

Joseph Kim (Young Chan)

Software Engineer

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in yckimjoseph

Education

Carnegie Mellon University

B.S. in Electrical & Computer Engineering

B.S. in Computer Science

Pittsburgh, PA

Skills

Kubernetes

Terraform

AWS

Docker

Golang

Python

C

x86 Assembly

Projects

Guitar Pedal Simulator

Jan-May 2019

- Developed a desktop app that allows users to simulate custom circuits against pre-recorded or live guitar
- Received honorable mentions from Apple at the Capstone Fair

Unix-like Operating System

Jan-May 2019

- Designed and implemented an x86 OS, supporting virtual memory address space, preemptive multithreading and a set of syscalls
- Implemented two different user-level thread libraries that could run on the OS

Conventions

KubeCon 2020

10 More Weird Ways to Blow Up Your Kubernetes

November 2020

Presented a talk about Airbnb's journey through adopting Kubernetes to an audience of over 600 people. Topics include:

- Least-privilege authentication models for containerized workloads
- Interaction between defined resource limits and Linux CFS quotas
- Implications of shared resource constraints within a single pod in real-world usage
- ECR image lifecycle management
- Unexpected outcomes of operational training

Experience

Airbnb

Feb 2020 - Present

Software Engineer, Cloud Infra

San Francisco, CA

- Developed and maintained airbnb's Kubernetes-based compute platform, including developer tools, interface and cluster components
- Built infrastructure components to support varying needs of stateless, stateful and ML workloads, collaborating with partner teams
- Increased reliability by implementing stronger fault domain isolation, new rollout systems and end-to-end testing
- Improved container image lifecycle management by implementing richer configuration support, resulting in safer deletions and reducing ECR footprint by 54%

Jump Trading

Sept 2019 - Nov 2019

Software Engineering Intern

Chicago, IL

- Optimized a data replay and filtering system for higher throughput

Airbnb

June 2019 - Aug 2019

Software Engineering Intern

San Francisco, CA

- Designed and implemented a service to apply time-based autoscaling policies on Elastic Map-Reduce clusters

Redfin

May 2018 - Aug 2018

Software Engineering Intern

Seattle, WA

- Implemented a home recommendation feed customized to user data
- Created a new sign-up email & page for better UX & response rates
- Worked with designers & project managers to ensure product quality

Bank of New York Mellon

June 2017 - Aug 2017

Summer Technology Analyst

Pittsburgh, PA

- Developed a fullstack webapp to manage a client info database
- Integrated a REST API to convert requests in JSON to MySQL

Carnegie Mellon University

Aug 2016 - Dec 2017

Teaching Assistant

Pittsburgh, PA

- Instructed students in recitations, office hours and review sessions
- Mentored 10 students each semester on a 3-week term project

May 2016 - Aug 2016

Research Assistant

Pittsburgh, PA

- Researched context-based color segmentation using neural nets
- Created a tool to index images in YUV color space for training sets