SWATI ROY

Email: swatir@cs.princeton.edu Homepage: http://www.cs.princeton.edu/~swatir/

Education:

Princeton University **1/2015 – Present**
Candidate for PhD, Computer Science
Advisor: Dr. Nick Feamster

Georgia Institute of Technology, Atlanta, GA **8/2013 – 12/2014**
Candidate for PhD, Computer Science,
Advisor: Dr. Nick Feamster
GPA 4.0/4.0

Georgia Institute of Technology, Atlanta, GA **8/2011 – 5/2013**
Candidate for Master of Science, Electrical and Computers,
GPA 3.84/4.0

Visvesvaraya Technological University, Belgaum, India **8/2006 - 6/2010**
Aggregate Percentage: **82.85%** (**Rank #1-Department of Telecommunication**)

Skills:

- **Programming:** C/C++, PERL, HTML, JAVA, VHDL/Verilog, SQLPlus , PSQL, Python
- O**perating Systems:** MS-windows, UNIX, LINUX

Experience:

Princeton University Princeton, NJ
Assistant in Instruction **2/2015 – 5/2015**
Algorithms and Data Structures

- Mastered various sorting and graph algorithms, regular expressions
- Conducted precepts for undergraduate students to support course material

AT&T Research Labs Bedminster, NJ
Summer Student Intern **5/2014 – 7/2014**
Project Impact assessment of Self-Organizing Networks in Dynamic Environment

- Mastered domain-knowledge of metrics impacting service performance of mobile cellular networks.
- Built model for better analysis of service parameters.

Georgia Institute of Technology Atlanta, GA
Graduate Research Assistant **8/2012 – 5/2013**
P**roject BISmark:**

- Built scripts to manage large-scale data.
- Developed algorithm to detect network anomaly.
- Analyzed data and drew conclusions based on experimental evaluation.

Projects:
Machine Learning:

- Mastered supervised and unsupersived learning algorithms
- Implemented machine learning based trading stratergies to market orders

Networks:

- Mastered inter-domain BGP routing protocols, Transport Issues and various flavours of TCP, Access Network, Performance Evaluation and introduction to multicasting.

- Mastered wireless network characteristics on existing network protocols, and newer protocols such as protocols for medium access control, scheduling, routing, reliable transport, Mobile IP and introduction to Ad-hoc Networks.
- Introduced to various challenges for wireless sensor networks, studied various protocols for different layers of protocol stack, Cross-layer module, Error-control.

Operating systems:

- Implemented a multi-threaded web server for static pages.
- Developed an optimized skeletal web proxy server.
- Designed a distributed proxy server to manipulate data in a computation-intensive way.

Computer Architecture:

- Simulated various branch predictors and simulation results matched with theoretical results.
- Implemented Tomasulo alogrithm allowing instructions to execute randomly but still maintaining the in-sequence execution.

Awards and Recognitions:

- Awarded N2Women best poster presentation award for SIGCOMM conference 2014.
- Awarded N2Women travel grant award for SIGCOMM conference 2014.
- Won 3rd place in ACM SIGCOMM Student Research Competition, 2013.
- University 10th rank holder in Bachelor's program, India, 2010.
- Telecommunication Engineering Department Topper 2006-2010.

Conference Proceedings:

Characterizing Correlated Latency Anomalies in Broadband Access Networks. Swati Roy, Nick Feamster. *Poster at ACM SIGCOMM* 2013.