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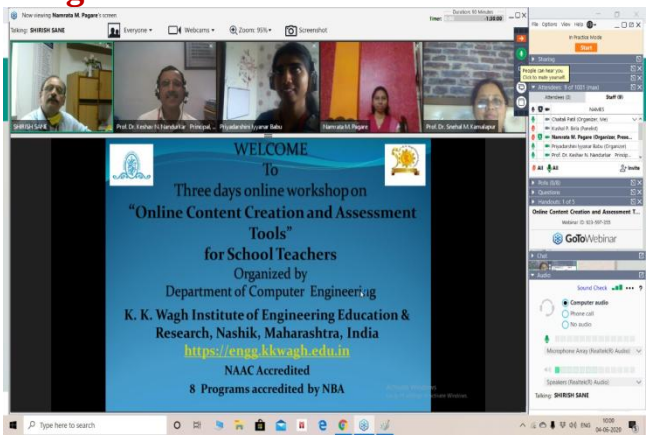
3-Days State Level Online Workshop on "Online Content Creation and Assessment Tools" for School Teachers using GoToWebinar



3-Days State Level Online Workshop on "Online Content Creation and Assessment Tools" for School Teachers was conducted from 4th June 2020 to 6th June 2020 by Department of Computer engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik. With an objective to develop and improve the user's understanding of creating a presentation, videos ,blended learning platform ,various open educational resources and to do formative assessment using online tools. The sessions were conducted by Prof. Dr. S. S. Sane , Prof. Dr. S. M. Kamalapur, Prof. Dr. Vandana Bagal, Prof. S. K. Gondhalekar , Prof. P. V. Gautam , Prof. I. Priyadarshini and Prof. K. P. Birla for three days. In total 1700 participants are benefited by the workshop. The workshop was coordinated by Prof. Dr. S. M. Kamalapur and Prof. I. Priyadarshini.

Expert talk on BE Projects: Selection to Implementation Using Google Meet

Department of Computer Engineering, organized an expert talk on BE Project: Selection to Implementation on 26th June, 2020 through google meet (https://meet.google.com/cqr-zhoy-bxu). Prof. Dr. P. N. Mahalle, Professor and Head, Department of Computer Engineering, Sinhgad Technical Education Society's, Smt. Kashibai Navale College of Engineering, Pune were invited as the expert speaker. He discussed various points to be considered while selecting the title for BE projects. He began the session by mentioning the four important things every student requires to get a good placement which includes, good problem solving skills, being a quick learner, able to apply the knowledge and have good soft skills. He mentioned that BE project is actually an application of knowledge gained from the first year and students should always ask oneself what problem project solves, after selecting a project title. He also mentioned to view the course objectives while selecting the topic and make sure that project revolves around these course objectives. He then mentioned the 5E's of the project which were Energy Awareness, Efficiency Improved, Environment Friendly, Economy of Project, Effectiveness of Project. Total 89 students and faculties attended the session. The session ended with lively question and answer session. The session was very fruitful and informative. The session was coordinated by Prof. Dr. S. M. Kamalapur and Prof. M. P. Mahajan under the guidance of Prof. Dr. S. S. Sane.

Expert talk on Every programmer must know… "NODE JS and RESTFUL API Development"

More than 100 students from the final year of Computer, IT and MCA attended an online Expert talk on Topic: Every programmer must know... "NODE JS and RESTFUL API Development" Presenter: Mr. Akshay Borase, Project Engineer, Persistent Systems Ltd. The talk was arranged 04/7/2020 by dept. of computer engineering. The talk was coordinated by Prof. K. P. Birla and Prof. S. M. Malao under the guidance of Head of Department Prof. Dr. S. S. Sane.

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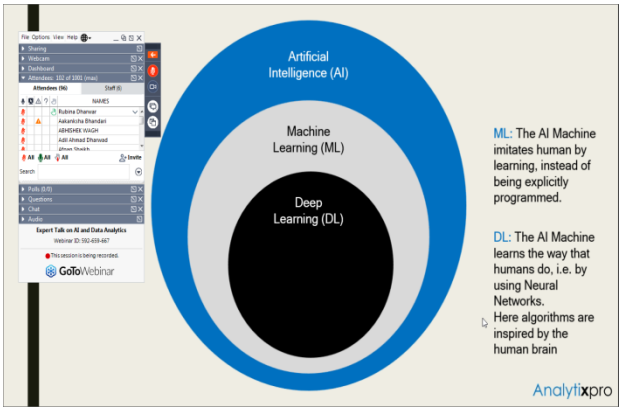
Expert talk on Topic: rtificial Intelligence and applications of AI in the real world""

More than 100 students from the final year of Computer, IT and MCA attended an online Expert talk on Topic: "Artificial Intelligence and applications of AI in the real world" Presented by Prof. Mausami Munot (PICT) organized on 11/7/2020 by dept. of computer engineering. The talk was coordinated by Prof. K. P. Birla, Prof. N. G. Sharma, Prof. S. M. Malao under the guidance of Head of Department Prof. Dr. S. S. Sane.

Online Webinar on "AI and Data Analytics" using GoToWebinar



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Online Webinar on "AI and Data Analytics" was conducted from 17thJuly 2020 by department of Computer engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik under debuggers club. The session was conducted from 04:00 pm to 05:00 pm.

