

Faculty Biodata

Name of Teaching Staff	Ruhina B. Karani
Designation	Assistant Professor
Department	Computer Engineering
Date of Joining the Institution	5.7.2013
Professional Memberships	ISTELM



Qualifications with Class/Grade:

1. M.E. Computer Engineering from University of Mumbai, First class with Distinction in October, 2012.
2. B.E., Computer Engineering from University of Mumbai, First Class with Distinction in May, 2007.

Total Experience in Years: 10 Years Teaching: 10 Years

- Assistant Professor, in computer engineering department of D. J. Sanghvi College of Engineering since 05/07/2013 till date.
- Assistant Professor (Adhoc), in information technology department of D. J. Sanghvi College of Engineering From 20.7.2011 to 30.6.2013.
- Lecturer, K.J. Somaiya College of Engineering from 5.1.2009 to 19.7.2010.
- Lecturer (Temp.), K.J. Somaiya College of Engineering from 24.3.2008 to 26.12.2008.
- Lecturer, K.E.S's N.N. Patil College of Engineering from 11.9.2007 to 19.3.2008.

Courses Taught:

- Machine Learning
- Digital Signal and Image Processing
- Human Machine Interaction
- Natural Language Processing
- Database Management System
- Operating Systems
- Software Architecture

Projects Guided:

- B.E. Project: **25**

Academic Duties:

- Website Coordinator
- Examination Coordinator
- Project Coordinator
- Member of Board of Studies
- Member of Department Advisory Board
- Alumni Coordinator
- F.E. Mentor

- Member of NBA Committee
- Member of NAAC Committee
- Member of admission Committee
- Class-Incharge

Workshop, lecture series & Conferences Conducted:

- Organized AICTE-ISTE Sponsored One week Short Term Training Program entitled, “Insights of Machine Learning and Deep Learning “from 2nd July 2018 to 6th July 2018
- Organized One week Faculty Development Program entitled, “R and Python Programming” from 16th July 2018 to 20th July 2018
- Organized Expert Session on “Imparting Social values and Ethics to Students”
- Organized an International conference on “Advanced Computing Technologies and Applications (ICACTA- 2015)” held in D.J.Sanghvi College of Engineering
- Organized a national conference on “Emerging Trends in Computers, Communication and Information Technology held in K.J.Somaiya College of Engineering , Mumbai.
- Organized a State Level Project Competition “ DJ ASCII” for Computer and Information Technology Department of D. J. Sanghvi College of Engineering
- Contributed as a teacher In 2 Week ISTE Workshop on Effective teaching/Learning of computer programming conducted by IIT Bombay under the National Mission on Education through ICT.
- Conducted expert lecture on “Digital Signal and Image processing”
- Conducted expert lecture on “Database management systems”

FDPs / STTPs / Workshops/ Lecture series Completed/Attended:

- NPTEL-AICTE approved 8 week MOOC course / Faculty Development Program on “Data Mining” in Feb- Apr 2021
- AICTE-ATAL approved 1 week Faculty Development Program on “Artificial Intelligence and Geospatial Technology in Surveillance for Infectious Diseases ” from 23rd August 2021 to 27th August 2021
- AICTE-ISTE approved 1 week Short Term Training Program on “Smart Computing” from 12th July 2021 to 16th July 2021
- AICTE-ATAL approved 1 week Faculty Development Program on “Reinforcement Learning and its Application ” from 7th June 2021 to 11th June 2021
- AICTE-ATAL approved 1 week Faculty Development Program on “Computer Science & Biology” from 19th October 2020 to 23rd Oct 2020
- AICTE-ATAL approved 1 week Faculty Development Program on “Computer Vision and Pattern Recognition: Challenges and Opportunities” from 21st Sept 2020 to 25th Sept 2020
- NPTEL-AICTE approved 8 week MOOC course / Faculty Development Program on Database Management System in Sept- Nov 2020
- AICTE approved 1 week Faculty Development Program/ Workshop on “Inculcating Universal Human Values in Technical Education” from 18 July 2020 to 22 July 2020
- ISRO’s 1 Week training on “Satellite Photogrammetry and its Application” from 29th June 2020 to 3rd July 2020
- Python 3.4.3 Training by Spoken Tutorial IIT Bombay conducted on 3rd May 2020
- AICTE- ISTE approved 1 week Short Term Training Program on “Insights of Machine Learning and Deep Learning” from 2nd July 2018 to 6th July 2018
- AICTE- ISTE approved 1 week Short Term Training Program on "R Programming, Python and Perl” from 2nd Jan 2018 to 7th Jan 2018.

