Dr. Sachin Kumar

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 https://www.youtube.com/professorandmentor/

About Me

Dr Sachin Kumar is Assistant Professor of Computer Science/Information Systems at the Cluster Innovation Centre (CIC), University of Delhi(UoD), Delhi, India. He is also Executive Officer of the University of Delhi Foundation. He has been awarded PhD degree from the Department of Computer Science, University of Delhi(UoD) on a thesis titled "Modeling and Prediction of Building Energy Performance Using Machine Learning Approaches". The thesis research work has been published in the domain of urban computing and smart systems in reputed international high-impact factor SCI/SCIE/Scopus journals and conferences such as Energy and Buildings (Elsevier, IF=7.6), Sustainable Cities and Societies (Elsevier, IF=11.5), Sustainable Energy, Grids and Networks (Elsevier, IF=5.6). His thesis primarily focuses on developing models for energy performance optimization through modelling and prediction of energy usage to improve energy conservation in residential and commercial buildings to achieve the goal of sustainable cities and societies. He has completed his post-graduation master of computer applications(MCA) from the Department of Computer Sciences, UoD. He worked as a software development engineer(SDE) with IHS Markit Information Mosaic, London, United Kingdom(UK) where he designed and developed software products and services using the latest technologies in finance, securities, and share market domain. Currently, he is teaching courses and supervising research and development in the areas of Artificial Intelligence/Machine Learning/Deep Learning, NLP, AI for Social Good, Responsible AI, AI for Climate Change and Sustainability, Public Health, Smart Cities and Buildings, Urban Computing, Social Networks and Analysis and Computational Social Systems. He has published more than 30 research articles. He has also authored two books: "Operating Systems: Concept Building and Problem-Solving Approach" by Cengage, USA and "Digital Transformation, Artificial Intelligence and Society: Opportunities and Challenges" by Springer. He has participated in and demonstrated his research works at domain-specific, highly reputed international conferences such as IEEE-ELM, ISTA, ISDA, IEEE-WCCI, IEEE-IJCNN, ACM-ICEGOV, etc. He has been invited as a resource person to several conferences, faculty development programs (FDPs), refresher courses, and workshops to share his knowledge and expertise. His main thrust is to develop technological artefacts to solve societal problems with the application of technology, specifically Artificial Intelligence, and their deployment in a real-world environment. He also writes on technology and social issues in national newspapers/web portals and creates digital content on the YouTube channel "Professor and Mentor" for awareness about technology and social issues. He has been continuously providing his consultations to startups. He is also promoting interdisciplinary research, innovation, and entrepreneurship through project-driven pedagogy, research publication outputs, and startup promotion.

Education

Doctor of Philosophy(PhD)   **University of Delhi, Delhi**

2020   *Dept. of Computer Science*

Master of Computer Applications(MCA)   **University of Delhi, Delhi**
2011   *Dept. of Computer Science*

B.Sc(PCM)   **Chaudhary Charan Singh University, Meerut, Uttar Pradesh**
2007   *Meerut College Meerut*

Career Profile - Appointments

Cluster Innovation Centre, University of Delhi   **Delhi**
Assistant Professor   *Jul 2015 – Till present*
- o Teaching information technology courses at CIC.
- o Developing new research, products, processes or commercial applications.
- o Collaboration with industry/academia.
- o Conducting substantial research into complex problems, ideas, concepts or theories.
- o Applying appropriate tools and methodologies for solving societal problems.
- o Presenting research and giving invited talks at national and international conferences.
- o Mentoring students for research, entrepreneurship and innovation.
- o Conceptualising, designing, and producing academic resources.

University of Delhi Foundation   **Delhi**
Executive Officer   *Dec 2022 – Till present*
- o To build and support the Delhi University Endowment Fund or other similar funds of the University of Delhi.
- o To promote interaction among the alumni, students, and well-wishers of the University of Delhi.
- o To organize reunions of the alumni through seminars, meetings, lectures, discussions, conferences, and study tours.

Institutions of University of Delhi, Delhi   **Delhi**
Assistant Professor   *Jul 2012 – Jul 2015*
- o Taught computer science courses at different institutions of University of Delhi.
- o Developed and implemented innovative pedagogy.
- o Introduced professional logistics to improvise student performance.
- o Mentored students in research projects and product developments.
- o Conducted workshops on the latest technologies for students for their career enhancement.
- o Participated in departmental and college activities.
- o Served and supported functional activities of departmental committees.
- o Organized academic events and conferences in the institutions.

IHS Markit Information Mosaic   **UK**
Software Development Engineer   *Aug 2011 – Jul 2012*
- o Worked on end-to-end automation of corporate actions and income processing.
- o Designed and developed change requests(CRs) for new functionality.
- o Designed and developed GUI, Security and Business layer with Public Key Infrastructure(PKI).
- o Technologies: GWT/GXT, Hibernate, JavaScript, Spring, Servlets, JSON.

