Piyush Bhardwaj

CONTACT
INFORMATION

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RESEARCH
INTERESTS

Machine learning and applications, kernel methods and optimization

EDUCATION

Indian Institute of Technology, Kanpur, India

Masters of Technology, Computer Science, 2013 (expected graduation: May 2015)

- GPA: 9.71/10
  Advisors: Harish Karnick & Prateek Jain

Indian Institute of Technology, Kanpur, India

B.Tech-M.Tech Dual Degree, Mechanical Engineering, 2012

- GPA (M.Tech): 9.33/10
- GPA (B.Tech): 8.6/10
  Advisors: Kalyanmoy Deb & Bhaskar Dasgupta

THESIS

P. Bhardwaj, 2015. Efficient low rank approximation via alternate least squares for scalable kernel learning. [thesis]

PUBLICATIONS

P. Bhardwaj, H. Karnick. 2016. Efficient low rank approximation via alternating least squares for scalable kernel learning.24th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning (ESANN).(Accepted)

A.Panwar, **P. Bhardwaj**, O. Ozdemir, E. Masazade, C. K. Mohan, P. K. Varshney, and A. L. Drozd. 2012. On optimization algorithms for the design of multiband cognitive radio networks. In Proceedings of the 46th Annual Conference on Information Sciences and Systems (CISS), Princeton University. [paper]

Bhardwaj, P., Dasgupta, B., and Deb, K. 2013. Modelling the Pareto-optimal set using B-spline basis functions for continuous multi-objective optimization problems. In Engineering Optimization, Volume 46, Issue 7, pp 912-938. [paper]

Padhye, N., **Bhardwaj,P**. and Deb,K..2013. Unified Approach In Evolutionary Computation For DE Enhancement. In Journal of Global Optimization. Volume 55, Issue 4, pp 771-799 [paper]

Padhye, N., **Bhardwaj,P.** and Deb,K..2010. Improving Differential Evolution by Altering Steps in EC. In Proceedings of conference on Simulated Evolution and Learning 2010, Springer LNCS. [paper]

Bhardwaj.P, E. Masazade, O. Ozdemir, A.Panwar, C. K. Mohan, P. K. Varshney, and A. L. Drozd. Optimization in Multiband Cognitive Radio Networks: Single- and Multiobjective Approaches. In prepration.

SCHOLASTIC
ACHIEVEMENTS

Ranked **first** (class of 70 master students) in the department of computer science and engineering

Awarded Academic Excellence Award (awarded to top 5%) for outstanding academic performance in year 2013-14

CBSE scholorship for undergraduate studies based on outstanding performance in AIEEE'07

Secured **All India Rank 693** in the IIT Joint Entrance Exam, 2007 out of more than 250,000 applicants

Secured **All India Rank 159** in All India Engineering Enterance Exam (AIEEE'07) out of more than 600,000 applicants

COMPETITIONS   **First prize** in Yahoo! Hack-U 2013 (among 76 teams). Ideated and implemented an application for automatic extraction of highlights from sports video using audio signal processing

Ranked **second** among more than 600 teams in Tagme-Image recognition competition organized by Indian Institute of Science, Bangalore

WORK
EXPERIENCE

Microsoft, Bing Ads, Bangalore, India

Software Development Engineer   **Aug, 2015 - Present**
Project: Sensitivity Detection in Online Articles

- Primary responsibility includes blocking ads on MSN articles with sensitive content
- Implemented linear SVM based model in production code based on BOW features
- Set up a pipeline for human labelling of articles for collecting training data
- Significant improvement over a dictionary based lookup employed earlier

Microsoft, Bing Ads Applied Research, Bangalore, India

Intern   **May, 2014 - July, 2014**
Project: Co-clustering algorithms for click prediction

- Implemented machine learning algorithms for co-clustering to improve click prediction
- Carried out rigorous experimentation to validate the results
- Awarded a job offer by Microsoft India based on the performance

Citigroup, Global Decision Management, Bangalore, India

Analyst   **June, 2012 - July, 2013**

- Built mathematical models to predict customer behaviour on credit card transactions.
- Used techniques like logistic regression, decision trees, PCA etc. for predictive modeling

Syracuse Univesity, Syracuse, New York USA

Summer Intern   **May, 2011 - July, 2011**

- Proposed and implemented algorithms in C and MATLAB to solve optimization problems for dynamic resource allocation in cognitive radio networks
- Investigated several single and multi objective optimization problems related to sum-rate maximization, power minimization and fair allocation in omni directional and directional underlay cognitive radio networks

COMPUTER SKILLS

- Programming Languages: C, C++, Java
- Tools: MATLAB, SAS, LaTeX