The objectives of this online webinar were

To identify different career opportunities for Engg. students in the field of AI and data science

To understand fundamentals of AI and data science

Session was conducted by Mr. Megha Shyam, IBM certified Data Scientist from Hyderabad and Mr. Kiran Babu C V, Accredited Data Science Trainer. They covered the fundamental topics from AI and data science and recent trends in it. They also talked about various job prospects in AIDS. The webinar was coordinated by Prof. S. M. Kamlapur, Prof. C. R. Patil and Prof. S. T. Patil along with staff members of Computer Engineering department.

Guidance session on How to face interviews

A Guidance session on "How to face interviews" by Mr. Shrikant Karode for the Final Year Computer Engineering students was organized on 23rd July 2020 by Dr. S. S. Sane, Prof. N. G. Sharma & Prof. R. H. Jadhav. The session was conducted online through GoToWebinar. Mr. Karode guided students on the following topics:

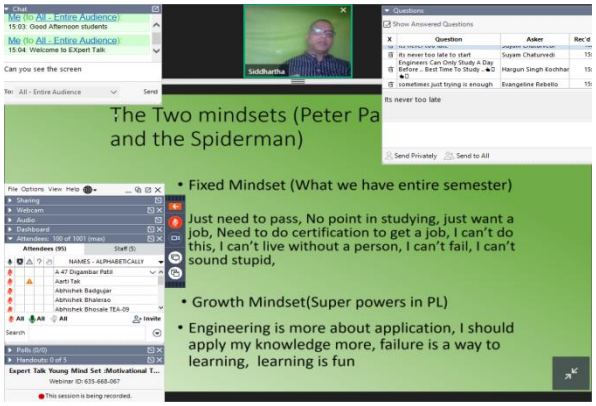
Ethics to be followed during interview Attitude

Importance of communication skills Eye contact, dress code Do's and don'ts for the interview

Following Faculty members attended the session: Dr. S. S. Sane, Prof. N. G. Sharma, Prof. R. H. Jadhav and Prof. S. A. Gade

Mr. Satwik Kolhe & Prof. Dr. S. M. Kamalapur & Ms. Mrunalee Deore & Prof. J. R. Mankar , received best paper award for the research papers presented in 9th cPGCON 2020 held at AVCOE , Sangamner on 10th and 11th July 2020

Webinar on Motivational Talk: Young Mind Set



Online Webinar on "Young Mind Set" was conducted on 10thAug 2020 by department of Computer engineering under debuggers club.

The objectives of this online webinar were

- To differentiate between fixed mind set and Growth based mind set
- To help them to change professional or personal change in their lives and within themselves.

The speaker of this session was Mr. SIDDHARTHA SHARMA, Master Trainer and Facilitator (CAMI-USA) , Neuro Linguistics Practitioner. He told about how to get from a fixed mindset to a growth mindset. He gave some most beneficial points and tips to the students to concentrate on studies and achieve their goals. The session also focused on making the

students build positive ‘self- esteem ‘and discover their true potential. It covered the key elements required for a student to be successful in academics and later life. The webinar was coordinated by Prof. A. V. Tavare, Prof. S. T. Patil and Prof. C. R. Patil along with staff members of Computer Engineering department.

Two day state level on line workshop for school teachers on “Online Content Creation”

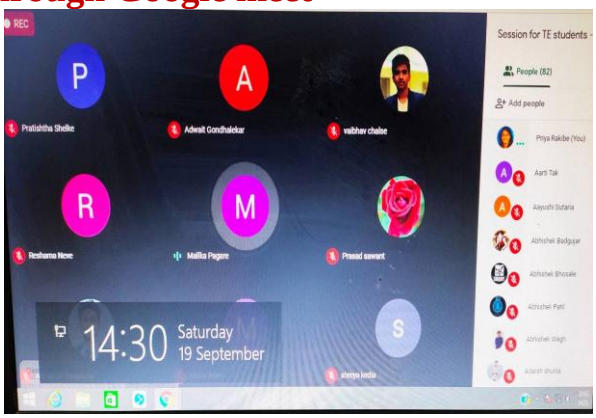
Department of Computer Engineering has organized a two day state level on line workshop for school teachers on “Online Content Creation” on 19th and 20th August 2020 with an objective of guiding the school teachers with various free and open source tools available for creating, editing videos and also to use various open educational resources to make their online teaching more effective. Due to the requirement of state board teachers the workshop was organized to address the specific needs of state board school teachers. Prof. Dr. K. N. Nandurkar Principal and Prof. Dr. S. S. Sane have E- inaugurated the workshop and various sessions for both the days were conducted by Prof. Dr. S. S. Sane, Prof. Dr. S. M. Kamalapur, Prof. S. K. Gondhalekar, Prof. I. Priyadarshini, Prof. A. V. Taware, Prof. K. P. Birla. The anchoring of the workshop was done by Prof. N. M. Pagare and coordinated by Prof. Dr. S. M. Kamalapur and Prof. I. Priyadarshini.

Rs. 20 lacs have been sanctioned by AICTE for MODROBs proposal prepared by Dr. S. S. Sane and Prof. K. P. Birla

Vaishali S. Tidake , Prof. Dr. S. S. Sane received best paper award of Euro 200 from Springer Nature for the research paper titled “Effect of distance metrics on Multilabel Classification” presented during 1st State level Doctoral Symposium on Natural Computing Research , 2020 held at SKNCOE , Pune on 8th August 2020.

Mr. Srinivas Sonkar, PhD Scholar in Computer Engineering Department completed PhD on 5th August 2020 guided by Dr. M. U. Kharat.

