Sharath Chandrashekhara

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Education

Ph.D. **Aug '14 – Present**

I am a fourth-year Ph.D. student in the Department of Computer Science and Engineering, University at Buffalo. I work in the **'Reliable Mobile System Lab'** and I am advised by **Dr. Steven Ko**. I am currently focusing on developing personalized storage for mobile platforms.

Master of Science **Aug '12 – Sept '14**

I graduated from the Department of Computer Science and Engineering, University at Buffalo, with a specialization in *Systems*. I was advised by Dr. Steven Ko and Dr. Vipin Choudhary in my Master's project. (CGPA: 3.84/4.00)

Bachelor of Engineering **Oct '05 – July '09**

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

Research Projects and Publications

- **BlueMountain** is a framework for flexible and personalized storage on mobile systems which aims to give the users higher control over their data. I am working currently exploring more ways of improving data management on mobile systems.

  "BlueMountain: An Architecture for Customized Data Management on Mobile Systems. ***Chandrashekhara, S.****, Ki, T., Jeon, K., Dantu, K., & Ko, S. Y., 23rd Annual International Conference on Mobile Computing and Networking 2017."*
  "Enabling automated, rich, and versatile data management for android apps with BlueMountain. ***Chandrashekhara, S.****, Marcus, K., Subramanya, R. G., Karve, H. S., Dantu, K., & Ko, S. Y., 7th USENIX Workshop on Hot Topics in Storage and File Systems 2015."*

- **Cider** is a highly flexible and scalable virtual block device, supporting temporally variable data redundancy. It uses erasure coding and works as a distributed block data store (design patent pending). Currently, I am working with Dr. Vipin Choudhary on integrating Cider into distributed flash-based arrays.

  "Cider: A Case for Block Level Variable Redundancy on a Distributed Flash Array. ***Chandrashekhara, S.****, Kumar, M. R., Venkataramaiah, M., & Choudhary, V., 26th International Conference on Computer Communications and Networks (Invited track, ICCCN 2017)."*
  Patent publication number: WO2015161140A1, Oct 22, 2015

- **Pixelsior** is a photo management framework which can manage the photos on a mobile device and can transparently manage content adaptation and image manipulation. Full work is under submission; our preliminary work was previously published in HotStorage 2016.

  "Pixelsior: Photo Management as a Platform Service for Mobile Apps. Jeon, K., ***Chandrashekhara, S.****, Dantu, K., & Ko, S. Y., 8th USENIX Workshop on Hot Topics in Storage and File Systems, 2016"*

- **PigOut** is a system that enables federated data processing over multiple Hadoop clusters. The work was published in IEEE Big Data conference.

*"Pigout: Making multiple hadoop clusters work together. Jeon, K., **Chandrashekhara, S.**, Shen, F., Mehra, S., Kennedy, O., & Ko, S. Y., 2014 IEEE International Conference on Big Data."*

Teaching Experience

I have given guest lectures in grad level courses and have worked as a teaching assistant for 6 terms.

- **Operating Systems:** Offered as CSE 421/521 by Dr. Tevfik Kosar—Fall 2014, 2015 and by Dr. Karthik Dantu—Fall 2017.
- **Distributed Systems:** Offered as CSE 486/586 by Dr. Steve Ko—Spring 2015, 2016 and 2017.

Professional Experience

SDE Summer Intern at Amazon Inc., Seattle **Summer '13, '14, '15**
I worked in the database engines team of Amazon Web Services group and developed system modules for low-level database backup and restore, data compression and encryption for Amazon Redshift—Amazon's data warehouse service on the cloud.

Software Developer at NetApp Inc., Bangalore **July '11 – July '12**
I worked on 'Data-Ontap'—NetApp's FreeBSD based operating system, for enterprise storage controllers; on technologies like *SCSI, Storage Area Networks (SAN), clustered storage* etc., with an exposure to development in *Kernel Space* and *Storage stack*.

Software Engineer at NDS Ltd. (now a part of Cisco), Bangalore **July '09 – July '11**
I worked on *Digital TV Set Top Box* middleware; in roles of *middleware debugging*, device driver development and full stack integration. I also spent a brief stint working in the NDS R&D Labs of Paris, France.

Technical Skill Set

- Passionate about systems research; have lead the design and development of two large research projects and effectively contributed to two others.
- Proficient in system level C/C++ programming; familiar with Object-Oriented programming in higher level languages like Java and Python; experienced on platforms like Android and Hadoop.
- 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*.

Other Information

- I am a homebrewer; a GNU/Linux and programming enthusiast.
- Visa Status: F1-Student Visa, Citizenship: India. References: Available on request.

For further information please see my homepage or contact me.

October 15, 2017