Priyank Jaini

CONTACT INFORMATION

David R. Cheriton School of Computer Science
200 University Avenue West
University of Waterloo
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RESEARCH INTERESTS

Bayesian Learning, Mixture Models, Assistive Technologies

EDUCATION

University of Waterloo September 2015 - present
Ph.D. in Computer Science
Advised by Prof. Pascal Poupart
GPA : 91.50%

Indian Institute Of Technology, Kanpur (IIT Kanpur) July 2010 - June 2015
M.Sc.(Integrated) in Mathematics and Statistics
GPA : 8.4/10

PUBLICATIONS

Journal Articles

- **Accuracy Maximization Analysis for Natural Tasks and Principles of Multiplicative Noise and Filter Correlation in Neural Coding**
  Johannes Burge and *Priyank Jaini*
  Public Library of Science (PLoS), 2016 (to appear)
- **Accuracy Maximization Analysis with Class-conditional Gaussians : Linking Normative and Descriptive Quadratic Models of Neural Response**
  Priyank Jaini and Johannes Burge
  Public Library of Science (PLoS), 2016 (under review)

Conference Papers (Refereed and Archived)

- **Online Algorithms for Sum-Product Networks with Continuous Variables**
  Priyank Jaini, Abdullah Rashwan, Han Zhao, Yue Liu, E. Banijamali, Chen Zhitang and Pascal Poupart
  In the Proceedings of the 8th International Conference on Probabilistic Graphical Models (2016)
- **Online Flow Size Prediction for Improved Network Routing**
  Pascal Poupart, Zhitang Chen, *Priyank Jaini*, Yanhui Geng, Li Chen, Kai Chen and Hao Jin
  IEEE ICNP Workshop on Machine Learning in Computer Networks (NetworkML 2016)
- **Online Bayesian Transfer Learning for Sequential Data Modeling**
  Priyank Jaini, Zhitang Chen, Pabla Carbajal, Edith Law, Laura Middleton, Kayla Regan, Mike Schaekermann, James Tung and Pascal Poupart
  Submitted to the 5th International Conference on Learning Representations, 2017 (under review)
- **Online and Distributed learning of Gaussian mixture models by Bayesian Moment Matching**
  Priyank Jaini and Pascal Poupart
  arxiv:1609.05881 (2016)

INTERNSHIPS

University of Pennsylvania, USA June 2015 - July 2015
Research Assistant, Neuroscience Graduate Group
Advised by Dr. Johannes Burge
Developed mathematical tools enabling characterization of task-relevant properties of natural stimuli.

University of Waterloo, Canada May 2014 - July 2014
Research Assistant, Artificial Intelligence Lab
Advised by Dr. Pascal Poupart
Developed tractable online Bayesian algorithm for parameter estimation of Gaussian Mixture Models.

Kyoto University, Japan May 2013 - July 2013
Research Assistant, Department of Systems Science and Informatics
Advised by Dr. Shin-Ichi Maeda
Developed probabilistic method for fast and robust recognition of QR codes.

Awards

- Huawei Noah's Ark Lab Distinguished Collaborator Award 2016
- Graduate Excellence Award, University of Waterloo, 2016

Voluntary Work

Assistant Coordinator, Institute Counselling Service, IIT Kanpur January 2012 - May 2013

- Tackled stigma related to counseling via personal interactions with over 500 students
- Extended academic mentoring system to help sophomores resulting in 16% decline in probation
- Personally mentored 3 students out of academic probation with avg. increase in GPA by 1.8
- Pioneered a sensitization campaign on suicides for over 3,000 students on Suicide Prevention Day
- Collaborated with Govt. of India to draft guidelines to set up student support services in 32 Centrally Funded Technical Institutes

Society of People for Development, India May 2011 - July 2011

- Conducted surveys among rural people for Govt. of Uttrakhand to gauge their dependency on forests
- Used GPS to map villages across 3 districts for better monitoring and protection of forest resources

Extra Curricular Achievements

- Chief Editor, Vox Populi, Campus Newsletter, IIT Kanpur
- Coordinator, English Literary Society, IIT Kanpur
- Senator, Students' Senate, IIT Kanpur