IHS Markit Information Mosaic   **UK**
Software Engineer Intern   *Jan 2011 – Jul 2011*
- o Designed and deveopled key modules from front to back end functionality.
- o Designed and developed GUI of the application using GWT/GXT.
- o Designed and developed functionality for the application using asynchronous call
- o Implemented PKI for user and transaction authentication.
- o Technologies: GWT/GXT, Hibernate, JavaScript, Spring, Servlets, JSON and Oracle10g.

Online Courses/Short Term Courses

Faculty Development Programme   **Ramanujan College, University of Delhi**
ADVANCED PEDAGOGICAL TECHNIQUES   *Oct 31 - Nov 7, 2023*

Summer Institute of Computational Social Sciences   **MIT, Duke, Princeton Uni.**
Social Network, Fake News, Disinformation   *June 14-June 24, 2021*

Faculty Development Programme   **Ramanujan College, University of Delhi**
Open Source Tools for Research   *Jun 7-Jun 15, 2020*

Faculty Development Programme   **Ramanujan College, University of Delhi**
Managing online classes and co-creating MOOCs   *May 18-Jun 03, 2020*

Faculty Development Programme   **Ramanujan College, University of Delhi**
Dimensions of Literature, Media, Psychology and Commerce   *May 29-Jun 3, 2020*

Faculty Development Programme   **Ramanujan College, University of Delhi**
Learning Outcome Based Framework   *10 Feb- 11 Feb, 2020*

Refresher Course   **HRDC, Jawaharlal Nehru University, Delhi**
Computer Science and Information Technology   *Sep 16-Sep 28, 2019*

Orientation Programme   **CPDHE, University of Delhi, Delhi**
Research Methodology   *Oct 9-Nov 6, 2018*

Faculty Development Programme   **Indira Gandhi DTU for Women, Delhi**
Machine Learning and Deep Learning   *July 16-July 20, 2018*

The Data Scientist's Toolbox   **Coursera, Johns Hopkins University, USA**
Jeff Leek, PhD   *2014*

Technology Commercialization   **University of Rochester, USA**
Mark Wilson   *2014*

Innovation for Entrepreneurs: From Idea to Marketplace   **Maryland Uni., USA**
Thomas J. Mierzwa   *2014*

Skills

- **Coursework Skills:** Philosophy of Programming, Programming Fundamentals and Paradigm, Operating Systems, Data Structures and Algorithms, Natural Language Processing, Artificial Intelligence, Machine Learning, Deep Learning, Software Project Management, Information Systems, Energy and Buildings, Urban Computing, Innovation Management, Computational Social Systems, Research Methodology and Research Tools.
- **Programming Languages and Associated Technologies:** C, C++, Java, Python, ARcGIS.
- **AI Frameworks:** Scikit-learn, TensorFlow, Microsoft CNTK, Keras, Environs.
- **Software Development:** Hands-on execution of RAD, Spiral, Agile-XP, TDD and Scrum.
- **Conceptual Understanding:** Text Understanding, Classification, Regression, Time Series Forecasting, Pattern Recognition, Recommendation Systems, Ranking Systems, e-Governance Systems.
- **Quantitative methods:** Cluster analysis, Correlation and association, Multivariate Regression analysis, Descriptive analysis, Exploratory analysis, Inferential analysis, Predictive analysis, Survey research.
- **Mentoring**: Entrepreneurship, Innovation projects, Start-ups, Research projects, Consultancy.
- **Analytical Skills:** Critical thinking, Data analysis, Problem-solving.
- **Language Skills:** Hindi, English and dialects.

Administrative Assignments

- **Convener**, Computer and Website Committee, CIC, 2022-2023.
- **Convener**, Computer and Website Committee, CIC, 2021-2022.
- **Member**, Infrastructure Committee, CIC, 2021-2022.
- **Member**, Purchase Committee, CIC, 2021-2022.
- **Member**, News Letter, Annual Report, CIC, 2020-2021.
- **Member**, Website Committee, CIC, 2020-2021.
- **Member**, Infrastructure and Space Committee, CIC, 2020-2021.

Courses Taught

- Computational Social Systems
- Programming Fundamentals(C/C++/Java/Python)
- Artificial Intelligence
- Machine Learning
- Business Analytics
- Data Structure and Design
- Data Communication and Computer Networks

Areas of Interest / Specialization

- **Artificial Intelligence:** Computer Vision, NLP, Developing applications and solutions for social good.
- **Urban Computing :** Digital Transformation, Smart Transportation, Smart Buildings and Cities.
- **Computational Social Systems :** Digital Technologies, AI/ML, Social Network Analysis, Human Networks and Interactions, Digital Inequality and Bias, Digital Sociology, Fake News and Hate Speech, Algorithmic Governance, Data Privacy and Issues, Data Analytics and Public Policy.
- **Information Technology Systems :** E-governance, Intelligent Governance, Information Systems.
- **Design and Innovation :** IT Applications, Business processes, Analytics, Product conceptualizations, Start-Up and Consultancy.
- **Public Policy:** Evidence-Based Policy, Policy Research, Innovation, Entrepreneurship and Skill Development.

