Arpit Agarwal

Contact Information

Department of Computer and Information Science
University of Pennsylvania
E-mail: aarpit@seas.upenn.edu
WWW: http://www.seas.upenn.edu/ aarpit/

Research Interests

Machine Learning, Learning Theory, Information Elicitation

Education

University of Pennsylvania — Philadelphia, USA
Ph.D. in Computer & Information Science — 2016 – present
Advisor: Shivani Agarwal

Indian Institute of Science — Bangalore, India
M.E. in Computer Science & Engineering — 2012 – 2014
Thesis Title: *GEV-canonical regression for accurate binary class probability estimation when one class is rare*
CGPA: 7.4/8.0 (*Best Student in M.E. CSE*)

Kamla Nehru Institute of Technology — Sultanpur, India
B.Tech. (Hons.) in Computer Science & Engineering — 2008 – 2012
Percentage Marks: 75.17%

Research Visit

Research Fellow at SEAS, Harvard University (September 1, 2015 – December 15, 2015)
Worked with Prof. David Parkes on multi-task information elicitation.

Publications

Shnayder, V., Agarwal, A., Frongillo, R. and Parkes D.C., **Informed Truthfulness in Multi-Task Peer Prediction.** In *Proceedings of the 17th ACM Conference on Economics and Computation (EC)*, 2016.

Agarwal, A. and Agarwal, S., **On Consistent Surrogate Risk Minimization and Property Elicitation.** In *Proceedings of the Conference on Learning Theory (COLT)*, 2015.

Agarwal, A., Narasimhan, H., Kalyanakrishnan, S. and Agarwal, S., **GEV-Canonical Regression for Accurate Binary Class Probability Estimation when One Class is Rare.** In *Proceedings of the 31st International Conference on Machine Learning (ICML)*, 2014.

Achievements and Awards

- Awarded student volunteer scholarship for ICML 2014, ICML 2015.
- Travel Grant from Google India for presenting a paper at ICML 2014, COLT 2015.
- Computer Society of India (Bangalore Chapter) Medal for best M.E. student in computer science & engineering, Indian Institute of Science, Bangalore, 2014.
- Secured all India rank 30 in Graduate Aptitude Test in Engineering (GATE) 2012 (out of around 150,000 students).
- Merit scholarship awards from UP state government and Bharat Sanchar Nigam Limited (BSNL) during all years in B.Tech., KNIT, Sultanpur, 2008 – 2012.

Graduate Courses

Fall 2012
Probability & Statistics
Design and Analysis of Algorithms
Program Analysis & Verification
Operating Systems

Spring 2013
Machine Learning
Game Theory
DBMS
Automated Verification

Fall 2013
Statistical Learning Theory
Computational Methods of Optimization
Linear Algebra

Fall 2014
Real Analysis
Information Theory

Fall 2015
Advanced Machine Learning (MIT, Audit)

Teaching Experience

- Teaching Assistant, IISc E0 270 Machine Learning, Spring 2016
  Responsibilities: tutorials on optimization, mentoring student projects, regular TA hours, setting up and correction of assignments, website maintainance.

Talks/ Presentations

- "On Consistent Surrogate Risk Minimization and Property Elicitation", ACM IKDD, Pune, India, 2016.
- "Connections between Calibrated Surrogates in Supervised Learning and Property Elicitation in Probability Forecasting", Presented at Harvard EconCS group meeting, Harvard University, 2015.
- "GEV-Canonical Regression for Accurate Binary Class Probability Estimation when One Class is Rare", International Conference on Machine Learning (ICML), Beijing, China, 2014.
- "Randomization at work: An Introduction to Randomized Algorithms", CSA Undergraduate Summer School, Indian Institute of Science, Bangalore, 2013.

Programming Skills

C, Java, Matlab, Python, LaTeX

Organizational Activities

- Member of Departmental Curriculum Committee, CSA, IISc, 2015-2016.
- Lead volunteer for Big Data Initiative, CSA, IISc, 2014.
- Volunteer for Indo-US Lectures Week in Machine Learning, Game Theory and Optimization, 2014.
- Organizer of machine learning programming contest TagMe! in CSA Open Days, Indian Institute of Science, 2014.
- Organizer of C programming contest in Effulgence, Kamla Nehru Institute of Technology, 2011.

References

Available upon request.