Chinmay Kulkarni

PhD Student, University of Utah

School of Computing Contact

Email: chinmayk@cs.utah.edu University of Utah GitHub: github.com/chinkulkarni Salt Lake City, Utah 84112, USA Webpage: chinkulkarni.github.io

Interests Distributed Systems, Caching, Key-Value Stores, Cloud Computing

EDUCATION

Doctor of Philosophy in Computer Science, Expected Spring/Summer 2021

Advised by Prof. Ryan Stutsman

Achieving High Throughput and Elasticity in a Larger-than-Memory Store **PREPRINT PUBLICATIONS**

Chinmay Kulkarni, Badrish Chandramouli, and Ryan Stutsman

Adaptive Placement for In-memory Storage Functions ATC 2020

Ankit Bhardwaj, Chinmay Kulkarni, and Ryan Stutsman

Splinter: Bare-Metal Extensions for Multi-Tenant Low-Latency Storage **OSDI 2018** Chinmay Kulkarni, Sara Moore, Mazhar Naqvi, Tian Zhang, Robert Ricci, and Ryan Stutsman

Rocksteady: Fast Migration for Low-latency In-memory Storage **SOSP 2017**

IEEE DEB 40(1)

Chinmay Kulkarni, Aniraj Kesavan, Tian Zhang, Robert Ricci, and Ryan Stutsman

Beyond Simple Request Processing with RAMCloud Chinmay Kulkarni, Aniraj Kesavan, Robert Ricci, and Ryan Stutsman

OPEN SOURCE

microsoft/FASTER

https://github.com/microsoft/FASTER Software Contributor (username: chinkulkarni)

vmware/node-replication

Currently under review by VMware's open source team

Contributor (username: chinkulkarni)

utah-scs/splinter

https://github.com/utah-scs/splinter Contributor (username: chinkulkarni)

EXPERIENCE

University of Utah

Research Assistant advised by Ryan Stutsman, 2016 - Present, Salt Lake City, USA

Worked on Splinter, a multi-tenant low-latency store that can be extended using type- and memorysafe code written in Rust. Worked on Rocksteady, a fast and low impact migration protocol for the RAMCloud in-memory key-value store. Continued and completed internship projects.

Google

Research Intern hosted by Larry Kai, Summer 2020, Sunnyvale, USA

Working on defining and measuring the availability of Google services that use Slicer, a system that auto-shards and load balances stateful services. Designing and building a dashboard that Google engineers can use to visualize and monitor the availability of their service.

VMware

Research Intern hosted by Gerd Zellweger, Summer 2019, Palo Alto, USA

Worked on a many-core operating system written in Rust. Designed, built, tested and evaluated a Rust library that constructs a highly scalable, linearizable, concurrent data structure from a single threaded implementation as part of this effort.

Microsoft

Research Intern hosted by Badrish Chandramouli, Summer 2018, Redmond, USA Worked on an RPC layer and scale out protocol for FASTER, a key-value store that uses a latch free hash table and a concurrent log-structured record store to service 160 million updates per second. Challenges included maintaining high throughput over the network and during scale-out.

Cisco Systems

Software Development Engineer, Bangalore, India, August 2013 - December 2013 Worked with the Core switching - Platforming team. Brought up the management port of the Cisco SUP 10 supervisor. Also involved with the development of the inband, datapath and env components of the Cisco Catalyst 6K series of switches.

SERVICE HotCloud'20

External Reviewer

AWARDS Google PhD Fellowship

Systems and Networking, 2019