Divya Srivastava

Personal Data

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Research Interest

Machine Learning, Deep Learning, Computer Vision, Document Image Analysis, Biometrics.

Education

2015-present	PhD(Thesis submission in June 2024), Department of Computer Science and Engineering **Indian Institute of Technology Jodhpur**
2015	Master of Technology in Advanced Computing (GGPA 8.75) **Maulana Azad National Institute of Technology, Bhopal**
2013	Bachelor of Technology, Department of Computer Science and Engineering (75.98%) **Gautam Buddh Technical University**
2008	Intermediate at Indian School Certificate, New Delhi (75.60%)
2006	High School at Indian Certificate of Secondary Education, New Delhi (80.00%)

Project

PhD Thesis	**From Words to Structures: Enhancing Document Image Analysis using Handcrafted and Machine Learning Techniques (Thesis submitted)** Supervised by- Dr. Gaurav Harit
M.Tech Project	**DNA Sequence Search using Content Based Image Retrieval** Supervised by- Dr. Rajesh Wadhvani
B.Tech Project	**An Electrocardiogram based authentication system using video stream** Supervised by - Mr. Rohit Sharma

Scholarships / Fellowships

1. Research Assistantship for M.Tech program by Ministry of Human Resource Development, Government of India, July 2013 to May 2015.

2. Research Assistantship for PhD under Visvesvaraya PhD Scheme for Electronics & IT, Ministry of Communications & IT, Government of India, since July 2015.

Publications

Journal

- **Divya Srivastava**, and Gaurav Harit. "Selective Denoising in Document Images using Reinforcement Learning." Sadhana (Accepted).

- **Divya Srivastava**, and Gaurav Harit. "Simultaneous denoising and super resolution of document images." Sadhana 49, no. 1 (2024): 35.

- **Divya Srivastava**, Rohit Sharma, Anuj Srivastava. "Reliability Analysis of Cloud Computing Systems Serving Multi-Class Requests." Journal of Scientific Research, Volume 65, Issue 5 (Accepted)

- **Divya Srivastava**, Rajesh Wadhvani, and Manasi Gyanchandani. "A Review: Color Feature Extraction Methods for Content Based Image Retrieval." International Journal of Computational Engineering & Management 18.3 (2015): 9-13.

Conference

- **Divya Srivastava** and Gaurav Harit, "Associating field components in heterogeneous handwritten form images using Graph Autoencoder", 15th International Conference on Document Analysis and Recognition - Worshop on Machine Learning **(ICDARWML-2019)**, Sydney, Australia.

- **Divya Srivastava** and Gaurav Harit, "Word Spotting in Cluttered Environment", The Third International Conference on Computer Vision & Image Processing **(CVIP-2018)**, Jabalpur, India.

- **Divya Srivastava** and Gaurav Harit, "Cell Extraction and Horizontal Scale Correction in Structured Documents",The Third International Conference on Computer Vision & Image Processing **(CVIP-2018)**, Jabalpur, India.

- Rohit Sharma, Taskeen Fatima, Shahina Anwarul, **Divya Srivastava**, "Electrocardiogram based Authentication System using Video Streams", Second International Conferences on Advances in Computer Science and Application, **CSA 2013**, Lucknow, India.

Reviewer

- 2021 International Symposium on Signal, Image Processing and Pattern Recognition (SIPPR 2021), Bangkok, Vietnam, Apr. 16-18, 2021..

- 2019 International Symposium on Signal, Image Processing and Pattern Recognition (SIPPR 2019), Bangkok, Thailand, Nov. 23-25, 2019.

- 13th Workshop for Women in Machine Learning 2018 (WiML 2018) Co-located with NeuralIPS in Montreal, Canada, Dec. 3, 2018.

Awards and Achievements

- Qualified GATE in year 2013 with Score 632 and in year 2014 with Score 613.

