

Zhaoqi(Roy) Zhang

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/RoyZhang7

Education

Tufts University

Ph.D. in Computer Science. Advisor: Raja Sambasivan

2020 – Present

Somerville, MA

> Research Field: Observability, Monitoring, Microservice, and Distributed System

George Washington University

Master's in Computer Science

2017 – 2019

Washington, D.C.

> Research Field: Distributed System, Networking (SDN/NFV), and Differential Privacy

Sichuan University

Bachelor's in Software Engineering

2013 – 2017

Chengdu, Sichuan Province, China

> Activity: 2 Patents & 4 National(China) college student entrepreneurship awards

Skills

Development: Python, Golang, gRPC, Bash, Git

Library & Toolkit: Docker, Kubernetes, OpenTelemetry, Jaeger, Skywalking, Perf, eBPF

Experience

Research/Teaching Assistant

Tufts University

Sep 2020 – Present

Somerville, MA

- > **Courses TAed:** Operating System, Cloud Computing, Debugging Cloud, and Big Data
- > **Infrastructure Duty:** (a) Maintaining department-wise Kubernetes/Docker environment for microservice testbeds, (b) Supporting lab-wise experiment setup & data collection pipeline in AWS & CloudLab, and (c) Modifying infrastructure & library, including testbeds, OpenTelemetry, gRPC, Linux kernel & more
- > **Research Projects:** (a) Predicting hardware contention for microservice with scoring, (b) Correlating request-level tracing to kernel events for diagnosing performance degradation in microservice app, (c) Automating identification of upstream contention triggers via cross-trace analysis, and (d) Rethinking distributed tracing in terms of incomplete traces and smarter sampling strategies.

Full Stack Software Engineer

Metallica Commodities Corporation

Sep 2019 – May 2020

White Plains, NY

> Developed features for internal trading backend & cross-datacenter data replication system

Project Manager Internship

Taiji Computer Corporation Limited

June 2016 – Sep 2016

Beijing, China

> Conducted requirement analysis, requirement proposal & code review.

Publications & Honors

Selected Publications

- > [Paper in Submission] Accurate and Predictable Scoring for Hardware Contention in Microservices, **1st author**. Submitted to **ISPASS'26**.
- > [Paper in Preparation] Automatically identifying errant upstream contention triggers in microservice applications via cross-trace analyses, **co-1st author**
- > [Poster in Press] Diagnosing behavioral causes of contention in distributed systems, **1st author**. In Poster Session of **NSDI'23**.
- > [Paper in Press]Automating instrumentation choices for performance problems in distributed applications with VAIF, **4th author**. In Proceedings of **SoCC'21**, pp. 61–75.
- > [Chinese Pattern] A Plant Planting Device. 2015 **1st author**

Selected Honors

- > 2016 Microsoft “Imagine Cup” Chinese National College Scientific Competition - Sichuan Division. **2nd place**.
- > 2016 China National Internet of Things and Innovation Start-ups Competition. **1st-tier prize**.