Awards and Achievements

- **Research Travel Grant,** *IEEE World Congress on Computational Intelligence 2022(WCCI2022)*, University of Padua, Padua, Italy, 18th to 23rd July 2022 by Department of Science and Technology, Government of India.
- **Research Travel Grant,** *The International Conference on Extreme Learning Machines (ELM2016)* Marina Bay Sands, Singapore, 13th to 15th Dec 2016, by University of Delhi.
- **Faculty Start-Up Grant**, University of Delhi, 2015
- Selected for **Ph.D. in Information Technology and Systems - Indian Institute of Management(IIM) Rohtak.**
- Awarded **University Grant Commission National Eligibility Test-Junior Research Fellowship**, 2012.
- Placement offers from several MNCs, IHS Markit Information Mosaic, Global Logic, Aricent, etc.

Publications

Sachin, Kumar and Prabhat Gupta Pradeep Natrajan. Quantification and Measurement of Relationship Between Movies and Actors for Production Resources Optimisation and Box Office Business Success: Insights and Reflections Using Network Science Approach. *Social Network Analysis and Mining*, 2024, IF=2.8, Springer.

Sachin, Kumar and Gaurav Dubey Shivam Goel Alok Nikhil Jha Ajit Kumar Verma Kartikey Saran, Yashu Garg. A Novel Influence Quantification Model on Instagram Using Data Science Approach for Targeted Business Advertising and Better Digital Marketing Outcomes. *Social Network Analysis and Mining*, 2024, IF=2.8, Springer,.

Manish Kumar Singh, Jawed Ahmed, Mohammad Afshar Alam, Kamlesh Kumar Raghuvanshi, and **Sachin, Kumar**. A Comprehensive Review on Automatic Detection of Fake News on Social Media . *Multimedia Tools and Applications*, 2023, IF=3.1.

Sachin, Kumar, Akash Erugurala, Ankit Kumar Bhagat, Amna Mirza, Alok Nikhil Jha, and Ajit Kumar Verma. A Novel Hybrid Model of Word Embedding and Deep Learning to Identify Hate and Abusive Content on Social Media Platform. *Frontiers of Artificial Intelligence, Ethics and Multidisciplinary Applications, Springer*, 2024.

Amna Mirza and **Sachin, Kumar**. Personalization and Customization of Governance Products and Services for Citizens Using Big Data Analytics and Artificial Intelligence. *Augmenting Customer Retention Through Big Data Analytics, CRC Press, Routledge, ISBN: 9781774917213*, 2023.

Sachin Kumar. A Novel Hybrid Machine Learning Model for Prediction of CO2 using Socio-Economic and Energy Attributes for Climate Change Monitoring and Mitigation Policies. *Ecological Informatics*, 13, 2023, IF=5.1, Elsevier.

Sachin Kumar, Shivam Panwar, Jagvinder Singh, Anuj Kumar Sharma, and Zairu Nisha. iCACD: an Intelligent Deep Learning Model to Categorise Current Affairs News Article for Efficient Journalistic Process. *International Journal of System Assurance Engineering and Management*, 13(5):2572–2582, 2022, IF=2.0, Springer.

Sachin Kumar, Zairu Nisha, Jagvinder Singh, and Anuj Kumar Sharma. Sensor network driven novel hybrid model based on feature selection and svr to predict indoor temperature for energy consumption optimisation in smart buildings. *International Journal of System Assurance Engineering and Management*, 13(6):3048–3061, 2022, IF=2.0, Springer.

Sachin Kumar and Alok Nikhil Jha. Fake news goes viral! determination and analysis of virality of socially relevant events in digital governance. In *Proceedings of the 15th International Conference on Theory and Practice of Electronic Governance*, pages 376–380, 2022, ACM, Nominated for the Best Paper Award, Organised by United Nations University Operating Unit on Policy-Driven Electronic Governance (UNU-EGOV)`Core(A)`.

Sachin Kumar and Zairu Nisha. Does social media feed tell about your mental state? a deep randomised neural network approach. In *2022 International joint conference on neural networks (IJCNN)*, pages 1–8. IEEE, 2022.

Sachin Kumar, Aditya Sharma, B Kartheek Reddy, Shreyas Sachan, Vaibhav Jain, and Jagvinder Singh. An intelligent model based on integrated inverse document frequency and multinomial Naive Bayes for current affairs news categorisation. *International journal of system assurance engineering and management*, 13(3):1341–1355, 2022, IF=2.0, Springer.

