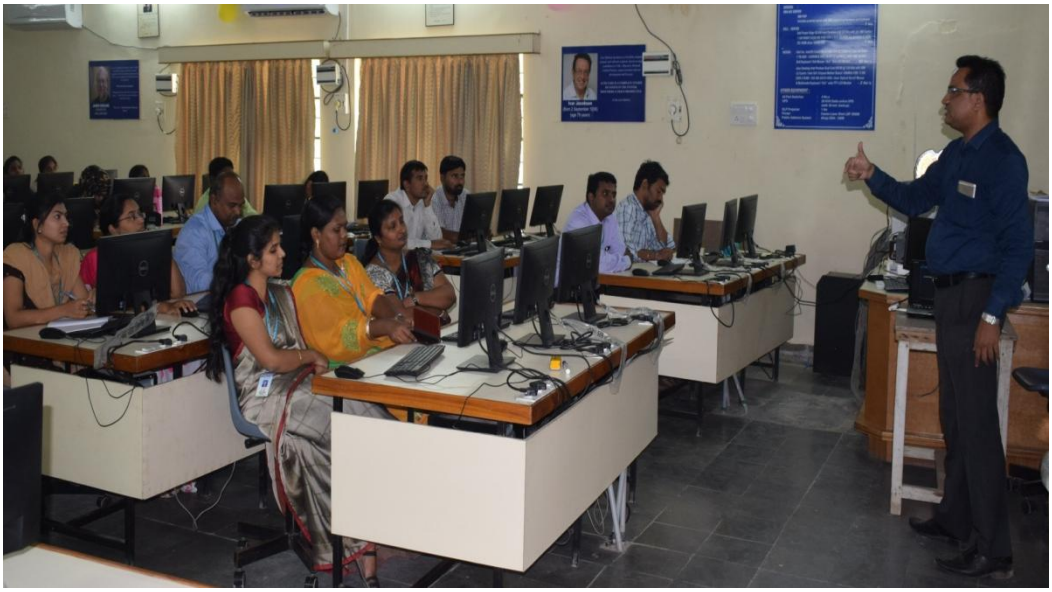
PyTorch is an open source machine learning library for Python, based on Torch. It is used for applications such as natural language processing and was developed by Facebook's AI research group.

Day 8. 19.11.2019

Session 1: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy on Implementation of ML on Cloud. BigML, Neptune and others

In this session deep learning and transfer functions in keras are shown.

Linear and Nonlinear Activation Function is shown. Different images having encoding in spatial domain instead of Frequency domain. Based on these linear and non linear graphs and equations is shown. Key Terminology like Derivative or Differential, Monotonic Function is explained. In this session Activation function Tanh-Hyperbolic Tangent is shown. With this example need of Rectified linear unit with multiple layers due to vanishing gradient problem is explained.



Session 2: A session is taken by Dr.Gourav Kumar, Managing Director, Magma Research & Consultancy on Deep Learning on Google Cloud, Implementation of deep Learning on Google Collaboratory.

In this session Classification and regression is given. Task of predicting a discrete class label and task of predicting a continuous quantity is given. In this aspect A metric is a function that is used to judge the performance of your model. Metric functions are to be supplied in the metrics parameter when a model is compiled.

Convolution Neural Networks vs Fully Connected Neural Networks is explained. Components of CNN like Input Layer, Convolution layer, ReLu, Maxpool , Fully Connected Layer is explained. Created a Sequential model by passing a list of layer instances to the constructor: this is explained as The Sequential model with linear stack of layers.

Explained with Pre-Trained Models in Keras, VGG 16/19 CNN and Pretrained Convolutional Neural Network (CNN). Installation of pytorch on google colab is explained, with playground example.

Session 3: A session is taken by N.C. Santosh, Asst. Prof. in Dept of CSE, KITSW on Computer Vision Applications using Deep Learning, Recurrent Neural Networks and Associated Functions

In this session sir has explained about computer vision applications and given different examples like SMI: System Management Interface.

Here all the the participants are given so many examples like no.of sockets i.e available slots for physical processors, no.of cores each processor is having, No. of threads each

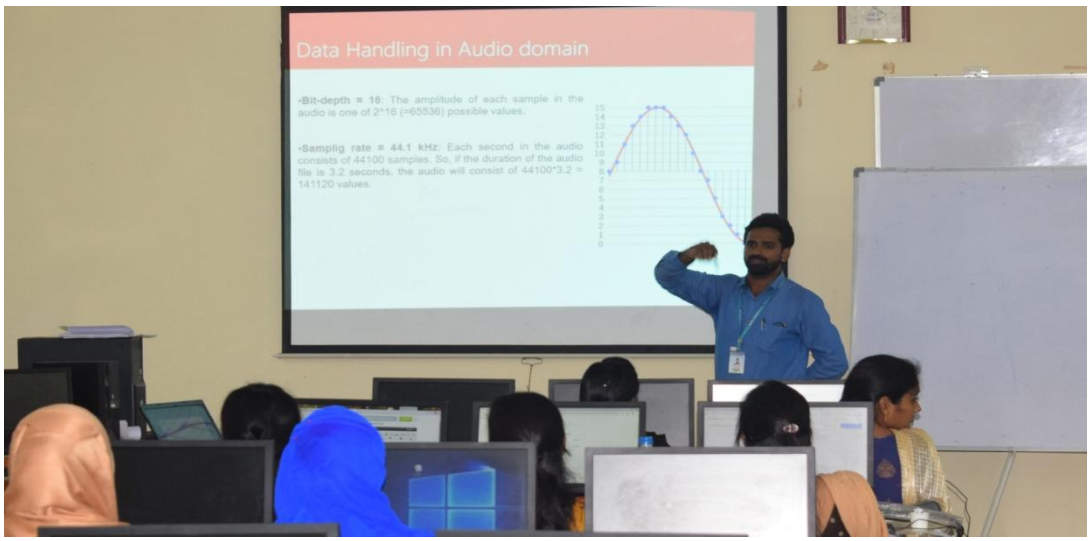
core is having, Usable Memory, sable Hard Disk, Configuration settings like GPU Based Remote System and data on allotted Virtual Machine get erased.
Sir has given hands on demo on Recurrent Neural Networks and Associated Functions

Session 4 : A session is taken by Md Sharfuddin Waseem, Asst. Prof. in Dept of CSE, KITSW on Basic Speech Processing , Speech recognition with tensorflow, Training and testing, Exploring different speech recognition datasets.

Sir Explained that we are Directly or indirectly always in contact with audio.
There are devices built which help you catch these sounds and represent it in computer readable format. Examples of these formats are wav (Waveform Audio File) format, mp3 (MPEG-1 Audio Layer 3) format, WMA (Windows Media Audio) format

It is nothing but a wave like format of data, where the amplitude of audio change with respect to time. This can be pictorial represented. Sir explained the Applications of Audio Processing, Indexing music collections according to their audio features, Recommending music for radio channels, and Similarity search for audio files.

Sir given a session on Speech processing and synthesis – generating artificial voice for conversational agents, Another way of representing audio data is by converting it into a different domain of data representation, namely the frequency domain.



Day 9. 20.11.2019

Session 1:A session is taken by Dr. Anil Kumar V, IIIT-Hyd, on speech processing current technologies.

