Darshan Washimkar

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PROFESSIONAL PROFILE

Highly motivated computer science graduate student with a strong knowledge of **Computer Networking, , Distributed Systems, Big Data Analysis** and **Bioinformatics**. Accomplished a couple of **research projects** and also have more than **30 months experience** in the software industry.

TECHNICAL EXPERTISE [N – Novice, I – Intermediate, P – Professional]

Languages:	C [P]	C++ [P]	Java [P]	Python [P]	
Data Analytics:	Hadoop [N]	MapReduce [N]	SQL [I]		
Networking Protocols:	TCP [P]	IPv4 [P]	IPv6 [P]	BGP [P]	Chord [P]
Web Technologies:	HTML5 [P]	JavaScript [P]	jQuery [P]	KML [I]	PHP [I]
Databases/Tools:	Oracle [I]	MySQL [I]	Network Simulator [I]	Eclipse [P]	VMware[P]
Cloud Services:	Amazon Web Services (AWS) [N]				

EDUCATION

Master of Science, Computer Science — Aug 2016 (Expected)
Colorado State University, Fort Collins, CO, USA — **GPA: 3.85/4**

Bachelor of Technology, Information Technology — May 2011
Shri Guru Gobind Singhji Institute of Engineering and Technology, Nanded, MH, India — **GPA: 7.8/10**

WORK EXPERIENCE

Graduate Teaching Assistant, Colorado State University — **Jan 2015 – Dec 2015**

- In fall 2015, I taught (CS356) **Computer Security** and (CS457) **Computer Networks and the Internet**
- In spring 2015, I taught (CS557) **Advanced Computer Networking** and (CS160) **Foundations in Programming**
- Conduct two recitations every week and teach ~30 students
- Also, responsible for grading, creating assignments, solving assignment related queries and serving as a lab manager

Programmer Analyst, Cognizant Technology Solution, Pune, India — **June 2011 – Sept 2013**

- Programmed websites, mobile applications and e-mailers using **JavaScript, jQuery, HTML 5, XML, JAVA, ASP.net**
- Gathered and analyzed requirements for the world's top pharmaceutical firms
- Maintained websites, fixed existing bugs and improved websites loading time
- **Awards:**
  > Awarded for innovative "honey bee" gaming application. It was a POC, demonstrating our capabilities [team of 2]
  > Member of 6 person team which was awarded "Low Cost Solutions Project Of The Year" for highest efficiency

ACADEMIC PROJECTS

Optimal Selection of Enzyme Triad for Index Alignment of Contigs to Optical Maps Using MapReduce [Team size: 2] — **Oct 2014 – Dec 2014**

- Proposed a new method to find best restriction enzyme triad from ~11 million combinations using **MapReduce**
- Implemented the algorithm in **hadoop** using **python** to distribute the task of finding shared sub strings in suffix tree
- Updated Dell Zhang's **generalize suffix tree** implementation to support Unicode characters of large range

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Forecast Use Of A City Bikeshare System [Team size: 1] **Nov 2014 – Dec 2014**

- Implemented linear (LLS) and non-linear models(Neural Networks) to predict the demand for bike sharing system
- Code implementation was in **python** and the results were submitted to kaggle for competition
- Showed that non-linear model performs much better for this problem

Cloud based Source-aware key- value store [Team size: 1] **Oct 2014 – Dec 2014**

- Distributed Hash Table (**DHT**) implemented from Chord paper using **Java**
- Used cloud computing environments like **Amazon Web Services (EC2,EBS)** for development

Genome Assembler [Team size: 1] **Aug 2014 – Dec 2014**

- Implemented a sparse de Bruijn graph for genome assembly from scratch in **C++**
- Performed in depth theoretical investigations into various **succinct data structures** for de Bruijn graph optimization

A P2P File Sharing Network [Team size: 1] **Feb 2014 – Mar 2014**

- Project involved development of peer to peer file sharing network that uses protocol resembling BitTorrent
- Implementation of **socket programming, fork, event loops** was in **C** language

A File Sharing Protocol Over Named Data Networks (NDN) [Team size: 1] **Mar 2014 – Apr 2014**

- Project was implemented using **CCNx** library from ccnx.org in **C**
- Compared performance of the protocol in IP vs NDN configuration and found that NDN gave much better performance

Low Cost Supercomputer with Cluster Computing [Team size: 3] **Aug 2010 - Apr 2011**

- Built a simple-to-manage and easy to deploy HPC cluster from outdated PCs of college laboratory
- It was used to execute compute intensive software applications in an academic setting
- Used HPLinpack to evaluate performance

OTHER OCCUPATIONS

Student Scientist, Colorado State University, Fort Collins, CO **Jan 2014 – Jan 2015**

- Worked on BGP Monitoring System (BGPmon) and delivered a translator module which is capable of converting Multi-Threaded Routing Toolkit (MRT) files to XML format supported by **BGPmon**
- Developed visualization tools using **KML** to simulate DDoS attack events like NTP reflection attack
- Found and fixed ~25 critical bugs, including improvements and built a project website. Primarily worked with **C, C++**

CERTIFICATIONS

- Exam 70-480: Programming in HTML5 with JavaScript and CSS3 [Microsoft]

OTHER ACTIVITIES

- As an undergraduate, conducted a day long workshop on ‘Linux Administrator And Advance Shell Scripting’ with 60+ participants
- I was a member of Outreach and Team Everest, two groups in Cognizant that work for the cause of child literacy in rural areas.
- Organized cultural events at college level and also at ‘PRAGYAA’, national level technical festival in SGGS