- 1 week Faculty development program on “R and Python Programming” from 12th Jan 2018 to 13th Jan 2018.
- AICTE- ISTE approved 1 week Short Term Training Program on "Real Time Digital Signal Processing using DSP Processors" on 13th June 2016 to 17th June 2016.
- 1 week Short Term Training Program on "Practical Insights to Cloud Computing" from 4th Jan 2016 to 9th Jan 2016.
- Workshop under TEQIP on "Outcome based Education and Accreditation for Faculty Members of Technical Institution" by NBA on 7th Sept, 2014

Coursera Certifications Completed:

- 11 Weeks course on “Machine Learning” offered by Stanford University
- 16 Weeks specialization course on “Deep Learning Specialization” offered by “deeplearning.ai”
- 15 Weeks specialization course on “Mathematics for ML Specialization” offered by Imperial College, London
- 6 weeks course on “Data Analysis with Python” offered by IBM
- 4 weeks course on “Databases and SQL for Data Science” offered by IBM
- 3 weeks course on “What is Data Science” offered by IBM
- 6 weeks course on “Machine Learning with Python” offered by IBM
- 3 weeks course on “Open Source tools for Data Science” offered by IBM
- 3 weeks course on “Data Visualization with Python” offered by IBM
- 5 weeks course on “Python for Data Science and AI” offered by IBM
- 5 weeks course on “Assessment in Higher Education: Professional Development for Teachers” offered by Erasmus University Rotterdam
- 6 weeks course on “Learning To Teach Online” offered by UNSW Sydney (The University of New South Wales)

Industrial Training Completed:

- 1 Week training on “Machine Learning” by IBM from 22nd June 2020 to 26th June 2020
- 1 Week training on “Applied Statistics” by IBM from 28th June 2020 to 2nd July 2020
- 1 Month industrial training on “Machine Learning” by DVDV Technologies Pvt. Ltd., Mumbai from 1st May 2020 to 29th May 2020
- 1 Week training on “Introduction to AIML” by IBM from 22nd November 2019 to 24th November 2019

Research Activity Conducted/ Grant Received:

- Received minor research grant from University of Mumbai for conducting research on “**Optimal Harvesting of Rainwater using Simulation based on GIS and Weather Modeling Systems**”.

Publication & Conferences: (Till Date)

SCOPUS Indexed Publications: 08

- Published a paper on “Generation of Indian sign language by sentence processing and generative adversarial networks”, 3rd International Conference on Intelligent Sustainable Systems, ICISS 2020, 2020, pp. 1250–1255, 9315979
- Published a paper on “Pothole Detection and Dimension Estimation System using Deep Learning (YOLO) and Image Processing”, International Conference Image and Vision Computing New Zealand, 2020, 2020-November, 9290547
- Published a paper on “Deep Learning for Detection and Severity Classification of Dibetic Retinopathy”, Proceedings of 1st International Conference on Innovations in Information and Communication Technology, ICICT 2019, 2019, 8741456
- Published a paper on “Optimization of Rainwater Harvesting Sites using GIS” GISTAM 2019 - Proceedings of the 5th International Conference on Geographical Information Systems Theory, Applications and Management, at University of Crete, Heraklion, Crete-Greece, 2019, pp. 228–233) on 4th May 2019.
- Published a paper on “Baby Mentor: Learning Through Images” Proceedings of 2017 International Conference on Innovations in Information, Embedded and Communication Systems, ICIECS 2017, 2018, 2018-January, pp. 1–6
- Published a paper on “Detection of landing areas for unmanned aerial vehicles.” , Proceedings - 2nd International Conference on Computing, Communication, Control and Automation, ICCUBEA 2016, 2017, 7860044
- Published a paper on “Tracking of Entities in Multi-Sport Field”, International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015), Procedia Computer Science 45 (2015) Elsevier publication, pg. 300 – 304
- Published a paper on “A deviant transform based approach for color image registration”, Proceedings - 2012 International Conference on Communication, Information and Computing Technology, ICCICT 2012, 2012, 6398231

Web of Science Indexed Publications: 06

- Published a paper on “Optimization of Rainwater Harvesting Sites using GIS” GISTAM 2019 - Proceedings of the 5th International Conference on Geographical Information Systems Theory, Applications and Management, at University of Crete, Heraklion, Crete-Greece, 2019, pp. 228–233) on 4th May 2019.
- Published a paper on “Deep Learning for Detection and Severity Classification of Dibetic Retinopathy”, Proceedings of 1st International Conference on Innovations in Information and Communication Technology, ICICT 2019, 2019, 8741456
- Published a paper on “Baby Mentor: Learning Through Images” Proceedings of 2017 International Conference on Innovations in Information, Embedded and Communication Systems, ICIECS 2017, 2018, 2018-January, pp. 1–6
- Published a paper on “Detection of landing areas for unmanned aerial vehicles.” , Proceedings - 2nd International Conference on Computing, Communication, Control and Automation, ICCUBEA 2016, 2017, 7860044
- Published a paper on “Tracking of Entities in Multi-Sport Field”, International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015), Procedia Computer Science 45 (2015) Elsevier publication, pg. 300 – 304
- Published a paper on “2D Satellite Image Registration Using Transform Based and Correlation Based Methods” International Journal of Advanced Computer Science and Applications(IJACSA), 3(5), 2012. <http://dx.doi.org/10.14569/IJACSA.2012.030511>