In this session The Past, Present, and Future. Is clearly given. As Voice is the future. The world's technology giants are clamoring for vital market share, with both Google and Amazon placing voice-enabled devices at the core of their strategy. Speech Recognition in python is explained by using speech recognition application.

- Speech Recognition : Speech to Text
- Speaker Recognition: Speaker ID
- Speech Synthesis: Text to Speech
- Speech Analysis: Production Events Detection
- Speech coding: Compact Way of Representation
- Speech Enhancement: Enhancing Noisy Speech
- Language Identification: Language ID
- Voice Conversion: Converting Source Voice to Target

Voice Emotion recognition

Installation of Speech Recognition is shown. Purpose of recognizer class in speech recognition is shown with the implementation to recognize the speech. Applications of Speech Processing. Methods of Recognizing speech are seven in that few like bing, google, cloud, humidify etc. are explained. Of the seven, only recognize_sphinx() works offline with the CMU Sphinx engine. The other six all require an internet connection.

Speech Recognition History and its block diagram is explained different ways of creating audio data instance from and audio recorded by microphone is shown.

Session 2:A session is taken by Dr. Anil Kumar V, IIIT-Hyd, on speech processing current technologies, ML for Audio processing.

in this session sir has given a clear idea about Record theWAV File or Use Converter to getWAV File is shown with algorithms. Recognizing the speech using google API is explained. Speech extraction, time based using google API is explained.

- Speaker Identification
- Mobile Environment
- Issues in wireless environment
- Speaker Modelling
- Speaker Recognition system (training process)
- Speaker Recognition: Recognizing speakers by extracting and
- modeling signal processing features from the speech signal
- Classification
- Speaker verification v/s Speaker identification
- Text-dependent v/s Text-independent
- Closed set v/s Open set

Session 3: session is taken by Dr. Anil Kumar V, IIIT-Hyd, on speech processing current technologies, ML for Audio processing, speech processing using GMMs

in this session the way of accessing microphones with speech recognizer is given with PyAudio Package is shown.

Installation of PyAudio is trained to participants.

Installation procedure in Debian Linux, MacOs, Windows is explained and test of installation is shown. The microphone class is created with interpreter session and instance of recognizer class in python. Before the Deep Learning (DL) era for speech

recognition, HMM and GMM are two must-learn technology for speech recognition. Now, there are hybrid systems that combine HMM with Deep Learning and there are systems that are HMM free.

We have more design choices now. However, for many generative models, HMM remains important. But regardless of the status, speech recognition helps us to understand the application of HMM and GMM in the ML context better. So stop the long face and let's spend sometimes on it. The distribution of features for a phone can be modeled with a Gaussian Mixture Model (GMM).

Session 4: session is taken by Dr. Anil Kumar V, IIIT-Hyd. on speech processing current technologies, ML for Audio processing, speech processing using DNNs

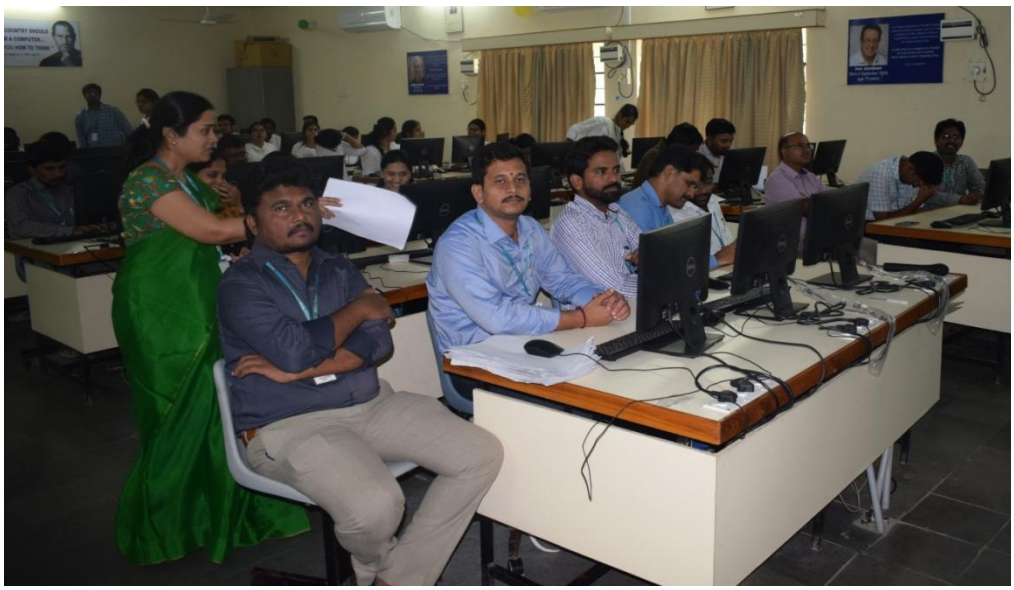
A deep neural networks (DNN) is a feed-forward artificial neural network that has more than one layer of hidden units between its inputs and its outputs. Each hidden unit, j, typically uses the logistic function to map its total input from the layer below, xj , to the scalar state, yj that it sends to the layer above.

DNN's can be discriminatively trained by back propagating derivatives of a cost function that measures the discrepancy between the target outputs and the actual outputs produced for each training case. When using the softmax output function, the natural cost function C is the cross-entropy between the target probabilities d and the outputs of the softmax.

To reduce overfitting, large weights can be penalized in proportion to their squared magnitude, or the learning can simply be terminated at the point at which performance on a held-out validation set starts getting worse. In DNNs with full connectivity between adjacent layers, the initial weights are given small random values to prevent all of the hidden units in a layer from getting exactly the same gradient.

DNN's with many hidden layers are hard to optimize. Gradient descent from a random starting point near the origin is not the best way to find a good set of weights and unless the initial scales of the weights are carefully chosen, the back propagated

gradients will have very different magnitudes in different layers. In addition to the optimization issues, DNNs may generalize poorly to held-out test data. DNNs with many hidden layers and many units per layer are very flexible models with a very large number of parameters. This makes them capable of modeling very complex and highly non-linear relationships between inputs and outputs.



This ability is important for high-quality acoustic modeling, but it also allows them to model spurious regularities that are an accidental property of the particular examples in the training set, which can lead to severe overfitting.

Day 10. 21.11.2019

Session 1: session is taken by Dr. Suryakanth V Gangashetty, IIIT-Hyderabad. on Machine Learning approaches for speech recognition

Automatic recognition of speech by machine has been a goal of research for more than four decades. In the world of science, computer has always understood human mimics. The idea which generated for making speech recognition system is because it is convenient for humans to interact with a computer, robot or any machine through speech or vocalization rather than difficult instructions. Session happened with Types of speech recognition system. Types of speech recognition system based on utterances