.Session on "Get ready technically" through Google meet



Interaction between the seniors and juniors is the most important factor in a junior's development. The session "Get ready technically" has been conducted on 19th September 2020 for the third year engineering students through Google Meet. The main objective of the session was to counsel for placement preparation and to encourage for the dream MNC jobs. The session was conducted by the current final year students Vaibhav Chalse, Vaibhav Bhavsar, Ashutosh Shrivastav, Reshma Neve, Apurva Kombade, Malika Pagare of Computer Engineering who have placed in various MNCs through online campus placement drives. They have shared their views and experiences and guided for placement preparation. Third year students were encouraged and came forward to ask the questions related to coding rounds, books, sites, criteria’s and many more. The session was really informative and it was more like peer to peer interaction than senior junior one. It was coordinated and planned by Prof. Priya D. Rakibe under the guidance of Dr. S. S. Sane, Head, Department of Computer Engineering, KKWIEER, Nashik

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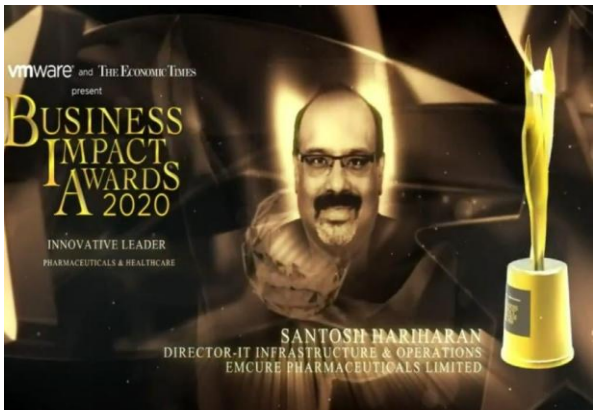
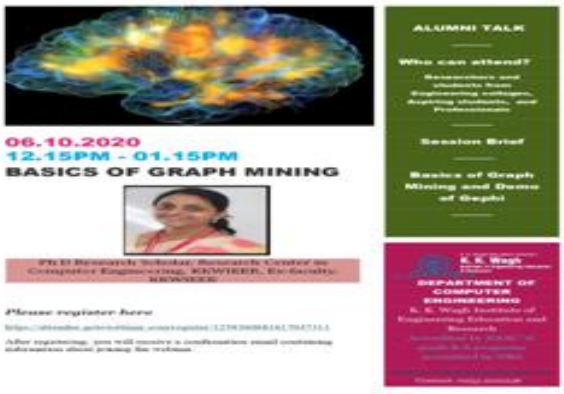
Our alumnus Mr Santosh Hariharan has been recognised as 'INNOVATIVE LEADER' in the Business Impact Awards 2020 by VMware and The Economic Times. The Innovative Leader award celebrates Mr Hariharan's work in the Pharmaceutical & Healthcare sector. Mr Hariharan is a 1994 graduate (Computer Engineering) and is currently the Director - IT Infrastructure & Operations at Emcure Pharmaceuticals Limited



Our alumnus Dipti Kulkarni has been selected in Top 100 in the 2020 HERoes Future Female Leaders list by Involve People supported by Yahoo Finance UK. Dipti Kulkarni is a 2002 graduate (Computer Engineering) and is currently the Vice President-Senior Business Support Manager at Bank of America.

■ Online webinar on "Basics of Graph Mining and Demonstration of Gephi"

A webinar on "Basics of Graph Mining and Demonstration of Gephi " was conducted on 6th October 2020, by Department of Computer Engineering, K. K. Wagh Institute of Engineering and Education Research. The session was conducted by Ms. Prajakta Vispute, ph D research scholar, Ex-Faculty KKWIEER. The main objective of the session was to introduce the concept and applications of Graph Mining and to demonstrate various



features in Gephi. During the session, she discussed various real world application of graph mining along with the demonstration of Gephi tool. The session was attended by around 115 students of Final year Computer Engineering and was coordinated by Prof. J.R.Mankar and Prof.I.Priyadarshini under the guidance of Head of Department Prof. Dr. S. S. Sane.

■ Online webinar on "Application of Deep Learning"

A webinar on the topic "Application of Deep Learning" was conducted on 09th October 2020 at 10:15 AM to 12.00 noon at department of Computer engineering, K. K. Wagh Institute of Engineering and Education Research, Nashik. The session was conducted by Dr. Ranadhir Ghosh, AI/ML Quantitative Analyst /Specialist, FIS Global Delivery Centre, Pune. He discussed about the basic framework and components of convolution networks. He also demonstrated various real world applications of deep learning like handwritten digit recognition, text classification and time series prediction using CNN. The session was coordinated by Prof. Dr. S.S. Sane and J R Mankar.

