

## Somaiya Vidyavihar University

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Department/Section: Computer Engineering			
College: K J Somaiya College of Engineering			
DOJ Somaiya: 16 <sup>th</sup> December, 2003	Career Experience: 20.5 Yrs.	Industry Experience: 01 Yr	Teaching Experience: 21 Yrs.
Present Academic Designation: Assistant Professor		Present Administrative Designation: -	

### Area of research/specialization and Courses Delivered

#### Research domain/interests/areas

1. Data mining
2. Natural Language Processing
3. Deep learning
4. Information extraction
5. Knowledge based systems
6. Image Processing

#### Courses Delivered:

1. Machine learning
2. Computer vision
3. Natural Language Processing
4. Applied Machine learning using Tensorflow framework
5. Advanced Data mining
6. Applied Data Science
7. Image processing
8. Soft Computing
9. Deep learning
10. Python Programming for Data Science
11. R programming for data science
12. C programming
13. Data warehousing & mining
14. Speech & Language processing
15. Neural networks & fuzzy systems
16. Digital signal processing
17. Computer Simulation and modeling

Recognition as a teacher by any University	UG: Yes	PG: Yes	Ph.D : No
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#### Details of Recognitions

1. Recognized UG teacher in Mumbai University from Dec 2003
2. Recognized PG teacher in Mumbai University from 2019.

### Education

Examination	Name of the Degree	University/Board	Institute/College	Year	CPI/SPI/%Marks
Ph.D	PhD in Computer Engineering	Mumbai University	K J Somaiya College of Engineering	2024	-
PG	ME in Computer Engineering	Mumbai University	Thadomal Shahani Engineering college	2011	74.37%

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UG	BE in Electronics & Telecommunication	Mumbai University	Konkan Gyanpeeth College of engineering	2001	65.58%
Diploma	Diploma in Industrial Electronics	--	K J Somaiya Polytechnic, Vidyavihar (Autonomous Institute)	1998	79.73

Notable Experience Details					
Sr. No	Name of the organization	Designation	Date of Joining	Date of Leaving	Experience (Years)
1.	Indian Ordnance Factory - Defence	Junior engineer trainee	July 2001	May 2002	01

Research Accomplishments and Projects		
No of students pursuing Ph.D. as on date: --		No of students completed Ph.D as on date: -
No of students completed PG thesis / Project work as on date: 05 Students PG thesis completed		No of students / groups completed UG projects as on date: 25 + UG Project groups completed.
Publications Total:	Number of Peer review Journal papers: 12	Number of Conference papers: 09

### Details of Publications:

#### International Journals:

- Sharma, Grishma, Deepak Sharma, and M. Sasikumar. "Summarizing long scientific documents through hierarchical structure extraction." **Natural Language Processing Journal** (2024) Elsevier: 100080. <https://doi.org/10.1016/j.nlp.2024.100080>
- Sharma, G., Sharma, D. (2022). "Improving extractive text summarization performance using enhanced feature based RBM method". **Revue d'Intelligence Artificielle**, Vol. 36, No. 5, pp. 777-784. (IIETA) <https://doi.org/10.18280/ria.360516>.
- Sharma, G., & Sharma, D. (2023). "Automatic Text Summarization Methods: A Comprehensive Review". **SN Computer Science, Springer** 4(1), 1-18. <https://doi.org/10.1007/s42979-022-01446-w>.
- 'Topic Modeling in Natural Language Processing', in International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 10 Issue 06, June-2021. DOI: 10.17577/IJERTV10IS060250
- 'Visual Object Detection and Tracking using YOLO and SORT', in International journal of engineering research and technology (IJERT), ISSN: 2278 – 0181, volume 8, issue 11, November 2019. DOI : 10.17577/IJERTV8IS110343
- 'Personalizing the Web Search for Effective Results Filtered on the Basis of User Needs' in International Journal of Innovative Research In Computer And Communication Engineering (IJIRCCE), Volume 5, Issue 4, April 2017.
- 'Voice Controlled Home Automation system' in International Journal of Advanced Technology in Engineering & Science (IJATES), ISSN – 2348 – 7550, Volume – 05, Issue – 05, May 2017.
- 'Face Recognition using Multi Agent System' International Journal of Computer Science and

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Engineering (IJCSE) Volume-4, Issue-4 E-ISSN: 2347-2693, April 2016.