Zairu Nisha, **Sachin Kumar**, Saibal K Pal, Jagvinder Singh, and Ompal Singh. Insights and reflections using data analytics approach of covid-19 situation among the indian states and ethical considerations. *International Journal of System Assurance Engineering and Management*, 13(1):131–142, 2022, IF=2.0, Springer.

Sachin Kumar. A Critical and Ethical Perspective on Governance and Policies during COVID-19 Pandemic in India. *Digital Government: Research and Practice*, 3(1):1–10, 2022, Association for Computing Machinery(ACM), https://doi.org/10.1145/3501032.

Sachin Kumar. An Assessment of Research Process Management Software Usage in Indian Higher Education. In *Decision Analytics Applications in Industry*, pages 409–419. Springer, Singapore, 2020.

Sachin Kumar, Jagvinder Singh, and Ompal Singh. Ensemble-based extreme learning machine model for occupancy detection with ambient attributes. *International journal of system assurance engineering and management*, 11:173–183, 2020, IF=2.0, Springer.

Sachin Kumar, Saibal K Pal, and Rampal Singh. A Novel Hybrid Model Based on Particle Swarm Optimisation and Extreme Learning Machine for Short-Term Temperature Prediction Using Ambient Sensors. *Sustainable Cities and Society*, 49:101601, 2019, IF-10.687, Elsevier. SCIE/Scopus.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. Intra elm variants ensemble-based model to predict energy performance in residential buildings. *Sustainable Energy, Grids and Networks*, 16:177–187, 2018, IF=5.899.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. A novel method based on extreme learning machine to predict heating and cooling load through design and structural attributes. *Energy and Buildings*, 176:275–286, 2018, IF= 7.879.

Sachin Kumar, Anushtha Kalia, and Arjun Sharma. Predictive analysis of alertness-related features for driver drowsiness detection. In *Intelligent Systems Design and Applications: 17th International Conference on Intelligent Systems Design and Applications (ISDA 2017) held in Delhi, India, December 14-16, 2017*, pages 368–377. Springer, 2018.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. A conceptual architectural design for intelligent health information system: case study on india. *Quality, IT and Business Operations: Modeling and Optimization*, pages 1–15, 2018.

Sachin Kumar, , Rampal Singh, and Saibal K Pal. Machine learning-based method and its performance analysis for occupancy detection in indoor environment. In *Advances in Signal Processing and Intelligent Recognition Systems: Proceedings of Third International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2017)*, pages 240–251. Springer, 2018.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. From E-Governance to D–Governance. *CSI Communications: 0970-647x*, 40(2):32–34, 2016, Computer Society of India.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. Intelligent energy conservation: indoor temperature forecasting with extreme learning machine. In *Intelligent Systems Technologies and Applications 2016*, pages 977–988. Springer, 2016.

Sachin Kumar, Saibal K Pal, and Ram Pal Singh. Elm variants comparison on applications of time series data forecasting. In *2016 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, pages 1404–1409. IEEE, 2016.

Sachin Kumar, Saibal K Pal, et al. A new sustainable prototype usp for education information system. In *2015 International Conference on Futuristic Trends on Computational Analysis and Knowledge Management (ABLAZE)*, pages 174–179. IEEE, 2015.

Sachin Kumar and Saibal K Pal. An approach to ensure superior and sustainable software development performance. In *2014 International Conference on Computing for Sustainable Global Development (INDIACom)*, pages 115–117. IEEE, 2014.

Sachin Kumar and Saibal K Pal. Empirically developed integrated ict framework for pds in developing countries. In *2013 Third World Congress on Information and Communication Technologies (WICT 2013)*, pages 234–239. IEEE, 2013.

Authored Books/Chapters

- **Sachin Kumar, Ajit Kumar Verma, Amna Mirza**. *Digital Transformation, Artificial Intelligence and Society: Opportunities and Challenges*, *2024*, *Springer Nature*.
- **Sachin Kumar**. AI Project Cycle, *New ICT Series Class 8, Cambridge University Press, UK, ISBN-9781009792493, 2023*.
- **Sachin Kumar**. Machine Learning, *New ICT Series Class 7, Cambridge University Press, UK, ISBN-9781009441582, 2023*.
- **Sachin Kumar**. Need of Artificial Intelligence (AI), *New ICT Series Class 6, Cambridge University Press, UK, ISBN-9781009441575, 2023*.
- **Sachin Kumar**. Robotics, *New ICT Series Class 5, Cambridge University Press, UK, ISBN-9781009792486, 2023*.
- **Sachin Kumar**. Internet of Things(IoT), *New ICT Series Class 4, Cambridge University Press, UK, ISBN-9781009441568, 2023*.
- **Sachin Kumar**. AI Ethics, *New ICT Series Class 3, Cambridge University Press, UK, ISBN-9781009441551, 2023*.
- **Sachin Kumar**. Artificial Intelligence (AI) and You, *New ICT Series Class 2, Cambridge University Press, UK, ISBN-9781009792479, 2023*.
- **Sachin Kumar**. Introduction to Artificial Intelligence, *New ICT Series Class 1, Cambridge University Press, UK, ISBN-9781009441544, 2023*.
- Manish Kumar Singh, Sachin Kumar, Saibal K Pal. **Operating Systems Fundamentals: Concept Building and Problem Solving Approach, ISBN:978-93-5573-354-2**, 2022, *Cengage Publication*, Boston USA.

