

# SARAVANAN DHAKSHINAMURTHY

## GENERALIST SOFTWARE ENGINEER

github.com/saravan2/ · ORCID iD : 0009-0007-7285-1946

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### CORE COMPETENCIES

Kernel, Distributed Systems, Databases,  
Job Scheduling and Networking

**Programming:** C, C++, Python, Rust

**OS:** GNU Linux, FreeBSD, VxWorks

**Databases:** MySQL, MongoDB, SQLite

**Hypervisors:** XenServer, KVM, QEMU

**Debugging:** Drgn, BPF, GDB

### EDUCATION

#### BACHELOR OF ENGINEERING

*Computer Science, May 2007*

**Sathyabama University, Chennai, India**

### PUBLICATIONS

- **IOCost: Block Input-Output Control for Containers in Datacenters** | <https://doi.org/10.1109/MM.2023.3277783> (IEEE Micro Top Picks 2023)
- **IOCost: block IO control for containers in datacenters** | <https://doi.org/10.1145/3503222.3507727> (ASPLOS 2022)
- **CASH: A Credit Aware Scheduling for Public Cloud Platforms** | <https://doi.org/10.1109/CCGrid51090.2021.00032> (CCGRID 2021)

### CERTIFICATIONS

#### Foundations in Computer Science

*Graduate Certificate, Aug 2014*

**Stanford University**

#### Advanced FreeBSD Kernel Internals

*May 2016*

#### Systems Software

*Graduate Certificate, March 2019*

**Stanford University**

### PROFESSIONAL EXPERIENCE

#### ORACLE

**Jul 1, 2024 – Present**

**Principle Software Developer, Dataplane** Redwood Shores, CA

- Open Source Projects: SPDK
- Core member of the foundational team developing an ultra-low latency, high throughput software-defined storage service
- Designed and built metrics library for high performance services

#### META

**Nov 11, 2019 – Dec 27, 2023**

**Production Engineer, Kernel**

Menlo Park, CA

- Open Source Projects: Linux Kernel, resctl-demo, chef
- Derived sequential, random r/w cost associated with SSD models and tuned cgroup controllers to improve I/O isolation [potential to stack workloads] on most of the fleet
- Stacked [12:1] Control Plane Coordination and Storage service (Zookeeper) workloads of different sizes to save capacity.
- Improved kdump, post-mortem and debugging capabilities of all server platforms deployed at datacenters and edge
- Worked on GRUB boot manager, EFI bootloader used for network booting any server, internal tool using BPF to accurately measure block device latencies to qualify vendors, firmware
- Maintained kernel build infrastructure, testing pool and framework to validate latest **Linux kernels**

#### CITRIX SYSTEMS, INC

**May 15, 2011 – Nov 8, 2019**

**Principal Software Engineer**

Santa Clara, CA

- Worked on Load Balancers, Application Delivery Controllers (ADC): NetScaler, Citrix ADC.
- **Developed device drivers and kernel customizations** for BSD-like proprietary Operating System.
- Server Platform development activities involving integration of drivers, libraries, firmware, tools and hardware validation.
- Developed supervisory infrastructure to monitor health and extract vital system stats through IPMI, actively participated in FIPS 140 Level 1, 2, 3 Citrix ADC projects.

**ALCATEL-LUCENT (Contractor)** January 18, 2010 – April 29, 2011

#### WIPRO TECHNOLOGIES

**August 27, 2007 – April 29, 2011**

Project Engineer (Contractor)

Calabasas, CA

Project Engineer, *Promoted in January 2010*

Chennai, India

- Developed Software for high performance switches and routers.
- Worked extensively on **Real Time (VxWorks) Kernel issues**
- Developed Microprocessor (MPC 8248) profiling utility, i2c driver
- Implemented non-intrusive postmortem dump generation
- **Prodigy of the Year 2008 Award**
- **Feather in my Cap Award x 2**