




Sphoorti Joglekar


EDUCATION

- May 2018** **Carnegie Mellon University**
MS in Information Networking Specialization - Computer Systems
- June 2014** **University of Pune**
BE in Computer Engineering

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ACADEMIC PROJECTS

INTERNET SERVICES

Chord Routing Algorithm Evaluated an enhancement to the routing table in Chord Algorithm used in Distributed Hash Tables to study its effectiveness and identify its limitations.

DISTRIBUTED SYSTEMS

Two Phase Commit Designed and developed a system that curates and publishes group collages from multiples images and is robust to lost and delayed messages as well as to node failures and reboots.

DISTRIBUTED SYSTEMS

File Caching Proxy Implemented a file caching proxy server based on check-on-use semantics in OpenClose at whole file granularity.

STORAGE SYSTEMS

CloudFS Implemented a hybrid cloudfs using FUSE that supports chunk-based deduplication, caching, crash recovery and snapshotting.

STORAGE SYSTEMS

myFTL Implemented a flash translation layer for a SSD that uses dynamic mapping between logical and physical block addresses and also performs wear leveling to improve the write amplification factor of the SSD.

EMBEDDED SYSTEMS

Real Time Kernel Implemented a real time kernel capable of context switching, task scheduling based on RMS as well as highest locker variant of the priority ceiling protocol.

INTRODUCTION TO COMPUTER SYSTEMS

Dynamic Memory Allocator Implemented a malloc package that allocates memory from the heap and manages free blocks by coalescing segregated free list and a quick free list for smaller block requests.

INTRODUCTION TO COMPUTER SYSTEMS

Web Proxy Developed an HTTP web proxy that handles concurrent connections and caches recently used static web content.

COURSEWORK

- 18-746** Storage Systems
15-640 Distributed Systems
18-845 Internet Services
14-642 Fundamentals of Embedded Systems
15-513 Introduction to Computer Systems

WORK EXPERIENCE

MAY 2017 - AUGUST 2017

TINTRI - File Systems Intern

Designed and developed an infrastructure to improve system availability by isolating and limiting the failure impact of inconsistencies in I/O path of snapshot deletion.

JULY 2014 - JULY 2016

MOJO NETWORKS

Developed device driver features for various 802.11 QCA chipset like

- Admission Control and QoS for ViVo Applications
- Sigma Certification for Hotspot 2.0
- OSS counters for network monitoring and performance analytics
- Logging kernel panics for troubleshooting and debugging

OPEN SOURCE INVOLVEMENT

DECEMBER 2014 - MARCH 2015

GNOME OPW

Developed moVirt, an Android application for monitoring oVirt datacenter using the oVirt REST API to communicate with the oVirt engine allowing users to connect and monitor VMs using VNC and SPICE.

NOVEMBER 2013 - SEPTEMBER 2014

THE OPENSTACK FOUNDATION

Contributed patches to Devstack, Neutron and Zaqar projects of OpenStack. Patches typically included writing unit test case for vxlan in ip library, fixing documentation errors and enhancing code readability.

TECHNICAL SKILLS

LANGUAGES C, Shell, C++, Java, Python

TOOLS GDB, Git, Mercurial, OpenStack, Android SDK, oVirt, Emacs

PRESENTATIONS, PUBLICATIONS AND AWARDS

- Conducted a session on Contributing to Open Source at Gnumify '15
- Published Smartphones and off the shelf hardware for 3D scanning in mobile robots research paper in IJSER Jan 2014 edition.
- Received ADA Initiative Scholarship to attend OSHWA 2014, in Rome, Italy.