Research Projects

- **Principal Investigator**, Faculty Research Programme Grant, ***Artificial Intelligence Framework for Carbon Emission Prediction and Hybrid Intelligent Impact Quantification Model Using ML and NLP to Ensure Accountability of Stakeholders for Climate Actions and NetZero Targets*** funded by Institute of Eminence, Delhi University, 2024-2025, Approx 5.0 Lakhs.
- **Principal Investigator**, Faculty Research Programme Grant, ***Quantification and Pattern Analysis of Digital Discourses to Understand Innovation and Start-Up Ecosystem Using Natural Language Processing and Machine Learning Approaches*** funded by Institute of Eminence, Delhi University, 2023-2024, Approx 4.0 Lakhs.
- **Principal Investigator**, Faculty Research Programme Grant, ***Assessment of Innovation and Start-Up Ecosystem: A Case Study on Entrepreneurs And Incubators in Tier-1 and Tier-2 Cities*** funded by Institute of Eminence, Delhi University, 2022-2023, Approx 5.0 Lakhs.
- **Principal Investigator**, Faculty Research Programme Grant, ***Analysis and Determination of Influence of Users on Social Media Platforms Using Machine Learning*** funded by Institute of Eminence, Delhi University, 2021-2022, Approx 1.75 Lakhs.
- **Co-Principal Investigator**, Innovation Project, ***Weaving Dreams for Destitute – Night Shelters*** funded by Delhi University, 2015-2016, Approx-4.5 Lakhs.

Policy Papers/Commentaries/Discussions

- Sachin Kumar, ***AI Governance in India: Aspirations and Apprehensions***,The Observer Research Foundation, https://www.orfonline.org/research/ai-governance-in-india-aspirations-and-apprehensions
- Amna Mirza and Sachin Kumar, ***'LiFE Industry 4.0: The need for right synergies in Digitalisation and Globalisation 4.0 for Sustainable Development.***, Think20 (T20) is an official Engagement Group of the G20., https://t20ind.org/research/life-industry-4-0/

Invited Lectures/Talks

- **Artificial Intelligence, IoT and Digital Society: Opportunities and Challenges**, *International Conference on Diversity, Equity, Inclusion and Belonging (ICDEIB-2024), Amity University*

London, UK, 2024, .

- **Introduction to Artificial Intelligence and its Use in Academia**, *Workshop on Use of Artificial Intelligence in Legal Teaching and Research, Indian Law Institute, New Delhi 2023,* .

- **Digital Transformation and Artificial Intelligence: Opportunities and Challenges in Healthcare Research**, *National Webinar on Application of Artificial Intelligence in Health care research, K M Shah Dental College and Hospital, Sumandeep Vidyapeeth, Vadodara, Gujrat, India, July 7, 2023,* .

- **Digital Transformation and Artificial Intelligence for Social Good: Opportunities and Challenges**, *23rd INBUSH ERA World Summit 2023 & 2nd International Conference on Recent Trends in Engineering, Technology and Business Management (ICRTETBM 2023) (Sustainability, Digitization and Business Operations) at Amity International Business School (AIBS) Amity Centre for Interdisciplinary Research (ACIDR), Amity University, Noida, India, February 22-24, 2023,* .

- **Digital Transformation and Artificial Intelligence: Opportunities and Challenges**, *Seminar, Cyber meet Society, Indraprastha College for Women, University of Delhi, Delhi, 15th Feb, 2023*, `https://www.instagram.com/p/CotqNKIjLsy/?utm_source=ig_web_copy_link`.

- **Research Management and Hands-on Experimentation**, *Faculty Development Programme on "Modern Teaching Techniques in Social Sciences"*, Kamkus College of Law, in collaboration with Mahatma Hansraj Faculty Development Centre (MHRFDC), Hansraj College, University of Delhi, Delhi, 20th Dec, 2022, .

- **Inculcating Research Aptitude in Undergraduate Students**, *National Seminar on Innovations in Research and Technology, International Coordination and Development Programme, Shaheed Bhagat Singh College, University of Delhi*, 16th Dec, 2022, .

- **Importance of embedding STEMbotics in School Curriculum**, *HT School Webinar on 'STEMbotics in School Curriculum'*, Organised by Hindustan Times, 3rd Dec, 2022, .

- **Digital Technologies, Information Consumption and Fake News**, *Refresher course on "Re-Defining Ethics in the Era of Digitalization: From Theory to Practice"* , Teaching Learning Centre, Ramanujan College, the University Of Delhi under the aegis of Ministry Of Education initiative "Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching", 29th March, 2022, `https://www.youtube.com/watch?v=qIJERpXAEmU&t=11s&ab_channel=RamanujanCollege`.

