VIPUL VENKATARAMAN

106 S Gregory St., Apt 10
Urbana, IL 61801
217-979-6438
vvnktrm2@illinois.edu
web.engr.illinois.edu/∼vvnktrm2

Education

University of Illinois at Urbana-Champaign
Masters in CS, May 2017
GPA: 4.0/4.0

Indian Institute of Technology Bombay
Bachelors in CS, Minor in Math, May 2015
GPA: 8.52/10.0

Experience

BloomReach, Mountain View | Engineering Intern — Summer 2016
Working on developing scalable methods for automated entity linking and attribute boosting using semi-structured and unstructured data about products from e-commerce sites.

Microsoft Research India | Summer School on ML applications in Big Data — Summer 2015
Participated in advanced workshops on Support Vector Machines, Expectation Maximization, Probabilistic Topic Models, Principal Component Analysis and Bayesian Learning.

Microsoft Research India | Research Intern — Summer 2014
Designed and implemented an improved inference technique in Microsoft's inference tool R2, and bettered existing tools such as Church, Venture and Infer.net by 10 times in various benchmarks.

Technische Universitat Braunschweig, Germany | Research Intern — Summer 2013
Showed the VC dimension of a symmetric gallery without holes to be six, the current best lower bound.

Awards

- All India Rank 63 and State Rank 1 in IIT-JEE 2011, among 500,000 candidates
- Recipient of the KVPY Scholarship by the Government of India, with All India Rank 4 in 2011
- Secured 3^{rd} position in the Regional Mathematical Olympiad (RMO), 2011
- Certified as among top 1% students in India, in the Indian National Mathematical, Chemistry and Astronomy Olympiads, in 2011
- Awarded Merit Certificate by CBSE India in 2011, for being in top 0.1% percentile in Mathematics
- Secured All India Rank 1, in the FIITJEE Talent Reward Exam, in 2009

Projects

Link Prediction via Graph Embedding in Large Social Networks — Spring 2016
Tackled the network sparsity problem by introducing richer links obtained via graph embedding to capture latent information, and achieved a 47% increase in accuracy from the state-of-the-art.

Preventing Overfitting in Machine Learning Classifiers — Fall 2015
Designed and implemented several modifications to the Dropout technique and improved performance by reducing overfitting while training Neural Networks, Support Vector Machines and Perceptrons.

Crowd-Powered Prostate Cancer Diagnosis — Fall 2015
Applied Crowdsourcing to diagnose prostate cancer without the help of expert pathologists. Achieved improved performance in comparison to the state-of-the-art Machine Learning techniques.

Incremental Query Optimization — Spring 2015
Developed a novel search algorithm that can automatically re-plan queries and efficiently prune the search space of equivalent queries. Demonstrated better performance over the PostgreSQL optimizer.

Competitive Programming

- Kaggle competition: 2^{nd} in the overall leaderboard in the 'Human or Robot?' Kaggle competition by Facebook as part of the Data Mining course project, in Fall 2015
- Secured 3^{rd} place in the Illinois Technology Association (ITA) tech challenge at UIUC, in Fall 2015
- Secured $2^{nd}/50$ in the Microsoft Azure ML Hackathon at IISc Bangalore, in Summer 2015
- ACM ICPC: qualified for the 2014 regional rounds by coming within top 5 teams at IIT Bombay

Technical Skills

Programming Languages: C++, Python, Java, Apache Spark
Statistical Computing: Matlab, R, Octave
Miscellaneous: MySQL, HTML, CSS, LaTeX, Scheme, Prolog