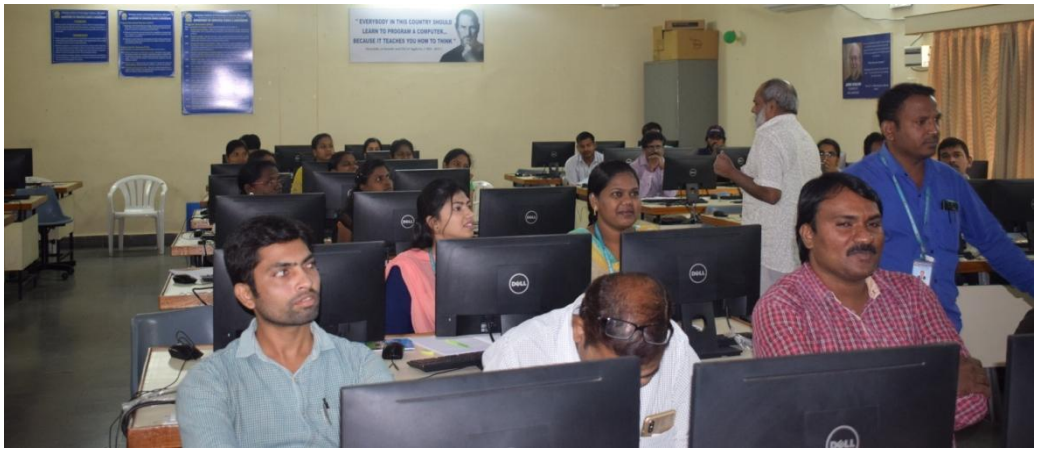
- Isolated Words
- Connected Words
- Continuous Speech
- Spontaneous Speech
- Types of speech recognition based on Speaker Model
- Speaker Dependent Models
- Speaker Independent Models
- Speaker Adaptive Models
- Types of speech recognition based on Vocabulary
- Small Vocabulary - 1 to 100 words or sentences
- Medium Vocabulary - 101 to 1000 words or sentences
- Large Vocabulary- 1001 to 10,000 words or sentences
- Very-large vocabulary - More than 10,000 words or sentences

Session 2: session is taken by Dr. Suryakanth V Gangashetty, IIIT-Hyderabad. on Implementation of speech processing and recognition

- Speech Coding
- Voice conversion
- Language Identification
- Challenges: Languages with lot of similarities
- Text and speaker independent
- Native vs non-native

Session 3: session is taken by Dr. Suryakanth V Gangashetty, IIIT-Hyderabad. on speech synthesis and voice conversion

- Speech Synthesis
- Existing: Concatenative synthesis
- Research: Statistical synthesis using HMMs
- Challenges: Multilingual on small devices
- Custom voices
- Emotion Synthesis
- Easy adoption to new languages



Session 4: session is taken by Dr. Suryakanth V Gangashetty, IIIT-Hyderabad. on speech synthesis and voice conversion

- Emotion Recognition
- Expressive Speech Processing
- Importance of prosody
- Emotion is objective
- Story telling
- Industry Interest
- Multilingual TTS over mobile

Day 11. 22.11.2019

Session 1: session is taken by Sri S.Nagaraju, Associate Professor, CSE, KITSW, on Reinforcement Learning

Definition of Reinforcement learning is given. Sir explained that it is an area of Machine Learning. It is about taking suitable action to maximize reward in a particular situation. It is employed by various software and machines to find the best possible behavior or path it should take in a specific situation. Sir said that Reinforcement learning differs from the supervised learning in a way that in supervised learning the training data has the answer key with it so the model is trained with the correct answer itself whereas in reinforcement learning, there is no answer but the reinforcement agent decides what to do to perform the given task. In the absence of training dataset, it is bound to learn from its experience. This is explained with an example problem. The problem is as follows: We have an agent and a reward, with many hurdles in between. The agent is supposed to find the best possible path to reach the reward.

The problem contains robot, diamond and fire. The goal of the robot is to get the reward that is the diamond and avoid the hurdles that are fire. The robot learns by trying all the possible paths and then choosing the path which gives him the reward with the least hurdles. Each right step will give the robot a reward and each wrong step will subtract the reward of the robot. The total reward will be calculated when it reaches the final reward that is the diamond.

Main points in Reinforcement learning –

Input: The input should be an initial state from which the model will start

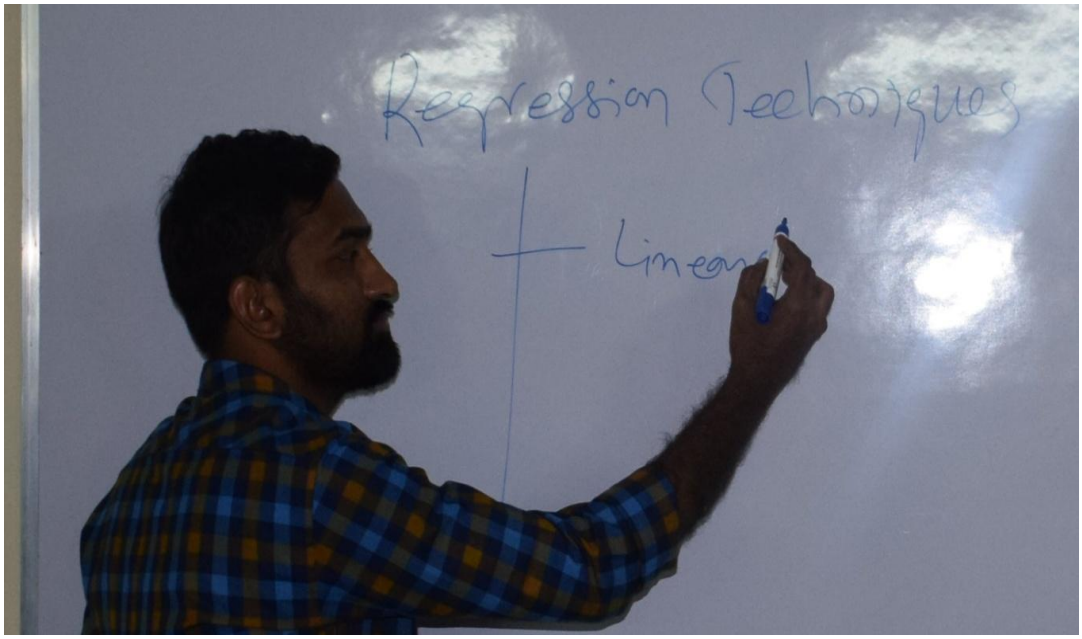
Output: There are many possible output as there are variety of solution to a particular problem

Training: The training is based upon the input, the model will return a state and the user will decide to reward or punish the model based on its output.

The model keeps continues to learn. The best solution is decided based on the maximum reward. Sir explained Difference between Reinforcement learning and Supervised learning. Sir explained the Types of Reinforcement: There are two types of Reinforcement: Positive and Negative. Sir concluded with Various Practical applications of Reinforcement Learning like RL can be used in robotics for industrial automation, RL can be used in machine learning and data processing, RL can be used to create training systems that provide custom instruction and materials according to the requirement of students.

Session 2: session is taken by Regression Techniques by Dr. D.Kumar, Asst.Prof-CSE, KITSW, On Regression Techniques.

Session started with what are regression and its 4 common Regression Techniques in Machine Learning. As we know we normally think Linear and Logistic regressions are usually the first algorithms people learn in data science. Due to their popularity, a lot of analysts even end up thinking that they are the only form of regressions. Today in this session the truth we learned is that there are innumerable forms of regressions, which can be performed. Each form has its importance and a specific condition where they are best suited to apply. In Linear Regression explained about How to obtain the best fit line (Value of a and b)?



In Logistic Regression its uses in Machine Learning and for what it is used to find the probability of event=Success and event=Failure is learned.. It is also learned that we should use logistic regression when the dependent variable is binary (0/ 1, True/ False, Yes/ No) in nature. other than basic or initial techniques sir has given Polynomial Regression A regression equation in Machine Learning if the power of the independent variable is more than 1.