- **Digital Technologies and Higher Education**, *Refresher course on "Re-Defining Ethics in the Era of Digitalization: From Theory to Practice"* , Teaching Learning Centre, Ramanujan College, the University Of Delhi under the aegis of Ministry Of Education initiative "Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching", 29th March, 2022, `https://www.youtube.com/watch?v=fo387zDQKCo&ab_channel=RamanujanCollege`.

- **Digital Technologies, Biases and Gender Issues: Part 1**, *Refresher course on "Feminist Teaching Research in Higher Education: Theory and Practice"* , Teaching Learning Centre, Ramanujan College, the University Of Delhi under the aegis of Ministry Of Education initiative "Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching", 29th July, 2021, `https://www.youtube.com/watch?v=XJEKdRElnKQ&t=641s&ab_channel=RamanujanCollege`.

- **Digital Technologies, Biases and Gender Issues: Part 2**, *Refresher course on "Feminist Teaching Research in Higher Education: Theory and Practice"* , Teaching Learning Centre, Ramanujan College, the University Of Delhi under the aegis of Ministry Of Education initiative "Pandit Madan Mohan Malaviya National Mission On Teachers And Teaching", 29th July, 2021, `https://www.youtube.com/watch?v=LbhnW4_Pfgk&ab_channel=RamanujanCollege`.

- **Analysis of Research Management Tools and Hands-on Experience**, *Interdisciplinary Workshop on Research Management Tools*, SIES College of Arts, Science and Commerce, University of Mumbai, 7th June, 2021.

- **Handling and Processing Information for Permanent Storage in Programming.**, *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 3rd June, 2021.

- **Handling Set of Similar and Dissimilar Items and their Processing in Programming** , *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 2nd June, 2021.

- **Understanding Concepts of Functions, Pointers and Memory Addresses in Programming**, *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 1st June, 2021.

- Deciding the Right Course of Action While Automating Real World Scenarios in Programming, *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 31th May, 2021.
- Concept of Iteration in Real World and their Implementation in Programming, *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 29th May, 2021.
- Programming Philosophy and Automating the Real World., *Value Added Courses on C and C++*, J C Bose University of Science and Technology, YMCA, Faridabad, Haryana, 28th May, 2021.
- Exploring Idea of Research Project in Humanities, *National Webinar on 'Fostering Research Culture in Higher Education Institutes'*, SIES College of Arts, Science and Commerce, University of Mumbai, 17th April, 2021.
- Analysing Research Management Tools in Indian Higher Education System, *Faculty Development Programme on Philosophical Methods in Interdisciplinary Teaching*, Ramanujan College, University of Delhi, 30th March, 2021. `https://www.youtube.com/watch?v=oxN8jv-N-gE&t=6s&ab_channel=RamanujanCollege` .
- Research Process Management: Concept, Implications and Future Directions , *9th International Conference on Quality, Reliability, Infocom Technology and Business Operations (Trends and Future Directions(ICQRIT))*, Delhi,27th to 29th Dec, 2018, Springer.
- An Intelligent Health Information System for India, *7th International Conference on Quality, Reliability, Infocom Technology and Business Operations (Trends and Future Directions)(ICQRIT)*, Delhi, 27th to 29th Dec, 2018, Springer.
- Post-Quantum Cryptography and Approaches, *International Conference on Quality Reliability Infocom Technology and Industrial Technology Management*, Delhi, 2013.

Achievements: Journals/Conferences/Workshops/Seminars

- Associate Editor, *International Journal of System Assurance Engineering and Management*, Springer, 2022.
- Member, Organising Committee, National Seminar on *Innovation and Opportunities in Marine Bio-resources Biotechnology*, organised by Cluster Innovation Centre and Marine Biotechnology Laboratory, Department of Botany, University of Delhi, Delhi, India, 21st August, 2021.
- Member, Programme Committee, International Conference on *Quality Reliability Infocom Technology and Business Operations*, University of Delhi, Delhi, India, 2021.
- Member, Programme Committee, International Conference on *Quality Reliability Infocom Technology and Business Operations*, University of Delhi, Delhi, India, 27th Dec-29th Dec, 2018.