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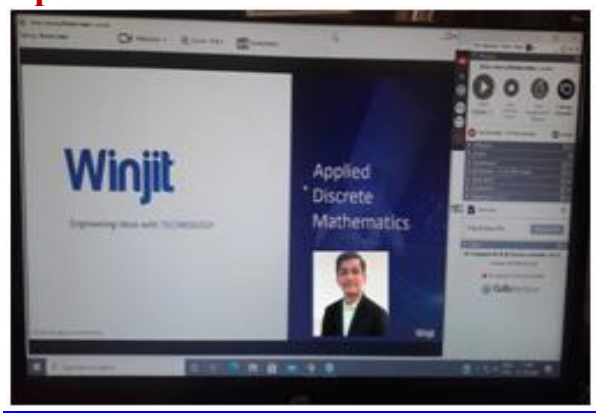
Online webinar on "Applications of Artificial Intelligence"

A webinar on "Applications of Artificial Intelligence" was conducted on 9th October 2020 by Department of Computer Engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik. The session was conducted from 03:30 pm to 5:00 pm. The objective of this online webinar was to have a basic understanding of some of the more advanced topics of AI such as learning, natural language processing. Prof. Dr. S. S. Sane, Head, Department of Computer Engineering addressed the participants during inaugural session and briefed about the Artificial Intelligence. The session was conducted by Mr. Prathamesh Karmalkar, Data scientist, Text analytics at Merck Life Science, India. He covered the topics like building a semantic search engine, exploring elastic search as alternative to Faiss, improving search with supervised learning, elastic search vs faiss comparison. He also informed about the importance of AI degree.

Online webinar on "Entrepreneurship & Startup development"

A webinar on the topic "Entrepreneurship & Startup development" was conducted online on 29th October 2020 AT 3.00PM .The expert for the session was Mr. Sudhir Gorade, CEO, Sumago Infotech Pvt. Ltd. Nashik. He had covered the points - observations from data and market research, business/start up ideas, problem statement formulation, solution and implementation plan, competitive analysis and benchmarking, distinction over peers and why you can provide better service / product etc. Students learned the things which they are going to use in near future and they were encouraged and came forward to ask the questions related to their career .The session was coordinated by Prof. P. D. Rakibe under the guidance of Prof. Dr. S. M. Kamlapur, and Prof. Dr. S. S. Sane, Head department of Computer Engineering, KKWIEER, Nashik

Expert talk on "Discrete Mathematics"



An expert talk on the topic "Discrete Mathematics" was conducted on 31st October 2020, 11.15 am to 12.30 pm at department of Computer engineering, K. K. Wagh Institute of Engineering and Education Research, Nashik. The session was conducted by Mr. Ketan Lohar, Vice President, Winjit Technology, Nashik. Various real world applications along with sample use cases were discussed in the session. The session was coordinated by Prof. Dr. S M Kamalapur, and Prof J R Mankar Computer engg. dept., under the guidance of Head of Department Prof. Dr. S. S. Sane.

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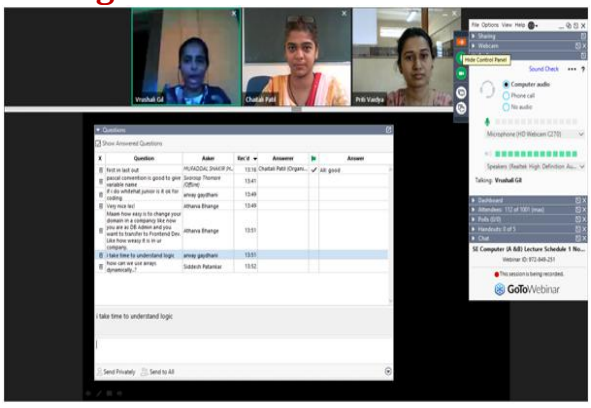
An expert talk on "Multi-label Classification"

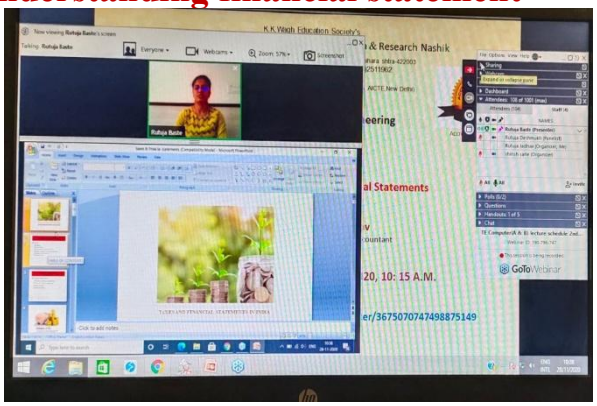
An Expert talk on "Multilabel Classification" was conducted on 6th November 2020 at 10:15 am to 11.15 am by department of Computer engineering, K. K. Wagh Institute of Engineering and Education Research, Nashik via goto webinar. The session was conducted by Prof. Vaishali S. Tidake, Associate Professor, and Department of Computer Engg. NDMVP'S KBT COE, Nashik. She discussed about concept of Multilabel Classification , its applications and demonstration. It was a very interactive session and helpful for the students from project point of view. The session was coordinated by Prof. Dr. S.S. Sane, J R Mankar and N G Sharma.

Online Expert Talk on "Coding Standards and Techniques to Improve Coding Skills"



Online Expert Talk on "Coding Standards and Techniques to Improve Coding Skills" was conducted on 6th Nov.2020 at 1.00pm to 2.00pm. at department of Computer engineering, K. K. Wagh Institute of Engineering and Education Research, Nashik. The session was conducted by Ms.Vrushali Gill, Database Administrator, FinIQ, Nashik. Main objectives of session were to know different coding standards used in Industry and to understand the different Techniques to improve coding skills. The session was attended by Second Year students for Course Fundamental of Data Structures. The session was coordinated by Prof. C R Patil, and Prof S T Patil , Computer Engg. Dept.,under the guidance of Head of Department Prof. Dr. S. S. Sane.

