CHI WAI CHAN

Hong Kong

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Summary

Software engineer with 2+ years working with cloud technology such as Juju, OpenStack, Kubernetes, and Observability Stack (Grafana, Prometheus, Loki). Experienced in developing Charms, Snap packages, Rock images, and Python packages.

Experience

Canonical   **Jan 2024 – Present**
Software Engineer I   *Hong Kong*

- Contributed and created the Validation plugin to MicroStack with the team, enabling cloud validation for Sunbeam using tempest without the hassle of configuring it.
- Integrated the Validation plugin with the Observability plugin to periodically check and monitor the health of MicroStack with using Grafana dashboards and alerts, allowing cloud operators to identify issues easily.
- Worked with the team and rewrote the legacy unmaintained hw-health charm into Hardware Observer operator with native integration of COS-lite, providing modern solution for monitoring hardware resources on bare-metal infrastructure in Juju ecosystem.

Canonical   **May 2023 – Jan 2024**
Associate DevOsp Engineer   *Hong Kong*

- Contributed and created the Observability plugin to MicroStack (an OpenStack distriution also known as Sunbeam) with the team, enabling Observability (COS Lite) in MicroStack.
- Developed a Python-based Prometheus Exporter for Hardware Observer Operator (prometheus-hardware-exporter) to provide various collectors for vendor dependent RAID devices.
- Worked with the team and rewrote the legacy hw-health charm into Hardware Observer operator with native integration of observability stack (COS Lite), providing modern solution for monitoring hardware resources on bare-metal infrastructure in Juju ecosystem.

Canonical   **May 2022 – May 2023**
Graduate DevOps Engineer   *Hong Kong*

- Addressed critical bugs in Graylog charm and Elasticsearch charm that blocked the testing in solution QA team's testing pipeline.
- Enhanced legacy apt-mirror charm's code base by introducing unit and functional tests, assuring the charm's quality.
- Introduced a clean up feature to apt-mirror charm that helped reducing unused mirrored files, and reduced disk usage in privately managed production cloud.
- Developed a Snap-based Prometheus Exporter (prometheus-juju-backup-all-exporter) for Juju Backup All charm, and integrated the charm with the Canonical Observability Stack Lite (COS Lite).

Research Center for the Early Universe, University of Tokyo   **Aug 2021 – Apr 2022**
Project Researcher   *Tokyo, Japan*

- Set up analysis pipeline to re-analyze 3 months of time series data with latest GstLAL pipeline at the time, and found consistency with old results.
- Improved GstLAL pipeline's offline dashboard to support on-demand loading of images.
- Developed static group website and prepared TensorFlow tutorial for new members.

HENNGE   **Jul 2021 – Aug 2021**
Software Engineer Intern   *Tokyo, Japan*

- Social media application development with Python (Flask framework).
- Implemented authentication and login system with Google OAuth 2.0 and Redis.
- Implemented text and image storage system using Redis and MinIO.
- Employed micro-services architecture and deployed the app using Docker, AWS, and Terraform.

Education

The University of Tokyo   Sep 2020 – Apr 2022
PhD in Physics   *Tokyo, Japan*

- Worked as a project researcher Research Center for the Early Universe.
- Dropped out of PhD program due to COVID-19 and social distance, and started working at Canonical (remote).

The University of Tokyo   Sep 2018 – Sep 2020
Master of Science in Physics   *Tokyo, Japan*

- Overall grade A in course work performance
- Teaching Assistant in Gravitational Wave Physics
- Submitted a techniqcal paper to arXiv (arXiv:2009.03025)

The Hong Kong University of Science and Technology   Sep 2014 – Sep 2018
Bachelor of Science in Physics   *Hong Kong*

- Dean's List 2015 - 2017
- HKUST Robust team (Smart Car team 2016 - 2017)
- Graduated with First Honor Class (GPA 3.7/4.3)

Technical Skills

- Docker
- Kubernetes
- OpenStack
- Terraform
- Juju
- ROCK
- LXD
- Snap
- Grafana
- Prometheus
- Loki
- Git
- Linux
- CI/CD
- Scrum
- Python
- Go
- Javascript

Certifications

Certified Kubernetes Application Developer   Nov 2024 - Nov 2026
The Linux Foundation   LF-8023d8bwns

Achievements

Masanori Nagashima Scholarship	2019
Dr Sampson Sun Scholarship Fund	2018
Third place winner at 12th NXP Cup Intelligent Car Racing Competition (South China Region)	2017

Languages

- Cantonese
- English
- Mandarin
- Japanese (N2 level)