9. 'Voice Browser', International journal of Advanced Research in Computer and Communication Engineering (IJARCCE), Volume 5, Issue 4, April 2016.
10. 'Video OCR for Indexing & Retrieval', International Journal of Computer Applications (IJCA) in May 2015.
11. 'Secure data hiding in images within selected zones', The board of international journal of innovative research & development (IJIRD) in march 2014, volume 3, issue 3.
12. 'Speech Recognition using Transform Method', International Journal of Computer Science and information security (IJCSIS)', Feb 2012, vol – 10, No - 2.
13. 'Speech Recognition using Energy and zero crossing features with kekre's Proportionate error algorithm', International Journal of Computer Applications', 2011, vol – 4, 33 – 37.

### Conferences:

1. "Named Entity Recognition in Healthcare: An Evaluation and Implementation of Deep Learning Models for Biomedical Data", International Conference on Technologies for Energy Agriculture and Healthcare ICTEAH 2024/KJSCE – SVU/KJSCE/April 2024.
2. "Event Oriented Abstractive Summarization", In Proceedings of the 19th International Conference on Natural Language Processing (ICON), Indian Institute of Information Technology (IIIT) Delhi, India, December 15 – 18 2022, NLP Association of India (NLP AI).
3. "Extractive Text Summarization Using Feature-Based Unsupervised RBM Method". In Cyber Security, Privacy and Networking, 2021 (pp. 105-115). Springer, Singapore. [https://doi.org/10.1007/978-981-16-8664-1\\_10](https://doi.org/10.1007/978-981-16-8664-1_10).
4. "Knowledge Transfer between Similar Atari Games Using Deep Q-Networks to Improve Performance", The Twelfth International Conference on Computing, Communication and Networking Technologies - 2021 organized by IIT Kharagpur in association with IEEE Kharagpur section on 6 – 8 July 2021.
5. "Visual Image Caption Generator Using Deep Learning", 2nd International Conference on Advances in Science & Technology (ICAST-2019) K. J. Somaiya Institute of Engineering & Information Technology, University of Mumbai, Maharashtra, India. April 2019.  
Link: <http://ssrn.com/link/2019-ICAST.html>.
6. "Real Time Event Summarization of Tweets with Segmentation", 6th International Conference on "Computing for Sustainable Global Development", IEEE Conference 13th - 15th March, 2019.
7. "Automated Gait Generation for simulated Bodies using Deep Reinforcement learning", 2nd International Conference on Inventive Communication and Computational Technologies (ICICCT2018) conference proceedings and IEEE explore, 20-21, April 2018.
8. "Using Deep learning methods for generation of a personalized list of shuffled songs", 12th INDIACOM 2018, 5th International conference on Computing for sustainable global development, IEEE conference, New Delhi - 14 -16 March 2018.
9. "Personalizing the web search", 12th INDIACOM 2018, 5th International conference on

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Computing for sustainable global development, IEEE conference, New Delhi - 14 -16 March 2018.

10. "Speech Recognition using Vector Quantization," ACM International conference and workshop on Emerging Trends and Technology, ICWET – Feb 2011.

No of Research / consultancy / projects completed:

Rs:

No of Research / consultancy / projects on-going:

Rs:

No of Research / consultancy / projects on applied as on date:

Rs:

Details of Research / consultancy / projects: --

Completed

On-going

Applied

### IPR/ Copyrights:

1. Copyright on Computer software work 'Multimodal Speech Analysis' in Jan 2025. Copyright Registration Number: SW- 20076/2025. [https://copyright.gov.in/Documents/ERegister/E-Register\\_January\\_2025.pdf](https://copyright.gov.in/Documents/ERegister/E-Register_January_2025.pdf)
2. Copyright on Computer software work 'User Preference Based Extractive Summarization of Long Structured Documents'. Nov 2023. Copyright Registration Number: SW-17599/2023. [https://copyright.gov.in/Documents/ERegister/E-Register\\_November\\_2023.pdf](https://copyright.gov.in/Documents/ERegister/E-Register_November_2023.pdf)