An expert talk on "Taxes and understanding financial statement"



An expert talk on "Taxes and understanding financial statement" was conducted online on 28th November 2020, 10.15am to 11.45am through Gotowebinar platform. Department of Computer Engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik had organized this session with the motive to introduce students about taxes and financial statements. The session was conducted by Mrs. Rutuja Baste Jadhav, Partner R. S. Baste & Co. Chartered Accountant, Nashik. She had covered following points: Tax laws and regulations, Financial Statement, Balance sheet, Income Statement, Cash Flow Statement. The session was coordinated by Prof. S. D. Jadhav and Prof. P. D. Rakibe under the guidance Prof. Dr. S. S. Sane, Head department of Computer Engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik.

Prof. Dr. Shirish S. Sane & Prof. Vaishali S. Tidake, received best paper award for the research paper titled "Efficient Multi-label Classification using Attribute and Instance Selection" presented on International conference on Intelligent Systems, Data Science and Computing (ICIDC-2020) organized by Shri Ramdeobaba college of Engineering and Management, Nagpur on 25-28th Nov 2020.

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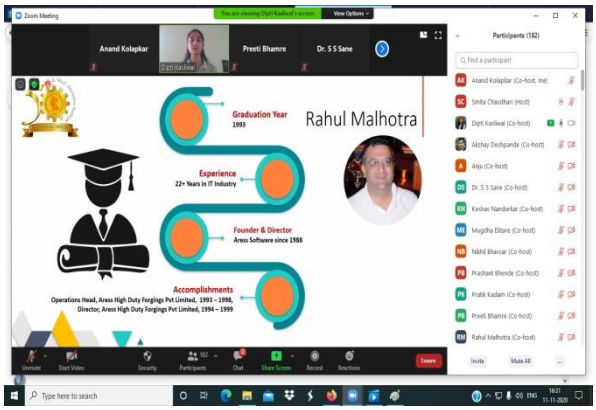
K K Wagh Institute of Engineering Education and Research Nashik is chosen to be training center of AWS Academy. AWS Academy provides higher education institutions with a ready-to-teach cloud computing curriculum that prepares students to pursue industry-recognized certifications and in-demand cloud jobs. It helps teachers stay at the forefront of AWS Cloud innovation so that they can equip students with the skills they need to get hired in one of the fastest-growing industries.

The academy works in partnership with a UGC/AICTE approved university/institute and AWS to offer a multitude of courses like

1. Foundation Level - AWS Cloud Foundations OR AWS Machine Learning Foundations
2. Associate Level - AWS Cloud Developing OR Cloud Operations OR Cloud Architecting
3. AWS Academy Data Analytics



Panel Discussion on Scope and Career opportunities in Computer Engineering, Information Technology and Artificial Intelligence & Data Science was conducted by Department of Computer Engineering, Information Technology and Artificial Intelligence & Data Science on 11th November 2020 at 4:00PM. Mr. Rahul Malhotra, Mr. Suchit Tiwari, Mr. Akshay Deshpande, Ms.Snehal Behre-Jog, Mr. Rushikesh Jadhav, Mr. Ravi Zha, Ms.Anju Sudheendran, Mr. Nikhil Bhavsar, Mr. Prashant Bhende were the Panelist for Panel Discussion. Dipti Kasliwal initiated the panel discussion. Prof. Dr. K. N. Nandurkar, Principal briefed about Institute. Prof. Dr. S. S. Sane, Head Computer Engineering & AI-DS and Prof. Dr. P. D. Bhamare, Head, Information Technology briefed about the Department. Mrs. Snehal Behre-Jog Moderated the Panel Discussion. The Panel Discussion was interactive as aspirants and students asked many queries which were answered by the Panelist. More than 180 participants attended the Panel Discussion.

The meeting with IBM for IBM ICE Programs-Partnering with IBM for the Institute, Teachers & Students was conducted on Tue Nov 24, 2020 3:30pm – 4:30pm (IST). Senior faculty from Computer Engineering, IT and MCA department were present for the meeting. Meeting was coordinated by Mr. Sanjeev Mehta from IBM, Suresh Joshi from Cache Technologies, Pune and Prof. S. K. Gondhalekar from department of Computer Engineering. This meeting is for discussion about the Partnership with IBM ICE programs which offers B.Tech/Technology specialization programs are futuristic and industry aligned. IBM interacts with the Universities/Higher Education Institutes and together design and delivers these integrated courses and IBM Innovation Centre for Education offers various programs to suit the varying needs of graduation students in collaboration with Education Institutes with IBM acting as the Knowledge Partner and the Education Institute acting as the Academic Partner. Dr. S. S. Sane mentioned past associations the IBM and suggested for IBM Innovation or excellence Centre to conduct certificate courses for students and faculty and students internship also. He suggested that we can think design and deliver integrated courses for MBA. Future discussions and meeting regarding this is planned with Mr. Suresh Joshi.

