

Arpit Agarwal

CONTACT INFORMATION

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RESEARCH INTERESTS

Machine Learning, Information Elicitation, Learning Theory

EDUCATION

Ph.D. in Computer & Information Science 2016 – present
University of Pennsylvania Philadelphia, USA
GPA: 4.0/4.0
Advisor: Shivani Agarwal

Ph.D. candidate in Computer Science & Automation 2014 – 2016
Indian Institute of Science Bangalore, India
Transferred to University of Pennsylvania in Fall 2016

M.E. in Computer Science & Engineering 2012 – 2014
(*Awarded medal for Best Student in the outgoing batch*)
Indian Institute of Science Bangalore, India
CGPA: 7.4/8.0

B.Tech. (Hons.) in Computer Science & Engineering 2008 – 2012
Kamla Nehru Institute of Technology Sultanpur, India

RESEARCH VISITS

- Research Fellow at SEAS, Harvard University (September, 2015 – December, 2015)
Advisor: Prof. David Parkes

PUBLICATIONS

- Agarwal, A., Assadi, S., and Khanna, S.,
Stochastic Submodular Covering with Limited Adaptivity.
In preparation.
- Agarwal, A., Patil, P., and Agarwal, S.,
Accelerated Spectral Ranking.
Under submission.
- Agarwal, A., Agarwal, S., Assadi, S., and Khanna, S.,
Learning with Limited Rounds of Adaptivity: Coin Tossing, Multi-Armed Bandits, and Ranking from Pairwise Comparisons.
In Conference on Learning Theory (**COLT**), 2017.
- Agarwal, A., Mandal, D., Parkes, D., and Shah, N.,
Peer Prediction with Heterogeneous Users.
In 18th ACM Conference on Economics and Computation (**EC**), 2017.
Invited to **TEAC special issue** for EC 2017 papers.
- Shnayder, V., Agarwal, A., Frongillo, R. and Parkes D.C.,
Informed Truthfulness in Multi-Task Peer Prediction.
In 17th ACM Conference on Economics and Computation (**EC**), 2016.

- Shnayder, V., Agarwal, A., Frongillo, R. and Parkes D.C.,
Informed Truthfulness in Multi-Task Peer Prediction (short version).
In **HCOMP** Workshop on Mathematical Foundations of Human Computation, 2016.
- Agarwal, A. and Agarwal, S.,
On Consistent Surrogate Risk Minimization and Property Elicitation.
In 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 31st International Conference on Machine Learning (**ICML**), 2014.

ACHIEVEMENTS
AND AWARDS

- Travel grant for presenting a paper at COLT 2017.
- 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 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).

GRADUATE
COURSES

Fall 2012

Probability & Statistics (IISc)
Design and Analysis of Algorithms (IISc)
Program Analysis & Verification (IISc)
Operating Systems (IISc)

Spring 2013

Machine Learning (IISc)
Game Theory (IISc)
DBMS (IISc)
Automated Verification (IISc)

Fall 2013

Statistical Learning Theory (IISc)
Computational Methods of Optimization (IISc)
Linear Algebra (IISc)

Fall 2014

Real Analysis (IISc)
Information Theory (IISc)

Fall 2015

Advanced Machine Learning (MIT, Audit)

Fall 2016

Randomized Algorithms (UPenn)

Spring 2017

Online Methods in Machine Learning (UPenn)
Combinatorial Optimization (UPenn)

TEACHING
EXPERIENCE

- Teaching Assistant, UPenn CIS 520 Machine Learning, Fall 2017
Responsibilities: setting up and correction of homeworks, design of course project, regular TA hours.
- Teaching Assistant, IISc E0 270 Machine Learning, Spring 2016
Responsibilities: tutorials on optimization, mentoring student projects, regular TA hours, setting up and correction of homeworks.

REVIEWER
SERVICE

JAIR, COLT 2017.

TALKS/
PRESENTATIONS

- “Learning with Limited Rounds of Adaptivity: Coin Tossing, Multi-Armed Bandits, and Ranking from Pairwise Comparisons”, Indian Institute of Science, Bangalore, 2017.
- “Learning with Limited Rounds of Adaptivity: Coin Tossing, Multi-Armed Bandits, and Ranking from Pairwise Comparisons”, Microsoft Research, Bangalore, 2017.
- “Learning with Limited Rounds of Adaptivity: Coin Tossing, Multi-Armed Bandits, and Ranking from Pairwise Comparisons”, Conference on Learning Theory (COLT), Amsterdam, 2017.
- “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

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.

REFERENCES Available upon request.