### UG & PG Projects Guided:

1. Finix - Fund Trail Analysis
2. Detecting Gallbladder stones using Ultrasound images
3. Named Entity Recognition in Healthcare
4. Audio-Scribe: Accessible Audio-to-Text Transformation Using ML
5. Podium Pro: A Platform To Improve Oratory Skills
6. Audio Sentiment Analysis for Customer Call Satisfaction
7. Pro-Health- Personalizing Fitness
8. Automatic Text Summarization using Deep Neural Networks
9. Smart Examination System: Automatic Remote Proctoring System
10. Voice Cloning: Multispeaker text-to-speech synthesis
11. Reinforcement Learning Agents for General Game Play (GGP) through Knowledge Transfer
12. Machine Learning Interpretability
13. Speech Aid: To assist in public speaking
14. Simulation Environment for Development and Testing of Autonomous Learning Agents
15. Visual Speech Prediction (VSP)
16. Image Caption Generator With Speech As Output
17. Automated Gait Generation for Simulated Bodies using Deep Reinforcement Learning.
18. Music recommendation using Deep Learning(Smart shuffle)
19. Bankruptcy Detection using Neural Networks
20. Voice Controlled Home Automation System

### FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered

#### Attended:

1. Successfully Completed NVIDIA Online certification on Building Transformer-Based Natural Language Processing Applications in November 2024.
2. Successfully Completed Online course on Introduction to Predictive Modeling from Coursera in August 2024.

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3. Successfully Completed Online course on Structuring Machine Learning Projects from Coursera in June 2024.
4. Successfully Completed Online course on Sequence models from Coursera deeplearning.AI in June 2024.
5. Attended 3 day Annual research meet in SVU – 29 – 31 Jan 2024.
6. Attended Two-Day National FDP on Research Writing & Publication Process conducted on 25 & 26 November 2023 by CRT, National Foundation for Entrepreneurship Development (NFED), Coimbatore, Tamil Nadu.
7. Successfully Completed Udemy online course on “Transformers for NLP” in August 2023.
8. Attended an intellectual property awareness training program organized by intellectual property office India on April 6, 2023.
9. Two weeks online Faculty development programme on “Natural Language Processing” jointly organized by the Electronics and ICT Academies at IIT Kanpur, IIT Roorkee, MNIT Jaipur, PDPM IITDM Jabalpur and NIT Patna during February 7- 18, 2022 under the “Scheme of financial assistance for setting up of Electronics and ICT Academies” of the Ministry of Electronics and Information Technology (MeitY), Government of India with “Excellent” grade.
10. Successfully Completed 8 weeks online course on ‘Deep Learning A-Z™: Hands-On Artificial Neural Networks on Udemy in Feb 2022.
11. Successfully Completed 4 weeks online course on ‘R Programming for Statistics and Data Science’ on Udemy in January 2022.
12. Participated in the International Webinar entitled, “Strengthening Your Understanding of Research Journals“(Reading, Referencing and Publishing)” organized by K. J. Somaiya College of Science and Commerce in collaboration with ELSEVIER on 10th July, 2021.
13. Attended and successfully completed online one week ISTE approved FDP on “Deep Learning & its Applications” from 05 – 09th July 2021, organized by Xavier Institute of Engineering, Mahim Mumbai, Maharashtra.
14. Attended and successfully completed Online Coursera six week course on “Machine learning with Python” authorized by Coursera and IBM from Jan – Feb 2021.
15. Attended and successfully completed NPTEL course on “Advanced Natural Language Processing” organized by IIT madras from Sep – Dec 2020.
16. Attended and successfully completed Online STTP on “Recent Trends in Deep Learning” Organized by Information Technology Department, Government College of Engineering Aurangabad. Sponsored by TQIEP-III from 04th September - 08th September 2020.
17. Attended and successfully completed Online Coursera Five week course on ‘Natural Language Processing’ authorized by National Research University Higher School of Economics & offered through coursera from 18th May to 22nd June 2020.
18. Attended one week FDP on 'Improving Teaching Learning Experience using Best Practices' organized by DJSCE, Mumbai from 15 – 19 June 2020.
19. Attended one day online webinar on ‘Research in Digital Age – Problems and Opportunities’ organized by Bharati Vidyapeeth’s Institute of Computer Applications and Management, (BVICAM) New Delhi on 12th June, 2020.
20. Attended two days FDP on ‘Online Teaching & E content’ organized by S K Somaiya College in association with Indian Institute of Digital Education (IIDE) on 11 & 12th June 2020.
21. Attended one week online STTP on ‘Recent Trends and Applications of Machine Learning and Deep learning in IT’ organized by RAIT, Nerul Mumbai from 25 – 29 May 2020
22. Attended one day online National Workshop on "Fine Tuning Research Planning using Elsevier Tools: Science Direct, Scopus and Mendeley" organized by K.J. Somaiya College of Science and Commerce, Vidyavihar on 25th April, 2020.
23. Attended 16th International conference on ‘Natural Language Processing’ at IIIT, Hyderabad on 18 – 21 December 2019.
24. Attended and successfully completed AICTE approved Graded eight weeks FDP on ‘Practical machine learning with Tensorflow’ organized by NPTEL, IIT Madras and Google from August to October 2019.

