Abhinav Jauhri

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Education

Carnegie Mellon University, Pittsburgh, PA.
PhD in Computer Engineering, August, 2012 - Present.
Advisor: Jason Lohn

Carnegie Mellon University, Pittsburgh, PA.
MS in Software Engineering, 2011.

Narsee Monjee University, Mumbai, India.
B.Tech. in Computer Engineering, 2010.

Research Interests

Seeking for a summer internship in a research lab in areas of systems, machine learning or optimization.

Papers under Submission And Working Papers

Comparitive Study of Antenna Placement Optimization Algorithms, Abhinav Jauhri, Jason Lohn. GECCO 2014.

Recommendations Using Coupled Matrix Factorization, Evangelos Papalexakis, Abhinav Jauhri. PAKDD 2014, Tainan, Taiwan. Submitted in October, 2013.

Measuring Client Device Behavior on the Modern Web, Erik Reed, Abhinav Jauhri. NIPS 2013. Submitted in October, 2013.

Professional Employment

Software Engineer, Salesforce.com Inc., San Francisco, CA, (September, 2011 - July, 2012)
- Created APIs for report generation for different entities within the commerce platform.
- Developed and modeled a platform to enable commerce activities across products.

Graduate Assistantships

Optimization Algorithms for Antenna Placement, Carnegie Mellon University (September, 2010 - August, 2011)
- Developed stochastic algorithms to locate near-optimal antenna placements.
- Contributed in design and implementation of evolutionary algorithms: Genetic Algorithm, Simulated Annealing, Hill Climber.

Formulated course, **How to Write Fast Code (18-645)**, Carnegie Mellon University (May, 2011 - August, 2011)
- Prepared class assignments using CUDA, OMP, and Hadoop.
- Prepared infrastructure for students to collaborate, and test code on clusters.

Summer Internships

Nvidia, Santa Clara, CA. Summer 2013.
- Worked on adding functionalities in C++ to provide video streaming for their gaming platform.
- Developed a thread pool library for Windows platform.

Red Hat, Pune, India. Summer 2009.
- Worked on a converged VoIP conference application for GNU/Linux platform. The web based application used Session Initiation Protocol (SIP) for session management.
- Developed a mechanism to allow persistence storage of users logged onto the VoIP application to enable conferencing using Real-time Transport Protocol (RTP). `http://code.google.com/p/jvprism`

Projects

Binomial and Fibonacci heaps in Racket, for submission at Lisp In Summer Projects, 2013
- Functional implementation of heaps using dialect of Lisp.
- Benchmarked and compared with existing libraries in Racket. `https://github.com/ajauhri/rkt-heaps`

Measuring Client Device Behavior on the Modern Web, Carnegie Mellon University (January, 2013 - May, 2013)
- Our hypothesis - Most of the client devices have workload which require fetching of state information from a remote server. Understanding the access pattern is essential to perform optimizations.

– Collecting and analyzing patterns of popular websites and web-based applications. `https://github.com/ajauhri/web-stap`

Evograph, Carnegie Mellon University (January, 2011 - April, 2011)
- Developed evolutionary algorithms to represent graphs aesthetically.
- Assessed performances of different algorithms on complete graphs. `http://code.google.com/p/evograph`

Process Enactment Tool, Carnegie Mellon University (August, 2010 - December, 2010)
- Developed a tool using Ruby on Rails to effectively track processes in a software organization. Extreme Programming (XP) was adopted in the course of its development. Test Driven Development (TDD) was accomplished using RSpec. Selenium was used for creating integration tests.
- Worked on the design and development of core functionalities, and developed the test suite. `http://github.com/ajauhri/Fall-2010-Public`

Distributed Storage Systems, Narsee Monjee University (July, 2009 - May, 2010)
- Designed and implemented an application to allow storage of data on multiple nodes in a network.
- Worked on the implementation of a virtual file system layer using FUSE-J to intercept system calls, and perform customized operation. Also, developed protocols to enable interaction between storage nodes. `http://distrosys.wikia.com`

Packet Sniffer, Narsee Monjee University (January, 2009 - March, 2009)
- Created a system to capture, store, and analyze network packets. An initial version of a Honey-Pot architecture was developed.

IT Enabled Academia, representing Narsee Monjee University at IBM's Great Mind Challenge 2008
- Built an application to provide a framework for educational institutions to automate their administrative mechanisms with the conventional student-faculty interactions. Some key features included time-table generation, exchange of study material, archival of students data, report generation, and bar-code generator.
- Worked on development of all functionalities, database schema design, and XQueries. `http://github.com/ajauhri/itea`

Graduate Coursework

Stochastic Optimization (18-879) by `Jason Lohn`

Analytical Performance Modeling & Design of Computer System (15-857) by `Mor Harchol-Balter`

Machine Learning (10-701) by `Alex Smola & Barnabas Poczos`

Graduate Algorithms (15-750) by `Manuel Blum`

Advanced and Distributed Operating Systems (15-712) by `Hui Zhang`

Systems Experience

Programming Languages: C, C++, Java, Racket, Matlab

Scripting Languages: Python, bash, Javascript

RDBMS Language: SQL

DBMS: DB2, Oracle 9i, MySQL, SQLite

Presentation technologies: HTML, LaTeX

Selected Honors

Carnegie Institute of Technology Dean's Tuition Fellowship for academic year 2012 - 13.

Head of Editorial Board at Narsee Monjee University for academic year 2009 - 10.

Member of a team which was amongst best 20 teams selected fromm all over India by IBM at their annual competition, Great Mind Challenge, 2008.

Chairperson of the Student Branck of Computer Society of India (CSI) at Narsee Monjee University for academic year 2007 - 08.

College prefect at La Martiniere College, Lucknow, India for academic year 2005 - 06.