JAHNAVI SINGHAL

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EDUCATION

Degree	Institution/ University	Remark	Year
MS, Computer Science	University of California, San Diego	- GPA: **3.9/4.0**	2016 - 2018 (anticipated)
B. Tech, Computer Science	Indian Institute of Technology, Banaras Hindu University (IIT-BHU)	- Jr/Sr **GPA: 9.02/10** (Absolute Scale) - **Department Rank: 2**	2009 - 2013

- Courses completed (Fall' 2016) - Design and Analysis of Algorithms, Machine Learning Algorithms
- Appointed as a Teaching Assistant for the graduate course (Design and Analysis of Algorithms) for Winter 2017

PROFESSIONAL EXPERIENCE

Software Engineer, Arista Networks, Bangalore   **July 2013 – August 2016**

Senior member of the platform team responsible for developing L3 forwarding features for Arista EOS, a Linux-based network operating system for data-center and cloud network switches

- Developed IPv6 Next-hop Groups support for MPLS and IP tunnels for 7050X, 73xx series of switches
- Designed and prototyped IP-in-IP tunnel encapsulation support using IPv4 Next-hop Groups and **lead a team of 2 engineers** to implement the feature
- Managed the major Q2' 2015 Arista EOS product release coordinating with a team of 10 engineers spread across USA, Canada and India; **received award and special mention** from manager for my significant contributions
- Developed and enhanced infrastructure code for release management to detect the checked-in but un-merged fixes
- Implemented Unicast Reverse Path Forwarding (URPF) in TACC, **C++, python**

Software Engineering Intern, NetApp Inc., Bangalore   **May 2012 – July 2012**

- Designed an efficient method to transfer the diff of two snapshots of file system over the network. Implemented this by redirecting the SnapDiff XML output to a file on NFS which can be mounted and read by the client.
- This improved the speed of transferring the diff by 1.5 times

RESEARCH EXPERIENCE

Summer Research Intern, SURGE, Indian Institute of Technology, Kanpur   **May 2011 – July 2011**

Research Problem: Task Scheduling in Heterogeneous Distributed Computer System**s**

- Designed an optimal scheduling of Matrix-Matrix Multiplication problem on distributed system consisting of CPU & GPU to load balance the sub-task across the components and implemented it using **Open-MP and CUDA** and analyzed the variation in task execution time as a function of task division across components.
- The task execution time decreased substantially by distributing task optimally amongst the machines
- Awarded a **research scholarship** for the successful completion of the research project

B.Tech Major Project, Indian Institute of Technology, BHU   **October 2012 – March 2013**

Research Problem: Constrained Shortest Path Problem (CSPP) with cost & delay as fuzzy constraints

- Evaluated various types of fuzzy numbers using their ranking methods and analyzed the results obtained with different methods to reduce discretization errors during fuzzification while optimizing the execution time
- The work received special recognition in the paper published in proceedings of second International Conference on Emerging Research in Computing, Information, Communication and Applications (**Elsevier**), pp. 812-822, ISBN: 9789351072638 - www.elsevierst.com/abstract

SKILLS SET

- **Technical :** C, C++, python, Java, TACC, Open-MP, CUDA, TCP/IP protocols, Android, Linux, HTML, CSS
- **Behavioral :** Leadership & team management, team work, presentation

AWARDS AND EXTRA CURRICULAR ACTIVITIES

- **Co-coordinator of the FieldIT' 2016**, the annual 24 hour hack-a-thon event at Arista Networks
- **Won 2nd prize** in BuildIT' 2014 at Arista Networks for developing an efficient search service in python for the system database & **"Best Presentation of Idea" award in Hackathon**' 2015 for developing an Android App to aid the employees in parking their cars in a hassle-free way
- Qualified for the **2nd round of ACM ICPC**, Amritapuri Multisite Regionals 2012 held at Amrita University
- Awarded **merit scholarships** in consecutive semesters for being ranked 1 in the department in 2010
- **Student Member of ACM** till April' 2014, membership number: 705555
- Awarded National Merit Certificate by CBSE, India in 2007 for being in **top 0.01% students** for Mathematics