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Seminars/Workshop/Training attended by staff:

- Prof. P. D. Rakibe Quiz on design and Analysis of Algorithms by Computer Department attended on 2nd June 2020
- Prof. N. G. Sharma, Prof. N. S. Sonawane, Prof. R. H. Jadhav, Prof. S. M. Malao, Prof. A. V. Kolapakar, Prof. P. P. Vaidya, Prof. J. R. Mankar, S. A. Gade attended Online workshop on ICT Tools for Collaboration by IQAC KKWIEER , Nashik on 1st and 2nd June 2020
- Prof. S. A. Gade attended Online Quiz on SOFT COMPUTING AND OPTIMIZATION ALGORITHMS by MET , Nashik from 1st to 3rd June 2020
- Prof. J. R. Mankar, Prof. P. P. Vaidya attended Webinar on Outcome based Education Software , Vmedulife software services, Banglore
- Prof. R. H. Jadhav, Prof. S. M. Malao, Prof. A. V. ,Kolapakar, Prof. P. P. Vaidya, Prof. J. R. Mankar, S. A. Gade attended Three days state level online workshop on "Online content creation and assessment tool" by Computer Department from 4th to 6th June 2020
- Prof. P. D. Rakibe , Prof. R. H. Jadhav attended Webinar on Data Analytics with power BI , K K Wagh Polytechnic , Nashik on 6th June 2020
- Prof. S. M. Malao , Prof. A. V. Kolapkar attended Webinar "INTRODUCTION TO MACHINE LEARNING AND ITS APPLICATION" Electrical Engineering , KKWIEER, Nashik on 8th June 2020.
- Prof. Dr. S. M. Kamalapur , Prof. S. K. Gondhalekar attended One week FDP on Exploring the Dimensions of Innovation, Incubation and Emerging Technologies to Embrace Post COVID Change , Finolex Academy of Management & Technology, Ratnagiri from 8th to 12th June 2020.
- Prof. N S. Sonawane, Prof. S. M. Malao attended Webinar on "Leadership and Governance from NBA Perspective" Rajarambapu Institute of Technology, Rajaramnagar (RIT), Islampur, Dist. Sangli & Global Engineering Dean's Council India Chapter (GEDC India Chapter) on 23rd June 2020.
- Prof. N S. Sonawane attended International Technical Webinar on "Interpretable Machine Learning with Probabilistic Graphical Models" by M.G.M.'s College of Engineering, Nanded on 27th June 2020
- Prof. S. M. Malao attended Webinar on Artificial Intelligence And Data Analytics IEEE SIT student branch, Sinhagad Institute of Technology, Lonawala on 28th June 2020.
- Prof. M. P. Mahajan, Prof. N. S. Sonawane, Prof. Dr. S. M. Kamalapur, Prof. S. M. Malao, Prof. A. V. Kolapakar, Prof. P. P. Vaidya, Prof. J. R. Mankar, M. J. Patil, S. A. Gade attended Webinar on Introduction to Computer Vision by Computer Department on 29th June 2020.
- Prof. S. A. Gade , Prof. P. D. Rakibe attended Webinar on Filing Patent in India on 1st August 2020.
- Prof. A. V. Kolapkar attended Webinar on Filing Patent in India on 1st August 2020.
- Prof. P. D. Rakibe attended Webinar on NEP 2020 on 2nd August 2020
- Prof. K. P. Birla attended Webinar Augmented Reality & its Applications on 5th August 2020.
- Prof. Dr. S. M. Kamalapur attended Webinar on "Preparation of Quality Journal Papers & Book Chapters" on 5th August 2020.
- Prof. A. V. Kolapkar attended Webinar on Introduction to Brain Computer Interface on 08th August 2020.
- Prof. A. V. Kolapkar attended One Week National Level FDP on Computer Networks Simulation using NS2 on 10th August 2020
- Prof. S. A. Gade attended Webinar on Augmented Reality & its Applications on 18th August 2020.
- Prof. S. A. Gade attended Webinar on W9-Continuous Improvement, Institutional Governance and Support System on 18th August 2020.
- Prof. A. V. Kolapkar attended Webinar on Cloud Computing on 19th August 2020.
- Prof. M. J. Patil attended Webinar on W10-Assessment of COs,POs and PSOs on 20th August 2020.
- Prof. R. H. Jadhav , Prof. S. A. Gade , Prof. N. M. Pagare , Prof. G. R. Gupta attended Webinar on Patent Protection for Innovation Driven Academic Institutions on 29th August 2020.

