Om Saran K R E

Email: omsaran@utexas.edu Phone: +1 737 288 2414 https://www.linkedin.com/in/omsarankre/

EDUCATION

University of Texas at Austin, Master of Science in Computer Science *2021 - 2023 (expected)*
CGPA: *4.0/4.0*

PES Institute of Technology (Bangalore, India), B.E in Information Science & Engineering (ISE) *2014 - 2018*
CGPA: *9.05/10.00*

INTERESTS AND SKILLS

- **Research Interests**: Distributed Systems, Concurrent/Parallel Programming, File Systems Development, Software Defined Network - OpenFlow.
- **Programming Languages**: Python, Golang, C, Swift

PROFESSIONAL EXPERIENCE

Apple *(Cupertino) Software Engineering Intern* *May 2022 - Aug 2022*

- Developed features, fixed bugs in various components of a distributed build system's infrastructure.
- Rewrote a component to upgrade web framework to a well supported open source one while ensuring full backward compatibility and deploying it to production.
- Improved concurrency performance and correctness in a content addressable storage system.

Nutanix *(Bangalore) Member of Technical Staff 4** *August 2018 - July 2021*

- Developed and architected AOS's (Nutanix Distributed Operating System) OpenFlow based SDN controller to natively integrate AOS's networking with Google Cloud Engine's networking.
- Researched and worked on Proof of Concepts to bring Nutanix's hypervisor/AOS to a cloud that offers first class bare metal service. Proposed the networking architecture to Nutanix's software architects and a distinguished engineer.
- Built and architected a distributed system that manages the life cycle of ephemeral virtual Nutanix clusters for Nutanix Test Drive. Also includes a cache management system to provide end-users with instant Nutanix clusters. It is one of the highest lead generation tool at Nutanix.
- Developed L3 networking solutions and cloud architecture for porting Nutanix clusters to Google Cloud Engine (Virtual Nutanix Clusters) leveraging Nested Virtualisation used in Test Drives.

Nutanix *(Bangalore) Intern* *Jan 2018 - August 2018*

- Developed features and enhanced a python based test automation framework used for functional qualification of Nutanix clusters company wide.

Electronics For Imaging (EFI Bangalore) *Intern* *June 2017 - July 2017*

- Worked on dashboard service that gives customers insight (utilisation) into their fleet of EFI industrial printers. Full stack development with back-end aggregating event based data on Elasticsearch and front-end presenting this data via a dashboard displaying metrics/analytics of the printers.

Electronics For Imaging (EFI Bangalore) *Intern* *June 2016 - July 2016*

- Developed an authorization backend for a SaaS application that provides analytics of EFI's industrial printers.

RESEARCH EXPERIENCE

Advised by Prof. Vijay Chidambaram *U.T Austin* *September 2021 - Present*

- Working on BigHPC project with focus on Virtualization Manager to deploy heterogeneous workloads (BigData and HPC) on heterogeneous HPC Infrastructure.
- Working on verification of Persistent Memory file systems that involves development of Linux Kernel Modules to instrument them.

Advised remotely by Prof. Vijay Chidambaram *U.T Austin* *2020*

- Contributed code to research project after it was published (SOSP 2019) - SplitFS - A novel filesystem for persistent memory to reduce software overhead. Contributions include:

- Implemented system call wrappers in user-space to support RocksDB & YCSB on SplitFS (In Review).
- Implemented system call wrappers in user-space to support POSIX test suite and ported the same to SplitFS.

- Adding support for older CPUs (dynamically choosing between CLFLUSHOPT (new) and CLFLUSH (old)).
- Fixed miscellaneous bugs.

TALKS

- Tech talk (Nutanix Insider) at .NEXT 2019 Copenhagen, Denmark on virtual Nutanix clusters.

AWARDS

- Nutanix Hackathon 2020 - Won a team prize of $5000.
- Nutanix Hackathon 2018 - Won a team prize of $5000.
- Nutanix Employee Award for Performance - June 2018, December 2018, July 2019.
- MRD Merit Scholarship (INR 5000) for being among top 5 performers in undergraduate academic year 2016.
- CNR Rao Merit Scholarship (25% fee waiver) for being in Top 20% during academic years 2015 and 2016.

RELEVANT COURSEWORK

Graduate: Data Centers, Machine Learning
Undergraduate: Introduction to Operating Systems, Unix Systems Programming, Digital Design and Computer Organization, Microprocessors and Computer Architecture, Parallel Computing, Database Management Systems, Computer Networks.

*Promoted just after leaving the company