Sir also explained about Stepwise Regression. Stepwise Regression is the form of regression used when we deal with multiple independent variables. In this regression technique in Machine Learning, the selection of independent variables is done with the help of an automatic process, which involves no human intervention.

Session 3: session is taken for Assessment Test and Feedback

Valedictory:

This FDP by name “Machine Learning in Speech Processing” is very special to the department as it is the first DST sponsored 2-week FDP achieved by Prof. P.Niranjan garu & B.srinivas who are the co-principal investigator and principal investigator respectively.

CSE department of KITS, Warangal is delighted to conduct this 2 Week Faculty Development Program for the benefit of research aspirants and enthusiastic academicians. We, sincerely hope that this FDP will reach the expectations in achieving its innate objective.


DST Sponsored


Kakatiya Institute of Technology & Science, Warangal
(An Autonomous Institute under Kakatya University, Warangal)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

8.COVERAGE OF INAUGURAL FUNCTION IN NEWSPAPER

PRESS AND PUBLICITY MEDIA:

FDP to enhance skills

HANS NEWS SERVICE

Warangal: The Department of Science & Technology (DST), New Delhi, sponsored two-week Faculty Development Programme (FDP) got underway at Kakatiya Institute of Technology & Science, Warangal (KITSW) here on Monday.

Kakatiya University (KU), Dean Faculty of Engineering, Prof T Sreenivasulu, who inaugurated the programme, said that the main objective of the FDP is to contribute to the cross fertilisation between the research on machine learning methods and their applications to speech processing. He emphasised the need for learning the basic algorithms that help to build and apply prediction functions with an emphasis on practical applications. He hailed KITSW for conducting FDP/Workshops regularly on par with the IITs and NITs. According to the guest of honour NITW Prof SG Sanjeevi, artificial intelligence (AI) means simulation of human intelligence and its one of application is speech processing. He highlighted the concepts and applications of machine learning. In our daily life knowingly or unknowingly we have been using the AI applications, he added.

In his presidential address, KITSW Principal Prof K Ashoka Reddy appreciated the Computer Science & Engineering (CSE) Department for conducting the FDP in addition to the three more lined in this academic year. "FDP is a technical platform to learn and share the latest developments in the research and updating the knowledge," he said.

The faculty members from various institutions including KITSW at the inauguration of FDP in Warangal on Monday

Head of the CSE Department Prof V Shankar said that FDPs will act as bridge between students and industry. The faculty must take the advantage of FDPs for their own benefits, to teach the students and also apply them in the research areas. The participant will be technically competent in the basics and practical applications for their research work and as well as to design the live projects for the UG and PG students, he added.

Telangana Today
FOR LOCAL TO GLOBAL NEWS

HYDERABAD, Wednesday, November 13, 2019

Machine Learning launched at KITSW

STATE BUREAU
Warangal Urban

A two week Faculty Development Programme (FDP) commenced at Kakatiya Institute of Technology & Science, Warangal (KITSW) on Monday. It is being organised by the department Computer Science & Engineering(CSE), KITSW, and sponsored by Department of Science & Technology (DST), New Delhi. The programme will be held from November 11 to 22.

Addressing the faculty Prof T Sreenivasulu said that the main objective of the FDP is to contribute to the cross fertilisation between the research on machine learning methods and their applications to speech processing. The participants should learn the basic algorithms that helps to build and apply prediction functions with an emphasis on practical applications. He also appreciated KITSW for conduction of FDP/Workshops regularly in equivalent to IITs and NITs for the benefit of faculty and students. Artificial Intelligence (AI) is the root of Machine learning, these are useful to create virtual world, he said.

According to the guest of honour NITW Prof S G Sanjeevi, AI means simulation of human intelligence and its one of the applications is speech processing. He also highlighted the concepts and applications of machine learning. In our daily, life knowingly or unknowingly we have been using the AI applications, he noted.

In his presidential address, principal, Prof K Ashoka Reddy appreciated the CSE department for conducting the FDP and for getting sanctioned of 3 more FDPs in this academic year. The programme was attended by convener FDP, Prof P Niranjan, coordinator B Srinvas, PRO D Prabhakara Chary, deans, HODs, faculty of KITSW including 70 other faculties from various institutes from all over the country.

సృజనాత్మక బోధన అందించాలి

- కంప్యూటర్ సైన్స్‌కు విశ్వవ్యాప్తంగా డిమాండ్
- కేయూ ఇంజినీరింగ్ కాలేజీ డీన్ ప్రొఫెసర్ శ్రీనివాసులు

భీమారం,నవంబర్11: కంప్యూటర్ సైన్స్ ఇంజినీరింగ్ విద్యార్థులకు సృజనాత్మకమైన ఆలోచనలు రేకెత్తించే విధంగా బోధన అందించాలని కాకతీయ యూనివర్సిటీ డీన్ ప్యాకల్టీ ఆఫ్ ఇంజినీరింగ్ ప్రొఫెసర్ శ్రీనివాసులు సూచించారు. గ్రేటర్ పరిధిలోని కిట్స్ కాలేజీలో "మెషీన్ లర్నింగ్ ఇన్ సిస్ట్ ప్రాసెసింగ్" అనే అంశంపై రెండు వారాల పాటు నిర్వహించనున్న సదస్సును సోమవారం ఆయన జ్యోతి ప్రజ్వలన చేసి ప్రారంభించారు. ఈ సందర్భంగా కేయూ ఇంజినీరింగ్ డీన్ ప్రొఫెసర్ శ్రీనివాసులు మాట్లాడుతూ నేడు విశ్వవ్యాప్తంగా కంప్యూటర్ సైన్స్‌కు ఎంతో డిమాండ్ ఉందని అన్నారు. మారుతున్న పరిస్థితులకు అనుగుణంగా సాంకేతిక పరిజ్ఞానాన్ని అనుసంధానం చేసుకుంటూ బోధన చేయాలన్నారు. మెషీన్ లర్నింగ్ పరిశ్రమలకు, ఆకాడమిక్‌లకు చాలా ఉపయోగపడుతుందన్నారు. నిట్ సీఎస్ఈ ప్రొఫెసర్ నంబీవ్ మాట్లాడుతూ మెషీన్ లర్నింగ్‌కు ఆర్టిఫిషియల్ ఇంటలిజెన్సీని పాంకే శీకతమ మూల పునాది అన్నారు. కిట్స్ సీఎస్ఈ విభాగాధిపతి ప్రొఫెసర్ శంకర్ మాట్లాడుతూ కంప్యూటర్ సైన్స్ టెక్నిక్స్‌తో మానవ సాంకేతిక కోర్సులను ప్రవేశపెట్టామని అన్నారు. కార్యక్రమంలో కిట్స్ కాలేజ్ ప్రిన్సిపాల్ ప్రొఫెసర్ ఆశోక్‌రెడ్డి, ఎఫ్‌డీపీ కన్వీనర్

జ్యోతి ప్రజ్వలన చేసి సదస్సును ప్రారంభిస్తున్న ప్రొఫెసర్ శ్రీనివాసులు

ప్రొఫెసర్ నిరంజన్‌రెడ్డి, అధ్యాపకులు శ్రీనివాస్, నాగరాజు, శేఖర్‌రావు, వీరయ్య ప్రభాకరాచారి, వివిధ కాలేజీలను చెందిన అధ్యాపకులు తదితరులు పాల్గొన్నారు.

