

Kevin Mok

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Work Experience

Red Hat

May 2020 — Aug 2021

Cloud/Software Engineer Intern <Kubernetes, GoLang, Jenkins>

- Reduced deployment time by **66%** by [implementing ability](#) to deploy locally-compiled binaries onto **Kubernetes/OpenShift** using only command-line (**Kubernetes/GoLang** used for this and three below).
- Implemented ability for Kubernetes operator to fetch data from a deployed service and update config with data to deprecate reliance on startup script.
- Added startup probes to handle starting legacy application containers that require additional startup time.
- Refactored probes to [have default values](#) assigned based on deployed YAML while also fixing reconciliation issues.
- Rewrote the **Jenkins (Groovy)** [nightly pipeline](#) to run in a GitHub PR using a trigger keyword to test all the team's submitted PR's before merging to the main branch.
- Took initiative to write [file](#) to define the GitHub parameters for the above pipeline so that it can be recreated easily.
- Took initiative to write [documentation](#) on how to get started with the project to onboard new developers and mentored the incoming intern.

Projects

Operating Systems Course <>

Jan. 2022

- Wrote and installed a [custom Linux kernel module](#) in **C**.
- Intercepted pre-existing system calls using custom kernel module by sending commands to userspace.
- Monitored specific process ID's in my system call to intercept their system calls.
- Used mutex locks for [thread synchronization](#) in **C**.

Rarity Surf <Python, Django, React, GraphQL>

Oct 2021

- Web app to give rarity rankings to NFT's and check which are listed on the OpenSea marketplace using their API.
- Reverse engineered the ranking algorithm to match the leading rarity ranking site's rankings ([scraped](#) using Selenium) with a **discrepancy of <0.25%**.
- Used app to frontrun purchases of **top 0.5%** rarity NFT's against competing buyers.
- Wrote **Django (Python)** [backend](#) to fetch metadata from IPFS, store rarity rankings in PostgreSQL and serve rarity data using GraphQL.
- Wrote **React** [frontend](#) with hooks to dynamically load rarity data. Styled with Tailwind.

AWS Server <AWS, Kubernetes, Terraform, Docker>

May 2024

- Deployed [various web apps](#) using **Docker** (Compose) on an **AWS EC2** Debian/**Linux** server.
- Created **Kubernetes** [manifest files](#) to quickly recreate my server setup with persistent storage/restarts and open ports.
- Created **Terraform** [files](#) to deploy an AWS EC2 instance and Docker containers.
- Used Amazon Route 53's DNS and **NGINX** to route subdomains to each web application.
- Wrote a **JavaScript** [server script](#) and [systemd service/timer](#) to display the uptime of my pages every hour.

Skills

Python, C, PostgreSQL, AWS, Kubernetes, Terraform, Docker (Compose), Jenkins, Groovy, Go(Lang), Bash, Linux, JavaScript, React, Python, Django, Node.js, MongoDB, Solidity, Git, Command Line

Education

University of Toronto

2018 — 2023

Computer Science Specialist — 3.84 GPA (CS). Graduated with High Distinction.

References

See my LinkedIn for [references](#) from my Red Hat managers/mentee, a startup client and a graduate student mentor.