Sharath Chandrashekhara

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Summary

Computer Science Master's student with more than 3 years of industrial experience in software development. Proficient in system programming with relevant experience in the domains of Enterprise Storage, Operating Systems and Middleware. Current research interests include *Distributed Systems* and *Cloud Storage.*

Education

Master's in Computer Science and Engineering   **Aug '12 – Present**

I am currently a second year student in The University at Buffalo, The State University of New York and expect to graduate in May 2014. Current CGPA: 3.84/4.00

Bachelor of Engineering, Electrical and Electronics   **Oct '05 – July '09**

Graduated from Sri Jayachamarajendra College of Engineering(SJCE), Mysore, India, under the Visvesvaraya Technological University (VTU) in July 2009, securing a First Class with Distinction.

Professional Experience

SDE Summer Intern at Amazon Inc., Seattle   **June '13 – Aug '13**

I worked in the Database Engines team in the AWS group and developed system modules in the data compression and encryption layers for Amazon Redshift – Amazon's data warehouse service in the cloud.

Software Developer at NetApp Inc., Bangalore   **July '11 – July '12**

I worked as a Software developer of 'Data-Ontap' – NetApp's FreeBSD based operating system, for Enterprise Storage Controllers. I worked on technologies like SCSI, Storage Area Networks (SAN), Network Attached Storage (NAS), RAID, Clustered Storage etc., with an exposure to development in the **Kernel Space and the Storage Stack**.

- Technologies: C/C++, Fibre Channel, SCSI, Storage Area Networks (SAN) and Network Attached Storage (NAS), RAID, Clustered Storage

- Platform: Linux, FreeBSD

Software Engineer at NDS Ltd. (now a part of Cisco), Bangalore   **July '09 – July '11**

I worked mainly on *Digital TV Set Top Box* (STB) Middleware and related technologies like DVB/MPEG. I worked in a wide range of roles ranging from debugging of Middleware modules and development of Device Driver test suite to full stack Integration of the Middleware and the Java Application over the Linux Kernel. I also spent a brief stint working in the NDS R&D Labs of Paris, France.

Academic Projects

- PigOut - I am currently working in a research group under *Dr. Steve Ko*. The project builds on top of Hadoop Pig platform to create a wide area data analytics system. This research work is a part of my Masters Thesis.

- Hydra - Developed a distributed block device giving fault tolerance using Reed Solomon Erasure codes. The system provides a unique feature of having a variable degree of fault tolerance at a granularity of a single block. I worked on this project under *Dr. Vipin Chaudhary* as a part of my Master's Project.

- WideFS - Developed a bare bones FUSE based file system with POSIX interface and a Metadata caching system for mounting and accessing Globus GridFTP servers.

- OS/161 - Developed various kernel modules, viz., synchronization primitives, File System interface, Process management subsystem, Rotating staircase scheduler, Virtual Memory Manager, Demand Paging and Swapping for OS/161, an educational OS developed at the Harvard University.

- Developed a distributed key/value store based on a simplified version of Amazon's DynamoDB architecture. The system was implemented on the Android platform as a generic content provider.

- Developed a CLI based Peer to Peer file sharing application based on the GNUtella V0.6 protocol.

- Designed a software system for accessing computer applications through a single switch input, empowering people with severe disabilities to control their computers.

- Designed and implemented a software stack compatible with the "IEEE 1451.0/5 Standards for Transducers" for a smoke sensor and the I^2C interface driver for an EEPROM on a ZigBee enabled 68HC11 based development board. I worked on this project in Allgo Embedded Systems, Bangalore, to fulfil my undergraduate project requirements.

Technical Skill Set

- Proficient in System Level C/C++ Programming with more than 3 years of experience in system software development. Familiar with Object Oriented Programming in higher level languages like Java, Python and Lisp.

- Have a good understanding of the various Network Protocols and familiar with Network programming.

- Have a good knowledge of the Hadoop platform and a working knowledge of the Android platform.

- Have basic GNU/Linux system administration skills and familiar with Bash scripting, Makefiles, LaTeX, version control systems, SQL, various Linux command line tools etc., with a good understanding of the Software Development Cycle.

Professional Affiliations

Chairman of the IEEE Student Chapter at SJCE, Bangalore Section for the year 2008-09 and member of the board as Joint Secretary, IEEE-SJCE, 2007-08. I actively take part in the activities of the ACM student chapter in the University at Buffalo.

Other Information

- Keen follower of technical happenings and blogs; a GNU/Linux and Programming enthusiast

- Visa Status: F1-Student Visa, Citizenship: India. For further information and other projects I have done, please see my homepage or contact me.