మంగళవారం | నవంబర్ | 12 | 2019 సాక్షి IV గ్రేటర్ సిటీ

అధ్యాపకుడు.. తరగని విజ్ఞాన గని

హనన్‌పర్తి: విద్యార్థులకు నాణ్యమైన విద్య అందించే తరగని విజ్ఞాన గని అధ్యాపకుడని కేయూ డీన్ ఫ్యాకల్టీ ఆఫ్ ఇంజనీరింగ్ ప్రొఫెసర్ టి.శ్రీనివాసులు అన్నారు. నగరంలోని కిట్స్ ఇంజనీరింగ్ కళాశాల కంప్యూటర్ సైన్స్ అండ్ ఇంజనీరింగ్ విభాగం ఆధ్వర్యంలో 'మెషిన్ లర్నింగ్ ఇన్ స్పీచ్ ప్రాసెసింగ్' అంశంపై రెండు రోజుల పాటు జరగనున్న ఫ్యాకల్టీ డెవలప్‌మెంట్ ప్రోగ్రాం సోమవారం ప్రారంభమైంది. సైన్స్ అండ్ టెక్నాలజీ విభాగం (న్యూఢిల్లీ) సౌజన్యంతో ఈ సదస్సు ఏర్పాటు చేయగా శ్రీనివాసులు ముఖ్యఅతిథిగా మాట్లాడారు. మెషిన్ లర్నింగ్ అనేది కంప్యూటర్ ప్రోగ్రాం ఆల్గారిథమ్‌తో కూడుకున్నదని చెప్పారు. తద్వారా కాలనుగుణంగా దానంతట అదే వృద్ధి చెందుతోందని తెలిపారు.

నిట్ ప్రొఫెసర్ డాక్టర్ ఎస్‌జి. సంజీవి మాట్లాడుతూ మెషీన్ లర్నింగ్ అనేది ఆర్టిఫిషియల్ ఇంటలిజెన్స్‌కు మూల పునాది అని వివరించారు. కంప్యూటర్ సైన్స్ విభాగాధిపతి ప్రొఫెసర్ శంకర్ మాట్లాడుతూ ఫ్యాకల్టీ డెవలప్‌మెంట్ ప్రోగ్రాంకు వివిధ ప్రాంతాల నుంచి 170 దరఖాస్తులు రాగా 70 మందిని ఎంపిక చేసినట్లు వివరించారు. ప్రిన్సిపాల్ డాక్టర్ కె.అశోక్‌రెడ్డి మాట్లాడగా ప్రొఫెసర్ పి.నిరంజన్, బానోతు శ్రీనివాస్, డాక్టర్ చంద్రశేఖర్‌రావు, డాక్టర్ ప్రభాకరాచారి, నాగరాజు పాల్గొనారు.

జ్యోతి ప్రజ్వలన చేస్తున్న శ్రీనివాసులు

సమావేశంలో పాల్గొన్న అధ్యాపకులు

కిట్స్‌లో ముగిసిన సదస్సు

భీమారం, న్యూస్‌టుడే: హసన్‌పర్తి మండలం భీమారంలోని కిట్స్ ఇంజినీరింగ్ కళాశాలలో సీఎస్‌ఈ విభాగం ఆధ్వర్యంలో ఈనెల 11 నుంచి 22 వరకు నిర్వహించిన ఫ్యాకల్టీ డెవలప్‌మెంట్ ప్రోగ్రాం శుక్రవారం సాయంత్రం ముగిసినట్లు కళాశాల ప్రిన్సిపల్ ప్రొఫెసర్ కె.అశోక్ రెడ్డి ఒక ప్రకటనలో తెలిపారు. అనంతరం అధ్యాపకులకు ధ్రువీకరణ పత్రాలను ప్రొఫెసర్ అశోక్‌రెడ్డి అందజేశారు. కార్యక్రమంలో సీఎస్‌ఈ విభాగాధిపతి ప్రొఫెసర్ వి. శంకర్, ఫ్యాకల్టీ కో-ఆర్డినేటర్ బి.శ్రీనివాస్, డి.ప్రభాకరాచారి తదితరులు పాల్గొన్నారు.

9. ATTENDANCE STATEMENT

KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
DST-FDP (Machine Learning In Speech Processing) Attendance Sheet- November 2019

S.No	Name	11/11/2019		12/11/2019		13/11/2019		14/11/2019		15/11/2019		16/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	Dr.Seena Naik Korra												
2	Dr.E.Sudharshan												
3	Dr.S.Venkateshulu												
4	Mr.B.Raju						A						
5	Mr.B.Yakoob												
6	Mr.A.Srinivas												
7	Dr.M. Chandrasekar												
8	Dr.B.Dhanalaxmi												
9	Dr.G. Rajender Naik												
10	Mr.B.Raghu ram												
11	G.Ashmitha												
12	MrD.Ramesh									A	A		
13	Mr.Ajmeera Ramesh												
14	Dr.Jarabala Ranga												
15	Dr.H.Balaji	A	A										
16	Mr.V.Srinu						A						

S.No	Name	11/11/2019		12/11/2019		13/11/2019		14/11/2019		15/11/2019		16/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
17	Mr.B.Venkanna	Vele	Vele	Vele	Vele	Vele	Vele	Vele	Vele	Vele	Vele	Vele	Vele
18	G.Shantha	Co	Co	Co	Co	Co	Co	A	A	Co	Co	Co	Co
19	Mr.Ramdas vankdothu	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd	Ramd
20	Mr.Ramu vankdoth	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram
21	Mr.B.Hanumanthu	B	B	B	B	B	B	B	B	B	B	B	B
22	Rega Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani
23	Punem Srijanya	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
24	B. Shobhan	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh	Shobh
25	M. Veeranna	M	M	M	M	M	AN	M	M	M	M	M	M
26	Mr.Pathlavath Ganesh	Co	Co	Co	Co	Co	Co	Co	Co	Co	Co	A	Co
27	Mr.Premsing padia	Prem	Prem	Prem	Prem	Prem	Prem	Prem	AN	Prem	Prem	Prem	Prem
28	Mr.M Swapna	Swapn	Swapn	Swapn	Swap	Swap	Swapn	Swapn	Swapn	Swapn	A	Swapn	Swapn
29	Bhukya Suresh	Bsh	Bsh	Bsh	Bsh	A	Bsh	Bsh	Bsh	Bsh	Bsh	Bsh	Bsh
30	Gugulothu Praveen	praveen	praveen	praveen	praveen	praveen	praveen	praveen	praveen	praveen	praveen	A	praveen
31	Banothu Upendar	U	U	U	U	U	A	U	U	U	U	U	U
32	Bhukya Rani	Rani	Rani	Rani	Rani	Rani	Rani	Rani	A	Rani	Rani	Rani	Rani
33	Bhukya Balakrishna	Bala	Bala	Bala	Bala	Bala	Bala	Bala	Bala	Bala	Bala	Bala	Bala
34	Mr.M.Kishore Kumar	MK	MK	MK	MK	MK	A	MK	MK	MK	MK	MK	A
35	Mr.Rajesh mothe	R	R	R	R	R	R	R	R	R	R	R	R