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25. Attended one day workshop on 'Experiential learning' on 28th August 2019 organized by department of computer engineering KJSCE Vidyavihar.
26. Attended one day workshop on "IoT Communication using MQTT Cloud Services" on 22 September, 2018 organized by KJSCE Computer department.
27. Attended and successfully completed AICTE approved 8 weeks FDP on 'Introduction to Machine learning' organized by NPTEL – IIT Kharagpur from August 2018 to October 2018.
28. Attended and successfully completed Online Coursera Four week course on 'Introduction to Data Science in Python' authorized by University of Michigan & offered through coursera from May to June 2018.
29. Attended Accenture Learning Symposium workshop on 'Deep learning & DevOps' conducted by Accenture on 5 – 6 February 2018.
30. Attended a Two week FDP - AICTE Sponsored Quality Improvement programme on 'Machine Learning Tools & Applications for Engineers' at VJTI Mumbai held during 12th – 21st June , 2017.
31. Attended a Two day workshop on 'Multirate Wavelets and its applications' at K.J.Somaiya College of Engineering on 18 – 19th March 2016.
32. Attended a Three day National Workshop on 'Medical Imaging' at IIT Bombay on 19th – 20th June, 2015.
33. Attended a one day seminar on 'MATLAB & SIMULINK for Engineering Education' by Math works India on 4th Oct 2013.
34. Attended a Two week ISTE Workshop on 'Database Management systems', organized by IIT Bombay in May 2013.
35. Attended a Two week ISTE Workshop on 'Introduction to Research Methodologies', organized by IIT Bombay in June 2012.
36. Attended Short Term Training Program on 'Digital Image Processing', organized by SIES, Nerul, New Mumbai, December 2006.
37. Attended a two week 'Induction Training Program for Engineering. College Teachers (ITP), organized by 'National Institute of Technical Teachers Training and Research, Pune, in Dec 2005.
38. Attended a Workshop on 'Digital Signal Processing', organized by Thadomal Shahani Engineering College, Mumbai, in Oct 2005.
39. Attended Distance Education Program on 'Embedded Systems', organized by IITB, Mumbai, Jan 2005.

