Prerna Agarwal

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EDUCATION

M.Tech, Computer Science, Data Engineering — CGPA: 9.625
Indraprastha Institute of Information Technology, New Delhi — 2015-2017

B.Tech in Computer Science — CGPA: 9.82
Jamia Millia Islamia, New Delhi — 2011-2015

Class 12th — 91.4 %
Dev Samaj Modern School, New Delhi — 2010-2011

Class 10th — 87.8 %
Dev Samaj Modern School, New Delhi — 2008-2009

RESEARCH INTERESTS

Machine Learning, Computer Vision, Deep learning, Spatial Data Mining, Information Retrieval

TECHNICAL ELECTIVES

Semantic Web, Program Analysis, Spatial Data Mining, Information Retrieval, Probabilistic Graphical Model, Data Mining, Graduate Algorithms, Collaborative Filtering

PUBLICATIONS

- P. Agarwal, R. Verma, A. Majumdar, "Indian Regional Cinema dataset for Recommender System", submitted in CIKM 2017 (Short Paper).
- P. Agarwal, R. Verma, Venkata M. V. Gunturi, "Discovering Spatial Regions of High Correlation", in SSTDM (ICDM Workshop) 2016, IEEE computer society.
- P. Agarwal, R. Ahmed, T. Ahmad, "Identification and Ranking of Key Persons in a Social Networking Website using Hadoop and Big Data Analytics", International Conference on Advances in Information Communication Technology and Computing 2016, ACM.
- P. Agarwal, R. Verma, A. Mallik, "Ontology Based Disease Diagnosis System with Probabilistic Inference", India International Conference on Information Processing 2016, IEEE computer society.

AWARDS AND ACHIEVEMENTS

- NET Qualified, January 2017.
- Ranked 2nd in overall M.Tech programme, IIIT Delhi.
- Presented paper in SSTDM (ICDM workshop) 2016 in Barcelona, Spain.
- Awarded with Dean's excellence award for excellent academic performance during the year 2015-2016.
- Selected with AIR 12 as Scientist in Computer Science in ISRO (Indian Space Research Organization) in April 2016.
- Awarded with Gold Medal for scoring highest CGPA in B.Tech, 2015, Jamia Millia Islamia.

- 3rd prize in Innovation Challenge (Research Showcase 2016) for the project Disease Diagnosis System based on Probabilistic Logic along with 1st prize in Tech Quiz.
- Secured AIR 442 with a percentile of 99.6 in Graduate Aptitude Test in Engineering 2015.
- Scholarship awarded for consecutive 3 years for holding Rank 1 in B. Tech 2nd, 3rd and 4th year, Jamia Millia Islamia.
- Science Stream topper of Dev Samaj Modern School, 2011.
- 2nd rank in National Science Olympiad 2011.

M.TECH THESIS

Mobility Assistance for Visually Impaired people (MAVI):
Advisor: Dr. Chetan Arora, IIIT Delhi
Co-Advisor: Dr. M. Balakrishnan, Deputy Director, IIT Delhi.
To develop a mobility assistance device for blind people to detect obstacles, road, pavement, animals etc. using openCV and machine learning techniques and further using deep learning techniques.

POSITION OF RESPONSIILITY

- Teaching assistant for the course Information Retrieval, Jan,17-May,17.
- Member of Organising team, Research Showcase 2016, IIIT Delhi.
- Teaching assistant for the course Data Mining, Aug,15-Dec,15 and Aug,16-Dec, 16.
- Teaching assistant for the course Data Structures and Algorithms, Jan,16-May,16.
- General Secretary of Subject Association, Jamia Millia Islamia, 2013-2015.
- Class Representative in B.Tech, Jamia Millia Islamia, 2012-2015.
- Member of Computer Society of India, Jamia Millia Islamia, 2011-2015.
- Team Representative of School Team in The Global Education and Leadership Foundation, 2009-2011.

OTHER RESEARCH PROJECTS

- *Elephant Accident Prevention:* *Advisor:* Dr. P. B. Sujit, IIIT Delhi
  Project aimed at collecting seismic data from elephant corridors that cross railway tracks and using that to prevent elephant-train accidents.
- *Multimodal Search:* *Advisor:* Dr. Sameep Mehta, IBM Research
  To build a multimodal search engine using deep learning. Image + Audio + Text based indexing, ranking and searching.
- *Probabilistic Pointer Analysis:* *Advisor:* Dr. Rahul Purandare, IIIT Delhi
  To provide a solution to the problem of pointer analysis on Java classes to find the probability of each object pointing to another object using SOOT.
- *Optical Word Recognition:* *Advisor:* Dr. Chetan Arora, IIIT Delhi
  A probabilistic graphical model approach to solve the problem of word recognition in images improving its accuracy and building different models.

SKILLS

Programming Languages: C, C++, Java, Python
Tools and Technologies: Hadoop and MapReduce, Android, SOOT, SPARQL, MongoDB, OpenCV, Caffe.