S.No	Name	11/11/2019		12/11/2019		13/11/2019		14/11/2019		15/11/2019		16/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
36	D.Mahesh												
37	Mr.K.Ravi Chaitanya												
38	Mr.A.Harsh vardhan												
39	Dr.B.Krishna												
40	N.Lavanya												
41	Dr.J.Srikanth												
42	S.Gouthami												
43	Mr.B.Kiran Kumar											A	
44	Mr.M.Kishore												
45	Mr.G.Sridhar					A							
46	Mr.B.Raju			A									
47	G.Rekha												
48	V.Gouthami						A						
49	Mr.A.Pavan												
50	Mr.Syed abdul mooed												
51	T.Aaradhana								A				
52	Mr.M.Venugopal Reddy											A	
53	Dr.S S S Reddy				A								
54	Dr.S Laxmi sunaina												A

S.No	Name	11/11/2019		12/11/2019		13/11/2019		14/11/2019		15/11/2019		16/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
55	Dr.Ravindra babu K							A	A				
56	Dr.S.Jayalaxmi												
57	Mr.Ch.S.K.B.Pradeep Kumar					A	A						A
58	Mr.G.V.Subba.Reddy												
59	Mr.P.Srinivas Rao												
60	Dr.P.Kamakshi												
61	Dr.V.Shankar												
62	V.Swathy												
63	Mr.P.Vijay Kumar												
64	Mr.B.Sridhara murthy												
65	Dr.V.Chandra Shekar Rao												
66	Mr.Yerrolla Chanti												
67	Dr.T.Amitha							A					
68	T.Chaitanya								A				
69	Mr.S.Venkataramulu												
70	S.Swapna							A			A		
71	Mr.K.Johnson											A	

KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DST-FDP (Machine Learning In Speech Processing) Attendance Sheet- November 2019

No	Name	18/11/2019		19/11/2019		20/11/2019		21/11/2019		22/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	Dr.Seena Naik Korra										
2	Dr.E.Sudharshan										
3	Dr.S.Venkateshulu										
4	Mr.B.Raju										
5	Mr.B.Yakoob										
6	Mr.A.Srinivas										
7	Dr.M. Chandrasekar										
8	Dr.B.Dhanalaxmi										
9	Dr.G. Rajender Naik										
10	Mr.B.Raghu ram										
11	G.Ashmitha										
12	MrD.Ramesh										
13	Mr.Ajmeera Ramesh			A	A						
14	Dr.Jarabala Ranga					A	A				
15	Dr.H.Balaji										
16	Mr.V.Srinu										

.No	Name	18/11/2019		19/11/2019		20/11/2019		21/11/2019		22/11/2019	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
17	Mr.B.Venkanna	Venk	Venk	Venk	Venk	Venk	Venk	Venk	Venk	Venk	Venk
18	G.Shantha	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca	Ca
19	Mr.Ramdas vankdothu	Ramdas	Ramdas	Ramdas	Ramdas	Ramd	Ramdas	Ramdas	Ramd	Ramd	Ramd
20	Mr.Ramu vankdoth	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram	Ram
21	Mr.B.Hanumanthu	B	B	B	B	B	B	B	B	B	B
22	Rega Sravani	S ravan	Sravan	Sravan	Sravan	Sravan	S ravan	Sravan	Sravan	S ravan	Sravani
23	Punem Srijanya	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
24	B. Shobhan	Shob	Shob	Shob	Shob	Shob	Shob	Shob	Shob	Shob	Shob
25	M. Veeranna	M	M	M	M	M	M	M	M	M	M
26	Mr.Pathlavath Ganesh	Gan	Gan	Gan	Gan	Gan	Gan	Gan	Gan	Gan	Gan
27	Mr.Premsing padia	Prem	Prem	Prem	Prem	A	Prem	Prem	Prem	Prem	Prem
28	Mr.M Swapna	Swapn	Swapn	Swapn	A	Swapn	Swapn	Swapn	Swapn	Swapn	Swapn
29	Bhukya Suresh	Bsu	Bsu	Bsu	Bsu	Bsu	Bsu	A	Bsu	Bsu	Bsu
30	Gugulothu Praveen	praveen	praveen	praveen	praveen	praveen	praveen	praveen	A	praveen	praveen
31	Banothu Upendar	Upe	Upe	A	Upe	Upe	Upe	Upe	Upe	Upe	Upe
32	Bhukya Rani	Rani	Rani	Rani	Rani	Rani	A	Rani	Rani	Rani	Rani
33	Bhukya Balakrishna	Balq	Balq	Balq	Balq	Balq	Balq	balq	A	balq	balq
34	Mr.M.Kishore Kumar	MK	MK	MK	MK	A	MK	MK	MK	MK	MK
35	Mr.Rajesh mothe	R	Rj	Rj	A	Rj	Rj	Rj	Rj	Rj	Rj

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36	D.Mahesh										
37	Mr.K.Ravi Chaitanya										
38	Mr.A.Harsh vardhan										
39	Dr.B.Krishna										
40	N.Lavanya										
41	Dr.J.Srikanth										
42	S.Gouthami										
43	Mr.B.Kiran Kumar					A	A				
44	Mr.M.Kishore										
45	Mr.G.Sridhar										
46	Mr.B.Raju										
47	G.Rekha										
48	V.Gouthami										
49	Mr.A.Pavan										
50	Mr.Syed abdul mooed										
51	T.Aaradhana					A			A		
52	Mr.M.Venugopal Reddy										
53	Dr.S S S Reddy						A				A
54	Dr.S Laxmi sunaina						A				A

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		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
55	Dr.Ravindra babu K										
56	Dr.S.Jayalaxmi						A				
57	Mr.Ch.S.K.B.Pradeep Kumar										
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10. ASSESSMENT OF THE PARTICIPANTS

Assessment Test Paper

1. What is Machine learning?
A. Acquisition of knowledge through the use of computer programs
B. Manual programs with classification
C. IoT based implementations
D. Knowledge Acquisition with manual executions

2. Which of the factors affect the performance of machine learning system ?
A. Accuracy
B. Error
C. None of these
D. Both of these

3. Different learning methods does not include?
A. Memorization
B. Analogy
C. Deduction
D. Introduction

4. Which of the following is used to install additional packages with Python
A. py install packagename
B. pip integrate packagename
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5 Which of the following is an example of a deterministic algorithm?
A. PCA
B. K-Means
C. None of the above
D. Both of these

6. Which instruments are used for perceiving and acting upon the environment?
A. Sensors and Actuators
B. Sensors
C. Perceiver

D. None of the mentioned

7. Which of the following is used for data science and machine learning?
A. Python
B. Weka
C. Anaconda
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8. Which of the following is used to write, test and execute the Python code ?
A. R Studio
B. Matplotlib
C. Turbo Editor
D. Spyder

9. Which of the following is/are true about bagging trees? 1. In bagging trees, individual trees are independent of each other. 2. Bagging is the method for improving the performance by aggregating the results of weak learners
A. 1
B. 2
C. 1 and 2
D. None of these

10. Which of the following is/are true about boosting trees? Statement 1: In boosting trees, individual weak learners are independent of each other. Statement 2: It is the method for improving the performance by aggregating the results of weak learners
A. 1
B. 2
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11 Which of the following is/are true about Random Forest and Gradient Boosting ensemble methods?