Publications in Open Access Journal: 04

- Published a paper on “English Language Accent Classification and Conversion using Machine Learning” (May 14, 2020). Proceedings of the International Conference on Innovative Computing & Communications (ICICC) 2020, SSRN, Elsevier, Available at SRN: <https://ssrn.com/abstract=3600748> or <http://dx.doi.org/10.2139/ssrn.3600748>
- Published a paper on “Optimization of Rainwater Harvesting Sites using GIS” GISTAM 2019 - Proceedings of the 5th International Conference on Geographical Information Systems Theory, Applications and Management, at University of Crete, Heraklion, Crete-Greece, 2019, pp. 228–233) on 4th May 2019.
- “Tracking of Entities in Multi-Sport Field”, International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015), Procedia Computer Science 45 (2015) Elsevier publication, pg. 300 – 304
- Published a paper on “2D Satellite Image Registration Using Transform Based and Correlation Based Methods” International Journal of Advanced Computer Science and Applications(IJACSA), 3(5), 2012. <http://dx.doi.org/10.14569/IJACSA.2012.030511>

Papers presented in International Journal: 12

- Published a paper on “3D Visualization of Products for Online Shopping”, IJCA, Vol- 132, Issue-5, December-2015.
- Published a paper on “A survey of Image Registration Techniques using Neural Network”, IJCSE, Vol-3, Issue-12, December-2015, ISSN 2347-2693.
- Published a paper on “Face Aging Simulation”, IJCA, Vol-131, Issue-11, December-2015
- Published a paper on “Detection of Landing Areas for Unmanned Aerial Vehicles”, IJCA, Vol-131, Issue-2, December-2015, ISSN 0975-8887.
- Published a paper on “2D to 3D Image Morphing Techniques” International Journal
- Published a paper on “Predicting Pool Ball Trajectories” International Journal
- Published a paper on “Interpretation of Indian Sign Language through Video Streaming”, International Journal
- Published a paper on “3D Visualization of Products for Online Shopping” International Journal
- Published a paper on “Face Aging Simulation” International Journal.
- Published a paper on “A Survey of Image Registration Techniques Using Neural Networks”
- Published a paper on “Detection of Landing Areas for Unmanned Aerial Vehicles”
- Published a paper on “Real Time Eye-Tracking using Web Camera” in International Journal of Engineering Research and Technology, Volume-3, Issue 11, Nov 14

Papers presented in International Conference: 10

- “Image Registration using Discrete Cosine Transform and Normalized Cross Correlation”, International Journal of Computer Application, Digital Library URL <http://www.ijcaonline.org/proceedings/icwet2012/number2/5323-1014> (ISBN 973-93- 80864-48-5).
- “2D Satellite Image Registration using transform based and correction based methods” International Journal of Advanced Computer Science and Applications (IJACSA), Vol.3 No. 5, PP 64-7, May 2012.
- “A deviant transform based approach for color image registration”, IEEE Explore, October 2012.
- “Baby Mentor: Learning Through Images” in IEEE sponsored ICIECS’17 held on 17/03/17 - 18/03/17

- “Detection of landing areas for unmanned aerial vehicles.” 2016 International Conference on Computing Communication Control and automation (ICCUBEA) (2016): 1-5.
- “Tracking of Entities in Multi-Sport Field”, International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015), Procedia Computer Science 45 (2015) Elsevier publication, pg. 300 – 304
- “Deep Learning for Detection and Severity Classification of Dibetic Retinopathy”, 1st International Conference on Innovations in Information and Communication Technology (ICIICT 2019), IEEE Conference Record No:46602, ISBN No:978-1-7281-1603-7 at St. Peter's College of Engineering and Technology, Avadi, Tamilnadu, India on 25th April 2019
- “Optimization of Rainwater Harvesting Sites using GIS” 5th International Conference on Geographical Information Systems Theory, Applications and Management (GISTAM 2019) at University of Crete, Heraklion, Crete-Greece on 4th May 2019.
- Published a paper on “Generation of Indian sign language by sentence processing and generative adversarial networks”, 3rd International Conference on Intelligent Sustainable Systems, ICISS 2020, 2020, pp. 1250–1255, 9315979
- Published a paper on “Pothole Detection and Dimension Estimation System using Deep Learning (YOLO) and Image Processing”, International Conference Image and Vision Computing New Zealand, 2020, 2020-November, 9290547

Book/ Book Chapter Publication:

- Published a book chapter on “Applications of Machine Learning in Psychology and the Lifestyle Disease Diabetes Mellitus” in Book “Design of Intelligent Applications Using Machine Learning and Deep Learning Techniques” 1st Edition, Chapman and Hall/CRC ,ISBN-9781003133681,2021

Patents/ Copyright:

- Registered a copyright for " Classification of Facial Expression using CNN", registration no- L-104141/2021

Ruhina Karani

Signature