Workshop/Conference Achievements and Awards

- Talk Chair, , Lalit Garg & Public Health and Satellite Data at Amity International Business School, Amity University, Noida, UP, India, 21st to 23rd Feb 2024.
- Talk Chair, *Quality 4.0, A data-driven approach for quality management*, By Mr Marcus Sørensen, Head of Quality & Six Sigma, Envases, Denmark at Amity International Business School, Amity University, Noida, UP, India, 22nd to 24th Feb 2023.
- Talk Chair, *Quality 4.0, A data-driven approach for quality management*, By Mr Marcus Sørensen, Head of Quality & Six Sigma, Envases, Denmark at Amity International Business School, Amity University, Noida, UP, India, 22nd to 24th Feb 2023.
- Session Chair, *Software Engineering, International Conference on Recent Trends in Engineering, Technology and Business Management (ICRTETBM 2023)*, Amity International Business School, Amity University, Noida, UP, India, 22th to 24th Feb 2023.
- Expert Panel Member, *Privacy and Artificial Intelligence*, *International Conference on Artificial Intelligence and International Law*, Campus Law Centre, University of Delhi, Delhi, India. 24th to 25th June, 2022.

- **Jury Member**, *International Conference on Future Challenges and Sustainable Development Goals: Science to Policy Framework*, Shaheed Bhagat Singh College, University of Delhi, Delhi, India. 16th to 18th April, 2021.
- **Session Chair**, *Network Communication, International Conference on Recent Trends in Engineering, Technology and Business Management (ICRTETBM 2019)*, Amity International Business School, Amity University, Noida, UP, India, 20th to 22nd Feb, 2019.
- **Session Chair**, *Artificial Intelligence II, International Conference on Quality Reliability Infocom Technology and Business Operations(ICQRIT)*, University of Delhi, Delhi, India, 27th to 29th Dec, 2018.
- **Session Chair**, *Modelling and Optimization, International Conference on Quality Reliability Infocom Technology and Business Operations(ICQRIT)*, University of Delhi, Delhi, India, 27th to 29th Dec, 2018.

Paper Presentation

- **A Novel Hybrid Model of Word Embedding and Deep Learning to Identify Hate and Abusive Content on Social Media Platform** in International Conference on Frontiers of Artificial Intelligence, Ethics, and Multidisciplinary Applications(FAIEMA), National and Kapodistrian University of Athens, Greece, 25th - 26th September 2023.
- **Mapping opportunities and challenges in entrepreneurship ecosystem: A case study of dynamics of incubation centres in tier 1 & tier 2 cities** in International Conference on Recent Trends in Engineering, Technology and Business Management (ICRTETBM 2023), Amity International Business School, Amity University, Noida, UP, India, 22th to 24th Feb 2023.
- **Does Social Media Feed Tell about Your Mental State? A Deep Randomised Neural Network Approach,** IEEE World Congress on Computational Intelligence 2022(WCCI2022), University of Padua, Padua, Italy, 18th to 23rd July 2022.
- **Does Social Media Feed Tell about Your Mental State? A Deep Randomised Neural Network Approach,** IEEE World Congress on Computational Intelligence 2022(WCCI2022), University of Padua, Padua, Italy, 18th to 23rd July 2022.
- **Smart Home: Accurate Prediction of Energy Consumption with Extreme Learning Machine Variant**, The 7th International Conference on Extreme Learning Machines Marina Bay Sands, Singapore, 13th – 15th Dec, 2016, Springer.
- **Intelligent Energy Conservation: Indoor Temperature Forecasting with Extreme Learning Machine**, International Symposium on Intelligent Systems Technologies and Applications (ISTA'16), Jaipur, India, 21st–24th, Sep, 2016, Springer.
- **ELM Variants Comparison on Applications of Time Series Data Forecasting**, International Conference on Advances in Computing, Communications and Informatics (ICACCI), Jaipur, India, 21st–24th, Sep, 2016, IEEE.
- **Assessment and Prospects of Big Data Analytics in Public Policy in India**, 4th International Conference on Advanced Data Analysis, Business Analytics and Intelligence, Indian Institute of Management Ahmadabad(IIMA), 2015.
- **A Conceptual Architectural Design for Intelligent Health Information System: Case Study on India**, 7th International Conference on Quality, Reliability, Infocom Technology and Business Operations (Trends and Future Directions(ICQRIT)), Delhi, 27th to 29th Dec, 2015, Springer.
- **A New Sustainable Prototype USP for Education Information System**, International Conference on Futuristic Trends on Computational Analysis and Knowledge Management & Consortium in Association with the University of Northampton, U.K., Amity University, Greater Noida, 25th to 27th Feb, 2015, IEEE.

Association with Professional Bodies

- **Member**, The Institute of Electrical and Electronics Engineers(IEEE).
- **Member**, Association for Computing Machinery(ACM).
- **Member**, Society for Reliability Engineering, Quality and Operations Management (Regd.).