Statement

1: Both methods can be used for classification task Statement

2: Random Forest is use for classification whereas Gradient Boosting is use for regression task Statement

3: Random Forest is use for regression whereas Gradient Boosting is use for Classification task Statement

4: Both methods can be used for regression task

A. 1
B. 2
C. 3
D) 1 and 4

12. Which of the following is associated with Random Forest Approach
A. Voting
B. Data Collection
C. Data Cleaning

D. None of these

13. Python code can be saved with _____ extension
A. py
B. pyc
C. ipy
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14. Which of the following algorithm doesn't uses learning Rate as of one of its hyperparameter?
A. Gradient Boosting
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15. Which of the following algorithm is not an example of ensemble learning algorithm?
A. Random Forest
B. Adaboost
C. Extra Trees
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16. To integrate and activate the package, which of the following is used in Python ?
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B. No
C. Machine dependent

D. None of the mentioned

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B. Natural Linguistic Processing
C. Natural Language Processing
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Department of Science & Technology, Sponsored, Govt. of India

Two Week Faculty Development Programme on

"Machine Learning in Speech Processing"

11th to 22nd November, 2019

Organized by

DEPARTMENT OF CSE

48/50

Date: 22-11-2019

Name: G. V. Subba Reddy Designation: Asst. Professor

Email: gvsreddy.005@gmail.com Branch: ECE

Mobile: 9640774091 College: GRIET.

Multiple Choice Questions

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11. ON PAPER FEEDBACK FROM PARTICIPANTS

DST Sponsored Two Week Faculty Development Programme

On

"MACHINE LEARNING IN SPEECH PROCESSING"
11 - 22 November, 2019

Organized by
Department of Computer Science & Engineering

KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL - 506015 (TS)
(An Autonomous Institute under Kakatiya University)

22-11-2019

FDP FEEDBACK FORM

Dear Participant, Feedback not only enables the organizers of the program to assess the effectiveness of the training conducted, but it also throws up some good suggestions that can be incorporated in the courses to be organized in future. Please tick the relevant evaluation option under all the heads

****

1. How well the FDP has achieved its objectives?

(a) Very well (b) Reasonably well (c) Average

2. How do you rate the overall design of the FDP

	Please tick appropriate option ⟶	Very Good	Good	Average
i	Clarity of communication about FDP			
ii	Organization of sessions			
iii	Quality of lectures			
iv	Effectiveness of discussions			
v	Effectiveness of learning experience			
vi	Laboratory Facility			
vi	Hospitality			

3. How do you rate the quality of lectures?

Date	Speaker	Gave a Talk on	Very Good	Good	Average
11/11/2019	**Prof. S. G. Sanjeevi, NIT Warangal**	Key note on Machine Learning			
	Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW	Research methodology – An overview			
12/11/2019	**Dr. Manjubala Bisi, Assistant Professor, Dept of CSE, NIT Warangal**	Machine Learning Applications			
		Introduction to Artificial Neural Networks			
	Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW	Classification Techniques			
		Implementation of Classification Techniques			
13/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	Deep Learning, Data Science and its Applications			
		Open Source Frameworks and Tools for Data Science and Analytics			
		Machine Learning Library of WEKA and its features Installation and Working with WEKA			
		-Training and Validation with WEKA Library			
14/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	Introduction to Python Language, installation and Working Environment			
		-PyPi Package Installer			
		-Supervised and Unsupervised Learning with Case Studies			
		-Key Implementations with Python based on Machine Learning			
15/11/2019	**Dr. Gourav Kumar, Managing Director,Magma Research&Consultancy pvt.ltd.**	-Clustering Data using K-Means Algorithm and its implementation in Python			

15/11/2019		Ensemble Learning and Algorithms			
		Building Classification Models and Evaluation of Performance			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Building Classification Models			
	B. Srinivas, Assistant Professor, Dept of CSE, KITSW	Classification Evaluation of Performance			
16/11/2019	**Dr. S. Suresh Kumar, HoD, Dept. of IT, JNTUCEJ**	-Decision Tree Introduction			
		-Decision Tree Learning with Case Studies			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	-Machine Learning using Statistical Analytics with R Tools			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Machine Learning using Scikit Learn			
	B. Srinivas, Assistant Professor, Dept of CSE, KITSW	Online Assessment Test			
18/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	Working with OpenCV for Machine Learning in Computer Vision Machine Learning using High Performance Julia Tools			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Open Source Tools for Deep Learning Neural Networks Algorithms Using TensorFlow			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Artificial Neural Networks as Key Base of Deep Learning Architecture of CNN, Creating CNN and Fine Tuning of CNN Performance			

	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	-Working with TensorFlow, PyTorch and Keras			
19/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	-Implementation of Machine Learning on Cloud: BigML, Neptune and others			
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Deep Learning on Google Cloud Implementation of Deep Learning on Google Colaboratory			
	N.C. Santhosh Kumar, Assistant Professor, Dept of CSE, KITSW	Computer Vision Applications using Deep Learning Recurrent Neural Networks and Associated Functions			
19/11/2019	**Sharfuddin Waseem Assistant Professor, Dept of CSE, KITSW**	Basic Speech Processing Speech recognition with tensorflow -Training and testing -Exploring different speech recognition datasets			
20/11/2019	**Dr. Anil Kumar Vuppala, IIIT Hyderabad**	Speech processing current challenges			
		Machine Learning for Audio Processing.			
		Implementation of Speach recognition using GMMs			
		Implementation of Speach recognition using DNNs			
21/11/2019	**Dr. Suryakanth V Gangashetty, IIIT Hyderabad**	Machine Learning Approaches for Speech Recognition			
		Implementation of Speech Processing and recognition			
		Speech Synthesis and Voice Conversion			
		Speech Synthesis and Voice Conversion			
22/11/2019	**S. Nagaraju, Associate Professor, Dept of CSE, KITSW**	Reinforcement Learning			
	Dr. D. Kumar, Assistant Professor, Dept of CSE, KITSW	Regression Techniques			

22/11/2019	**B. Srinivas, Assistant Professor, Dept of CSE, KITSW** **B.Raju, Assistant Professor, Dept of CSE, KITSW** **Syed Abdul Moeed, Assistant Professor, Dept of CSE, KITSW**	Assessment Test Feedback			
		Valedictory			

4. Please list out topics that you expected, if any, but not covered in this FDP?

5. How do you rate the Laboratory Sessions?

(a) Very Good (b) Good (c) Average

6. Whether FDPs like this should be organized here in the coming future ?. If Yes, Please suggest the subject areas in which you want us to organize FDPs.

