

Shrey Gupta

CONTACT INFORMATION

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EDUCATION

Stanford University

M.S. (*Artificial Intelligence*), Computer Science (2009-2011)

Courses - Information Retrieval and Web Search, Machine Learning, Data Mining, Structured Probabilistic Models, Multiagent Systems, Independent Study (under Dr. P. Raghavan, Yahoo! Labs), Natural Language Processing, Modern Applied Statistics: Data Mining, Web Programming, Computer Networks, Object Oriented Programming : Modeling and Simulation Perspective, Computer Vision*, Parallel Programming* (* - *in progress*)

Indian Institute of Technology Guwahati, India

Bachelor of Technology, Computer Science and Engineering (2005-2009)

HONORS AND AWARDS

National Merit Scholarship, Ministry of HRD, Government of India, 2005-09
Contest Winner, Rank 2, Google Programming Contest, IIT Guwahati, 2008
Summer Research Fellowship, Indian Academy of Sciences, Bangalore et al., 2007
Nurture Program, Indian National Mathematical Olympiad, 2004 & 2003
Certificate of Merit, Top 1%, National Standard Examination in Physics, 2004-05

PUBLICATIONS

Sharma, V.; Mukherji, U.; Joseph, V.; Gupta, S.; , *Optimal energy management policies for energy harvesting sensor nodes*, **IEEE Transactions on Wireless Communications**, vol.9, no.4, pp.1326-1336, April 2010

RESEARCH & INTERNSHIP EXPERIENCE

Microsoft Corporation, Bellevue, WA, USA ¹

Software Engineering Intern, Search Relevance - Bing, Online Services Division **Summer 2010**
Relevance ranking and interspersing of multimedia objects in general search results on Bing.

Qualcomm Incorporated, San Diego, California USA

Interim Engineering Intern, Corporate R&D

Summer 2008

Explored various techniques for 3-D modeling of the real world surroundings. Identified and implemented a procedure based on employing point clouds generated by depth-aware imagery. The internship, a part of the *Qualcomm Technology Leaders and Innovators Program*, was awarded to 6 students across all the IITs.

Indian Institute of Science, Bangalore, India

Research Intern

December 2007

Guide : Prof. Vinod Sharma, Department of Electrical Communication Engineering

The aim was to model self sustaining wireless sensor networks with optimum power consumption techniques such as to enable the network to function efficiently via power harvesting sensor nodes. A novel policy was developed and the results have been published in the Journal - *IEEE Transactions on Wireless Communication*.

Indian Institute of Science, Bangalore, India

Summer Research Fellow

Summer 2007

Guide : Prof. V. Rajaraman, Supercomputer Education and Research Centre

Involved the design and implementation of the Customer Access Layer (*real world interface*) of the Computing Utility (a distributed computing infrastructure). The project was a part of the prestigious Summer Research Fellowship awarded by Indian Academy of Sciences, Bangalore et al.

¹The Internship could not be completed due to personal reasons

MAJOR ACADEMIC
PROJECTS

Automated User Profiling on Micro blogs

Spring 2010

Guide : Prof. C. Manning, Stanford University

The project was done as a part of the Natural Language Processing (CS 224N) course at Stanford. We built a system that initially classifies a twitter account as a corporate/personal account and then generates a user profile by employing sentiment analysis and information extraction.

Clustering tweets based on Hashtags

Winter 2010

Guide : Prof. Anand Rajaraman, Prof. Jure Leskovec , Stanford University

We devised novel ways of discovering tweets associated with same events by clustering their hash-tags on text, co-occurrence and temporal features. The project was implemented on Amazon Elastic MapReduce platform and the dataset consisted of all public tweets from June-December 2009.

Supervised Machine Learning Classifiers

Autumn 2009

Guide : Prof. C. Manning, Prof. P. Raghavan, Stanford University

Implemented variants of classical classifiers like Naive Bayes, SVM, Decision Trees and Nearest Neighbor methods. Analyzed various existing feature selection methodologies and proposed new domain specific features to enhance accuracy of the classifier.

Bachelor's Thesis

August 2008 - May 2009

Guide : Prof. Gautam Barua, Department of Computer Science and Engineering, IIT Guwahati

The existing *battery aware* protocols for ad-hoc networks emphasize on the localized battery power measure and discount maintaining network connectivity on a global scale. We proposed new metrics which take into account the above deficiencies without any significant increase in the cost and complexity of computation.

PINTOS

August 2007 - November 2007

Guide : Prof. Gautam Barua, Department of Computer Science and Engineering, IIT Guwahati

The aim was to ameliorate a bare bones OS kernel Pint-OS (Developed at Stanford), by implementing various advanced OS constructs like Process Synchronization primitives, implementing schemes for running programs in both Kernel and User Mode, File System Management and design of Virtual Memory using Demand Paging.

COMPUTING
SKILLS

- Programming Languages: C, C++, Java, MATLAB, R
- Operating Systems: Linux, Windows
- Web Programming: HTML, CSS, JavaScript, AJAX, XML, Ruby on Rails
- Development & other tools: Eclipse, Visual Studio, Hadoop, Hive, Lucene, Amazon Web Services, Aster Data's nCluster

POSITIONS OF
RESPONSIBILITY

- **Teaching Assistant: CS 224N** - Natural Language Processing
- **Teaching Assistant: CS 103** - Mathematical Foundations of Computing
- **Teaching Assistant: CS 154** - Introduction to Automata and Complexity Theory
- **Teaching Assistant: CS 210** - Software Project Experience with Corporate Partners
- **Batch Representative**, IIT Guwahati, 2007-2008
- Editorial Team, *Linked List*, Departmental Magazine, 2008
- Student Advisor, Student Welfare Board, IIT Guwahati, 2007-2008
- Event Organizer, Techniche, IIT Guwahati Technical Fest, 2007

EXTRA CURRICULAR
ACTIVITIES

Successful Completion of NSS (National Service Scheme)

Active Wikipedia/Wikitavel Contributor

Quizzing

- 1st prize, Brainstorm - The General Quiz, Alcheringa 2007, IIT Guwahati
- 1st prize, Search Strings - The Biz Quiz, Techniche 2006, IIT Guwahati