- Prof. Dr. S. M. Kamalapur, Prof. P. P. Vaidya , Prof. S. M. Malao attended One week STTP on Developing Pedagogy for Effective implementation of OBE in Engineering Institutes from 31st August 2020 to 5th September 2020
- Prof. N. M. Pagare , Prof. G. R. Gupta attended FDP on "Machine Learning and Data Science" from 31st August 2020 to 4th September 2020.
- Prof. P. D. Rakibe attended Two Days TEQIP-III Sponsored FDP on Trends and Application in Machine Learning and Deep Learning on 4th and 5th September 2020
- Prof. S. A. Gade attended STTP on Moral, Ethics and Values in Education from 7th to 12th September 2020.
- Prof. R. H. Jadhav , Prof. I.Priyadarshini , Prof. N. G. Sharma attended Webinar on Big Data on 9th September 2020.
- Prof. S. K. Gondhalekar attended One Week Online Short Term Training Program (STTP) on "Block chain in DevOps: Implementing Transparent Continuous Delivery" from 14th to 19th September 2020.
- Prof. N. M. Pagare , Prof. G. R. Gupta attended Webinar on "Glimpses of IPR and Recent Trends on 18th September 2020.
- Prof. M. J. Patil , Prof. M. N. Shinde attended FDP on Artificial Intelligence and Machine
- Learning Applications in Biomedical Engineering from 21st to 25th September 2020.
- Prof. N. M. Pagare , Prof. G. R. Gupta ,Prof. S. A. Gade attended AICTE Training And Learning (ATAL) Academy Online FDP on " Design Thinking from 21st to 25th September 2020
- Prof. P. D. Rakibe attended National Level one week FDP (Online-Mode) on "Future Trends Technology-Iot, Robotics & Ai" from 21st to 29th September 2020.
- Prof. M. P. Mahajan , Prof. C. R. Patil , Prof. S. K. Gondhalekar , Prof. S. T. Patil attended 3 days online workshop on "Emerging Technologies in Engineering" from 24th to 26th September 2020
- Prof. P. P. Vaidya, Prof. J. R. Mankar, Prof. M. N. Shinde attended One week Online FDP on "Data Science for Engineering Problem Solving" on 5th October 2020 to 10th October 2020.
- Prof. N. S. Sonawane, Prof. V. N. Suryawanshi attended 5 days AICTE Training And Learning (ATAL) Academy FDP on Immersive Virtual Reality from 5th October 2020 to 9th October 2020.
- Prof. S. D. Jadhav attended 5 days AICTE Training And Learning (ATAL) FDP on Artificial Intelligence from 5th October 2020 to 9th October 2020
- Prof. D. M. Kanade attended Online FDP on Cyber Crime & Security from 5th October 2020 to 17th October 2020
- Prof. R. H. Jadhav, Prof.I.Priyadarshini, Prof. N. G. Sharma attended 5 days AICTE Training And Learning (ATAL) Academy FDP on "Data Sciences" from 20th October 2020 to 24th October 2020
- Prof. S. A. Gade attended 5 days AICTE Training And Learning (ATAL) Academy FDP on "Internet of Things (IoT)" from 26th October 2020 to 30th October 2020.
- Prof. K. P. Birla attended 5 days AICTE Training And Learning (ATAL) Academy FDP on "Augmented Reality (AR)/ Virtual Reality (VR)" from 26th October 2020 to 30th October 2020.
- Prof. S. T. Patil, Prof. S. D. Jadhav, Prof. P. D. Rakibe attended AICTE Sponsored 6 Days STTP Cybersecurity And Blockchain Technology from 26th October 2020 to 31th October 2020
- Prof. S. M. Malao, Prof. S. T. Patil, Prof. K. P. Birla, Prof. N. M. Pagare, Prof. S. D. Jadhav, Prof. G. R. Gupta, Prof. A. V. Tavare attended Webinar on IEEEXplore Digital Library: Orientation Workshop on 29th October 2020
- Prof. S. A. Gade attended Symposium On Internet of Things (SIoT-2020) on 31th October 2020
- Prof. C. R. Patil attended 3 Days online workshop on 'Intellectual Property Rights' from 9th Nov to 11th Nov 2020.
- Prof. A. V. Tavare, Prof. N. M. Pagare attended 2-Weeks Comprehensive Online Patent Information Course from 21st Oct to 4th Nov 2020
- Prof. S. A. Gade attended AICTE Sponsored Short Term Training Program on Robotics Process Automation Tools and Technics from 2nd Nov to 7th Nov 2020
- Prof. G. R. Gupta, Prof. S. A. Gade attended ATAL FDP on Artificial Intelligence from 2nd Nov to 6th Nov 2020.

Papers Presented by Staff and Student

Title of Paper : Shared Data Plane: Tenant-Aware, Shared Context for Functions in Serverless Computing

Author: Satwik Kolhe , Dr. Snehal Kamlapur

Organizer: cPGCON 2020 , Amrutvahini College of Engineering , Sangamner

Abstract: Software architecture has evolved from monoliths to microservices; Serverless computing, specifically Functions as a Service (FaaS), brings in a completely new approach in terms of granularity of functional modules and their execution pattern. Tough serverless computing is understood as an event-driven model, it has a lot to offer than just deploying event-driven systems. For any application, data is an integral part that shapes the design and execution pattern. Serverless Architecture confines the size and methods in which data can be shared between individual functions. Current FaaS platforms like AWS Lambda, Azure Functions, Apache OpenWhisk; provide a limited scope in which data can be shared between individual functions; which is often addressed interchangeably as Execution Context or Shared Context. The nature of the execution context is ephemeral, which introduces additional latency to cold starts. The restricted and finite amount of space made available for execution context also confine application design, limiting the types of applications that could benefit from serverless computing. This paper addresses such issues by introducing a methodology to define tenant aware, function-specific shared data plane. This shared data plane is transparent to function code and provides localized data referencing. This paper describes the architecture of Shared Data Plane together with optimizations to Apache OpenWhisk exemplified on an inference use-case requiring a large size pre-trained model. This approach of shared data plane shows improvements to the architectural design of serverless applications with increased performance and throughput of highly parallel stateless function invocations.

Keywords— Serverless Computing, Functions as a Service (FaaS), Apache OpenWhisk, Ceph

Title of Paper : Data Balancing Technique for Multi-Class Imbalanced Problems

Author: Deore Mrunalee C , J.R. Mankar

Organizer: cPGCON 2020 , Amrutvahini College of Engineering , Sangamner

Abstract: The imbalanced dataset contains skewed distribution of data. Such data distribution generates difficulties for machine learning algorithms. These algorithms also fail to generate accurate results in case of data imbalance, overlapping of class boundaries and hybrid datasets. Various techniques proposed in a literature to balance a dataset using oversampling or under sampling methods. The study of these techniques is done independently. A little work has been done with the combined study of these two techniques. The proposed system focuses on the study and implementation of oversampling and under-sampling together to balance a dataset. The technique is generalized for hybrid datasets. Cluster based under sampling approach is used followed by the Mahalanobis Distance-based Over-sampling technique. The data will be tested on multiple hybrid datasets and classification accuracy using C4.5 algorithm will be evaluated. The accuracy results will be compared with the individual oversampling and under sampling approach.