### **Organized:**

1. Organized a 21-day-long Summer School in Geospatial Science and Technology (Level 1). Organized by K. J. Somaiya Institute of Technology, Somaiya Vidyavihar and K. J. Somaiya College of Engineering, Somaiya Vidyavihar University. Supported by National Geospatial Program, Department of Science & Technology, Government of India, New Delhi from 27 May to 16 June 2024.
2. Organized one week ISTE approved STTP on "Geospatial Information Systems" from 19 – 23 July 2021, organized and coordinated by computer engineering department, KJSCE SVU.
3. Organized an ISTE approved one day Agro technical and recreational Visit in coordination with ISTE Teacher's Chapter KJSCE to Yusuf Meher Ali Center, Karnala Bird Sanctuary and Trek to Karnala Fort on 29th Feb 2020.
4. Organized an ISTE approved one day workshop on 'Financial Literacy in coordination with ISTE Teacher's Chapter KJSCE on 6th February 2020.
5. Organized an ISTE approved one day workshop on 'Self-Defence' in coordination with ISTE Teacher's Chapter KJSCE on 13th September, 2019.
6. Organized and coordinated one day workshop on "Machine learning Tensorflow & React

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Native” on 13th October, 2018

7. Organized & Coordinated ‘AICTE-ISTE Sponsored Refresher Programme on ‘Cloud Computing and Security’ from June 11, 2018 – June 16, 2018.
8. Coordinated Two Days Weekend Faculty Development Programme – Saptahaant Shikshak Prashikshan (SSP) on ‘Introduction to Machine Learning’ on 16th & 17th December, 2017 organized by IIT Kharagpur.
9. Organized & Coordinated one day workshop on ‘A - View classroom server & installation of Moodle server’ on November, 10th, 2017 for Technical staff of KJSCE.
10. Organized & Coordinated one week AICTE – ISTE approved STTP on “Bioinformatics: Emerging Research Trends & Applications’ on June 27 – July – 01, 2017.
11. Organized & Coordinated one week ISTE approved STTP on ‘SMAC’ social mobile analytics and cloud on December 5 - 9, 2016.
12. Organized various Technical hackathon under code-cell committee.

### **Session Delivered:**

1. Delivered a session on Image enhancement techniques and image mosaicking i 21-day-long Summer School in Geospatial Science and Technology (Level 1). Organized by K. J. Somaiya Institute of Technology, Somaiya Vidyavihar and K. J. Somaiya College of Engineering, Somaiya Vidyavihar University. Supported by National Geospatial Program, Department of Science & Technology, Government of India, New Delhi from 27 May to 16 June 2024.
2. Delivered an hands on expert session on NLP Sequence models in ISTE approved Five day workshop on “Unearth the secretes of NLP” organized by Vidyalankar Institute of Technology in June 2023.
3. Delivered a lecture on ‘Scilab’ in short term training program on ‘Solutions of Mathematical Models using SCILAB, organized by Science & Humanities dept., KJSCE, on Nov 2008.

### **Notable Key Scholastic Achievements**

1.	Published article in Mid-Day newspaper on 20th June 2024 on “AI in Filmmaking”.
2.	Reviewer for Journal: <ol style="list-style-type: none"> <li>1) Journal of Computational Science – Elsevier (Impact factor – 3.1 &amp; CiteScore – 5.5)</li> <li>2) Artificial Intelligence Review - Springer (Impact factor – 11.1 &amp; CiteScore – 22.0)</li> <li>3) Systems &amp; soft computing – Elsevier (CiteScore – 2.2)</li> <li>4) Various Scopus based IEEE and Springer international conferences</li> </ol>

### **Notable Positions and Responsibility**

1.	Institute level member of Infrastructure Maintenance and Write off.
2.	Member of National Innovation & Startup Policy cell – NISP at institute level.
3.	Coordinator of Centre of AIDS at institute level.
4.	Faculty advisor for KJSCE - Code CELL committee.
5.	Internal Exam Audit Committee.
6.	Departmental faculty Incharge of KJSCE ISTE – Teacher’s chapter.
7.	Departmental Library in charge. 2015 – 2017

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8.	Former, member of Result Analysis Committee, member of training & Placement cell Committee.
9.	Chief Proctor of Computer Engineering since July 1, 2011 to June 2016.

**Date: 04 / 12 / 2024**

**Signature of Faculty Member**