- Summer Training done at IQRA Softwares, Kanpur for the duration of six weeks in the year 2012, on "MATLAB and digital image processing" in the year 2012.

- Stood 2nd in Mechart in Techkriti 2011, held at IIT Kanpur.

Technical Talks

Dec 2017   Deep Learning Hands-on Session,
Faculty Development Program
Jodhpur Institute of Engineering and Technology, JIET, Jodhpur.

B.Tech Projects Mentorship

- Denoising Degraded Documents using CycleGAN. (Anurag Shah, Qazi Sajid Azam at IIT Jodhpur)

- Text Image Super-Resolution using GAN for improved OCR accuracy.(Anurag Shah, Qazi Sajid Azam at IIT Jodhpur)

- Content based image retrieval using fused features based on mathematical analysis. (Anshul Jain, Aniket Tomar, Vineet Kumar Armo, Akash Raj at MANIT Bhopal)

- Content Based Image Retrieval using Color and Texture Features. (Mudita Yadav, Aniket Malviya, Sparsh Smith Singh, Taj Mohammad at MANIT Bhopal)

- Content Based Image Retrieval using amalgamation of shape, color and texture Features. (Bhagyashree Dixit, Dharmendra Singh, Gagan Malpani, Manish Jamre at MANIT Bhopal)

- Content Based Image Retrieval using Wavelet transformation and Color Difference Histogram. (Aarti Jangid, Kalyan Yadav, Jagdish Chaudhary, Chithira Sasi at MANIT Bhopal)

- Motif Finding in Genes Using Image Processing. (Rohit Kumar, Deepaank Satyam Sinha, Ajay Patel, Ayesha Akhtar at MANIT Bhopal)
- Named Entity Recognition in News Domain. (Archit Rastogi, Aniket Malviya, Nitin Parihar, Akansha Sharma at MANIT Bhopal)
- A new content based image retrieval technique using color and texture information. (Dheeresh Das, Sajal Gupta, Shubham Prasad, Faraz Bukhari at MANIT Bhopal)
- Content based image retrieval based on haar wavelet and image signature. (Martand Aditya Singh, Ramraj Meena, Priyam Srivastava at MANIT Bhopal)

Summer School/ Workshops attended

- Participated in the National Conference on AI Innovations and IP Trends (AIIIPR) 2019 at IIT Jodhpur during 11-12 March 2019.
- Participated in the BSDP workshop organized by MSME, Kanpur.
- Summer School on Deep Learning, CVIT-IIIT Hyderabad, 2016.
- Attended lecture series on, "Advanced Data Analytics & Machine Learning on Cloud" at IIT Jodhpur in 2016.
- Participated in the Research Evaluation Workshop held at Malaviya National Institute of Technology, Jaipur during 13-15, September 2018.

Events Organised

- Member of organizing committee of robotics workshop ARCKRITI 2011 at Dr. Ambedkar Institute of Technology for Handicapped, Kanpur.
- Co-coordinator in cultural events in "KHANAK 2011", "Udayaya 2012" at Dr. Ambedkar Institute of Technology for Handicapped, Kanpur.
- Member of organizing committee of Annual Athletic Meet 2011-12, at Dr. Ambedkar Institute of Technology for Handicapped, Kanpur.

Technical Skills

Computer Languages:	Python, C
Softwares:	Matlab, LATEX
Libraries:	Tensorflow, Keras, Torch, Tesseract-OCR
Operating System:	Windows, Linux

Teaching Assistant

Computer Programming, Data Structures, Machine Learning, Deep Learning.

REFERENCES

Dr. Gaurav Harit Professor
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Indian Institute of Technology Jodhpur
Email: gharit(AT)iitj.ac.in

Dr. Anil Kumar Tiwari Professor
Department of Eletrical Engineering
Indian Institute of Technology Jodhpur
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Dr. Rajesh Wadhvani Assistant Professor
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Dr. Manasi Gyanchandani Associate Professor
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