Project Supervision

- Prayas Jain (2022). ***Analysis of Pre Poll and Post Poll Content Dynamics on Social Media***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Gaurav Dubey, Shivam Goyal, Yashu Garg (2022). ***Measurement and Prediction of Influence on Social Media***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Vishal Kumar, Harshita Kanwar (2022). ***Crime Hot-spot Detection: A Data Science Approach***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Akshit Jain, Bhavya Tewari, Bhavya Verma, Ujjawal Gahoi (2022). ***Detection of Crime Using Surveillance Videos***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Ansh Dassani, Ayush Gupta, Saksham Gupta, Ujjawal Gahoi (2022). ***Educational Website Development***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Vipul Wasnik, Pintu Kumar, Sai Yash, Siddharth Gupta (2022). ***Learning App Development(Grader)***, Semester Long Project, B.Tech(IT&MI), Sem-IV, Jan to May.
- Akash Erugurala, Ankit Kumar Bhagat, Vipin Bihari Yadav (2022). ***Parallel Analysis and Insights of Two COVID-19 Waves in India***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Abhinav Prashar, Deven mahlawat, Prabhat Gupta. (2022). ***Analysis of Virality of Fake News and Real News***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Sahiljit Singh. (2020). ***Gross Domestic Product Prediction Using Machine Learning***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Aditiya Sharma, Shrayas Sachan, Vaibhav Jain, Karthik B Raddy. (2019). ***Current Affairs News Classification and Ideological Prediction using Machine Learning***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Vedant Bonde, Harshit Joshi. (2019). ***Analysis of News Consumption Patterns and Fake News Analysis***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Sanjeev Dubey, Utkarsh Mittal. (2019). ***Emotion and Mood Classification Using Deep Learning***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Vivek Kumar et al. (2019). ***SmartEnvironment: Energy Conservation***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Arjun Sharma, Anustha Kalia. (2019). ***Deep Learning for Health Informatics***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Arjun Sharma, Anustha Kalia. (2019). ***Human Activity Recognition Using Deep Learning***, Semester Long Project, B.Tech(IT&MI), Sem-VI, Jan to May.
- Arjun Sharma, Anustha Kalia. (2018). ***Intelligent Driver Assistance to Detection Drowsy State***, Semester Long Project, B.Tech(IT&MI), Sem-IV, Jan to May.

Workshops Attended

- **ACM COMPUTE 2021: 14th Annual Conference, Department of Computer Science, University of Delhi, November 18 - 20, 2021**.
- **Faculty Development Programme**, Deep Learning and Machine Learning, Department of Information technology, Indira Gandhi Technological University for Women, Delhi, 16th to 21st Jul, 2018.
- **International Workshop on Big Data Analytics (WBDA-2016)**, School of Computer and Systems Sciences, Jawaharlal Nehru University, Delhi, 30th March, 2016.
- **FICCI Technology Expo and Innovator - Investor Meet**, Dec-15, FICCI, Delhi.
- **International Workshop of Medical Imaging and Machine Learning(WMLMIA)**, Indian Institute of Technology(IITM), 24th to 28th June, 2015, sponsored by Science and Engineering Research Board (SERB), Council of Scientific & Industrial Research (CSIR),
- **An Introduction to Splines with Statistical Applications**, 4th IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence, IIM Ahmadabad, 2015.
- **Text Mining: Theory, Methods and Applications**, 4th IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence, IIM Ahmadabad, 2015.
- **UGC-FCIT Workshop**, University of Delhi, 2014.
- **IndoCrypt2009**, Cytological Research Society of India, Indian National Science Academy Delhi, Dec 2009.
- **IBM Research Symposium** by IBM Research Lab, Delhi, 2009.

Media Coverage/Articles

- **India Can address Air Pollution and Climate Change With Industry 4.0**, *THE POLICY TIMES, 2023*, Mumbai, `https://thepolicytimes.com/india-can-address-air-pollution-and-climate-change`
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- **21st Century India Needs Intelligent Governance**, *The Daily Gaurdian, 2021*, Delhi, `https://thedailyguardian.com/21st-century-india-needs-intelligent-governance/`.
- **National Education Policy and Future Jobs**, *The Policy Times, 2021*, Mumbai, `https://thepolicytimes.com/national-educational-policy-and-future-jobs/`.
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- **Cyber Space: New Space for Security, Law and Order for India**, *Yojana Development Journal: Yojana Web Exclusives*, Vol-72,Publication Division, Ministry of I&B New Delhi, 2015.
- **Four Year Undergraduate Program for Revolutionizing Education System: Case Study on Delhi University Initiatives**, *Management Innovation Exchange*, `https://www.managementexchange.com/story/four-year-undergraduate-program-revolutionizing-eductaion-system-case-study-delhi-unive`
- **New Dimension in Public Policy in India: Big Data Analytics**, *Management Innovation Exchange*, `http://www.managementexchange.com/story/new-dimension-public-policy-india-big-data-analyti`

Interest and Hobbies

- Interaction with people having diverse social, political, economic, technological, psychological and philosophical backgrounds.
- Visiting new places and knowing their culture and tradition, history, geography, technological progress, political system and local innovations.
- Discussions on philosophy, technology, social issues, development, governance, politics, policies and their implementations.
- Listening to music, travelling and food.

References

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Declaration

I sincerely declare that the facts provided in this resume are true and correct to the best of my knowledge.

Name and Signature