Keywords—Oversampling, under sampling, hybrid dataset, Mahalanobis distance, cluster based under sampling, Imbalance data, Classification

Title of Paper : "Effect of distance metrics on Multilabel Classification"

Author: Vaishali S. Tidake , Prof. Dr. S. S. Sane

Organizer: First State level doctoral symposium, SKNCOE Pune, 8th August 2020

Abstract: Multi-label framework is suitable to represent lot of data in the real world. Various multi-label classifiers extract information from neighbors and utilize it for the purpose of classification. ML-kNN is currently the best known algorithm. Instances in multi-label data are associated with multiple labels.

Therefore in addition to take into account feature similarity, considering labels also for finding neighbors of known instances may be useful to improve performance of multi-label classifier. This paper presents novel algorithm, called MLFLD-MAXP which is an extension of our algorithm MLFLD. It first searches neighbors using feature similarity as well as label dissimilarity and estimates probabilities using labeled data. It then predicts labels for unlabeled data. In case no label is predicted for an instance, a label with maximum probability is associated with such instances. Empirical evaluation shows improved performance of MLFLD-MAXP when compared with other multi-label classification algorithms including ML-kNN. Algorithms such as MLFLD-MAXP or any kNN based algorithms such as ML-kNN need to make use of certain distance metrics such as Euclidean and choice of distance metric may affect the performance of the classifier. This paper studies the impact of various distance metrics. Empirical evaluation shows improved performance of MLFLD-MAXP when compared with other multi-label classification algorithms including ML-kNN. Use of Minkowski distance metric leads to superior performance of MLFLD-MAXP as compared to the use of other distance metrics.

Keywords: Classification, multi-label, feature similarity, distance metrics, nearest neighbor

Title of Paper : Deep Learning Based Dietary Assessment System

Author: Harshada Shirsat, Sanyami Sonawane, Rutuja Surywanshi, Gauri Jadhav

Organizer: International Research Journal of Engineering and Technology

Abstract: Road quality checking is of vital importance for the traveling comfort and driving safety. While high-end automobiles are already equipped with road detection function, most mid-range cars can only detect and evaluate road conditions leveraging remodeled or additional hardware devices built on vehicles, thereby constraining the road quality checking. For low cost budgeting smartphone is used as it already have inbuilt sensors. The acceleration sensor and gyroscope have fluctuations when the vehicle passes through the larger pothole, and there is a connection between them. A novel road detection approach based on Mahalanobis–Taguchi system (MTS), leveraging smartphones for data collection and involving the correlation between characteristics is used. The application was developed to collect and process the data, and then classify road quality conditions. In addition to experiment quality of newly constructed road is checked in certain intervals of time. The strategy of marking road conditions to the navigation map and providing road quality check report can effectively improve not only driving experience and traveling comfort but also driving safety, thereby providing more supports for the maintenance units.

Key Words: Road Quality Detection, Smartphone, Mahalanobis-Taguchi System (MTS), Road Surface Condition, Driving Safety, Accelerometer Data.

Title of Paper : Efficient Multi-label Classification using Attribute and Instance Selection

Author: Shirish S. Sane, Vaishali S. Tidake

Organizer: Ramdeo Baba COE, Nagpur 25-28th Nov 2020

Abstract: Both attribute and instance selection is proven to be beneficial to reduce the computational complexity of classifiers while improving their accuracy. Instances in multi-label data are associated with multiple labels. Hence the process of attribute selection from multi-label data is different as compared to single-label classification. Either transformation or adaptation approaches are used by various researchers while performing attribute selection. In this paper, attribute selection and sampling are performed on the multi-label data. This pre-processed multi-label data is then fed to the proposed algorithms, namely MLFLD and its extension MLFLD-MAXP. An empirical evaluation is carried out to study the behaviour of proposed multi-label classifiers. The methods used in this work are defined as algorithms MLFS, MLIS, and MLFSIS. Comparing proposed algorithms with and without MLFS, MLIS, and MLFSIS has shown the effectiveness of using only sampling or attribute selection followed by sampling on multi-label data.

Attribute and instance selection together are noticed to be very useful for the performance enhancement of proposed algorithms over only attribute or instance selection.

Keyword: Multi-label classification, Sampling, Attribute selection, Sample size

Title of Paper : Performance Evaluation of Community Detection Algorithms in Social Networks Analysis

Author: Prajakta Vispute, Dr. Shirish Sane

Organizer: International conference on Intelligent systems coma data science and computing (ICIDC-2020) Ramdeo Baba COE, Nagpur

Abstract: In social network analysis, community identification unveils properties shared by nodes like area of research, communication, common interest and many more. The evolving nature of social networks necessitates dynamic community detection methods. To handle the continuous change in data, improved community detection algorithms are introduced in various applications. To find communities in dynamic SNA, static community detection methods can be used to generate base communities, which then can be modified for dynamic data. This paper deals with selection of suitable algorithm for detection of communities from static data based on different performance parameters and thus could be used for efficient detection of dynamic communities

Key Words: Network analysis, Graph mining, Community detection, Dynamic community detection.

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