

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 [I]	
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 May 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

- ✚ **Forecast Use Of A City Bikeshare System** [Team size: 1]

 - 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

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

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

Oct 2014 – Dec 2014
- ✚ **Genome Assembler** [Team size: 1]

 - 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

Aug 2014 – Dec 2014
- ✚ **A P2P File Sharing Network** [Team size: 1]

 - 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

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

 - 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

Mar 2014 – Apr 2014
- ✚ **Low Cost Supercomputer with Cluster Computing** [Team size: 3]

 - 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

Aug 2010 - Apr 2011

OTHER OCCUPATIONS

- ✚ **Student Scientist, Colorado State University, Fort Collins, CO**

 - 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++**

Jan 2014 – Jan 2015

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