7. Please fill-up your personal details here:

Name	
Mobile Number	
Email	
Designation	
Department	
Name of Institute	
Address	
Pin code	

Signature of the Participant Signature of DST FDP Coordinator

DST Sponsored Two Week Faculty Development Programme

On

"MACHINE LEARNING IN SPEECH PROCESSING"
11 - 22 November, 2019

Organized by
Department of Computer Science & Engineering

KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE, WARANGAL - 506015 (TS)
(An Autonomous Institute under Kakatiya University)

22-11-2019

FDP FEEDBACK FORM

Dear Participant, Feedback not only enables the organizers of the program to assess the effectiveness of the training conducted, but it also throws up some good suggestions that can be incorporated in the courses to be organized in future. Please tick the relevant evaluation option under all the heads

****

1. How well the FDP has achieved its objectives?

(a) Very well (b) Reasonably well (c) Average

2. How do you rate the overall design of the FDP

	Please tick appropriate option ⟶	Very Good	Good	Average
i	Clarity of communication about FDP	✓		
ii	Organization of sessions	✓		
iii	Quality of lectures	✓		
iv	Effectiveness of discussions	✓		
v	Effectiveness of learning experience	✓		
vi	Laboratory Facility	✓		
vi	Hospitality	✓		

3. How do you rate the quality of lectures?

Date	Speaker	Gave a Talk on	Very Good	Good	Average
11/11/2019	Prof. S. G. Sanjeevi, NIT Warangal	Key note on Machine Learning	✓		
	Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW	Research methodology – An overview	✓		
12/11/2019	Dr. Manjubala Bisi, Assistant Professor, Dept of CSE, NIT Warangal	Machine Learning Applications	✓		
		Introduction to Artificial Neural Networks	✓		
	Dr. S. Narasimha Reddy, Associate Professor, Dept of CSE, KITSW	Classification Techniques	✓		
		Implementation of Classification Techniques	✓		
13/11/2019	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Deep Learning, Data Science and its Applications	✓		
		Open Source Frameworks and Tools for Data Science and Analytics	✓		
		Machine Learning Library of WEKA and its features Installation and Working with WEKA	✓		
		-Training and Validation with WEKA Library	✓		
14/11/2019	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Introduction to Python Language, installation and Working Environment	✓		
		-PyPi Package Installer	✓		
		-Supervised and Unsupervised Learning with Case Studies	✓		
		-Key Implementations with Python based on Machine Learning	✓		
15/11/2019	Dr. Gourav Kumar, Managing Director,Magma Research&Consultancy pvt.ltd.	-Clustering Data using K-Means Algorithm and its implementation in Python		✓	

		Ensemble Learning and Algorithms	✓		
		Building Classification Models and Evaluation of Performance	✓		
15/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	Building Classification Models		✓	
	B. Srinivas, Assistant Professor, Dept of CSE, KITSW	Classification Evaluation of Performance	✓		
16/11/2019	**Dr. S. Suresh Kumar, HoD, Dept. of IT, JNTUCEJ**	-Decision Tree Introduction	✓		
		-Decision Tree Learning with Case Studies	✓		
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	-Machine Learning using Statistical Analytics with R Tools	✓		
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Machine Learning using Scikit Learn	✓		
	B. Srinivas, Assistant Professor, Dept of CSE, KITSW	Online Assessment Test	✓		
18/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	Working with OpenCV for Machine Learning in Computer Vision Machine Learning using High Performance Julia Tools	✓		
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Open Source Tools for Deep Learning Neural Networks Algorithms Using TensorFlow		✓	
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Artificial Neural Networks as Key Base of Deep Learning Architecture of CNN, Creating CNN and Fine Tuning of CNN Performance	✓		

	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	-Working with TensorFlow, PyTorch and Keras		✓	
19/11/2019	**Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.**	-Implementation of Machine Learning on Cloud: BigML, Neptune and others	✓		
	Dr. Gourav Kumar,Managing Director,Magma Research&Consultancy pvt.ltd.	Deep Learning on Google Cloud Implementation of Deep Learning on Google Colaboratory	✓		
	N.C. Santhosh Kumar, Assistant Professor, Dept of CSE, KITSW	Computer Vision Applications using Deep Learning Recurrent Neural Networks and Associated Functions	✓		
19/11/2019	**Sharfuddin Waseem Assistant Professor, Dept of CSE, KITSW**	Basic Speech Processing Speech recognition with tensorflow -Training and testing -Exploring different speech recognition datasets	✓		
20/11/2019	**Dr. Anil Kumar Vuppala, IIIT Hyderabad**	Speech processing current challenges	✓		
		Machine Learning for Audio Processing.	✓		
		Implementation of Speach recognition using GMMs	✓		
		Implementation of Speach recognition using DNNs	✓		
21/11/2019	**Dr. Suryakanth V Gangashetty, IIIT Hyderabad**	Machine Learning Approaches for Speech Recognition	✓		
		Implementation of Speech Processing and recognition	✓		
		Speech Synthesis and Voice Conversion	✓		
		Speech Synthesis and Voice Conversion	✓		
22/11/2019	**S. Nagaraju, Associate Professor, Dept of CSE, KITSW**	Reinforcement Learning	✓		
	Dr. D. Kumar, Assistant Professor, Dept of CSE, KITSW	Regression Techniques	✓		

22/11/2019	B. Srinivas, Assistant Professor, Dept of CSE, KITSW B.Raju, Assistant Professor, Dept of CSE, KITSW Syed Abdul Moeed, Assistant Professor, Dept of CSE, KITSW	Assessment Test Feedback	✓		
		Valedictory			

4. Please list out topics that you expected, if any, but not covered in this FDP?

very good sessions.

5. How do you rate the Laboratory Sessions?

✓(a) Very Good (b) Good (c) Average

6. Whether FDPs like this should be organized here in the coming future ?. If Yes, Please suggest the subject areas in which you want us to organize FDPs.

7. Please fill-up your personal details here:

Name	Ramdas Vankdoth
Mobile Number	9703359402
Email	Viramdas726sap@gmail.com
Designation	Ph.D scholar
Department	CSE
Name of Institute	Osmania University
Address	Osmania University Campus, Hyd.
Pin code	-

Ramdas

Signature of the Participant

Signature of DST FDP Coordinator

12. VALEDICTORY FUNCTION AND CERTIFICATE DISTRIBUTION

This FDP by name “Machine Learning in Speech Processing” is very special to the department as it is the first DST sponsored 2-week FDP achieved by Prof. P.Niranjan garu & B.srinivas who are the co-principal investigator and principal investigator respectively.

CSE department of KITS, Warangal is delighted to conduct this 2 Week Faculty Development Program for the benefit of research aspirants and enthusiastic academicians. We, sincerely hope that this FDP will reach the expectations in achieving its innate objective.

సమావేశంలో పాల్గొన్న అధ్యాపకులు

కిట్స్‌లో ముగిసిన సదస్సు

భీమారం, న్యూస్‌టుడే: హసన్‌పర్తి మండలం భీమారంలోని కిట్స్ ఇంజినీరింగ్ కళాశాలలో సీఎస్‌ఈ విభాగం ఆధ్వర్యంలో ఈనెల 11 నుంచి 22 వరకు నిర్వహించిన ఫ్యాకల్టీ డెవలప్‌మెంట్ ప్రోగ్రాం శుక్రవారం సాయంత్రం ముగిసినట్లు కళాశాల ప్రిన్సిపల్ ప్రొఫెసర్ కె.అశోక్ రెడ్డి ఒక ప్రకటనలో తెలిపారు. అనంతరం అధ్యాపకులకు ధ్రువీకరణ పత్రాలను ప్రొఫెసర్ అశోక్‌రెడ్డి అందజేశారు. కార్యక్రమంలో సీఎస్‌ఈ విభాగాధిపతి ప్రొఫెసర్ వి.శంకర్, ఫ్యాకల్టీ కో-ఆర్డినేటర్ బి.శ్రీనివాస్, డి.ప్రభాకరాచారి తదితరులు పాల్గొన్నారు.


DST Sponsored


Kakatiya Institute of Technology & Science, Warangal
(An Autonomous Institute under Kakatya University, Warangal)
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

13. UTILIZATION CERTIFICATE AND STATEMENT OF EXPENDITURE