CHEN-YI HUANG

黃晨懿

Certified Kubernetes Administrator, dedicated software engineer, persistent learner, and enthusiastic open source contributor. Skilled in automation of system administration, operation, monitoring, and cloud-native solution such as Kubernetes and Containerization. Confident in self-learning, large-scale and multi-repo code tracing. I'm honored to receive the Arctic Code Vault Contributor at GitHub and give short talks about Kubernetes metrics at K8s summit in 2021.

Skills

Observability	Prometheus, Grafana, System & Kubernetes monitoring, Loki, Promtail
Deployment	ArgoCD, Helm
VM, Container	Kubernetes, Docker, Nvidia Cloud-Native Technologies, Proxmox
Programming	Python, Golang, C, Rust, PromQL
System,Networking	Linux SysAdmin, TCP/IP, Wireshark, Chrome DevTools
IaC, CI/CD	Ansible, Github Actions, Azure Pipelines
Language	Chinese (native), English

Work Experience

Dec 2022 –Present

Site Reliability Engineer, LINE TAIWAN LIMITED *Taipei, Taiwan*
- Co-developed, troubleshooted, and wrote acceptance tests for internal Terraform provider in **cross-country cooperation**.
- Pioneer of adopting Terraform in LINE Taiwan to deploy internal infra.
- Designed and implemented workflow automation to greatly improve present operational process.
- Documented comprehensive system architecture, network traffic tracing and application deployment process.

May 2021 –Dec 2022

Senior Engineer, INTELLIGENT BANKING DIVISION, E.SUN BANK *Taipei, Taiwan*
- Designed & built up a robust monitoring/alerting system that collect **15+** GB metrics per day across **100+** servers.
- Experienced in Kubernetes administration & cluster and service migration for **8** cluster (**60+** nodes) with **95%** & **99%** SLA.
- Adopted automation tool to construct **production-grade** and **GPU-accelerated** k8s cluster, and contributed to upstream Kubespray & backported to existing playbook.
- Developed tools for automating process of daily routine, config management, app deployment, system validation task, which lead to effectively reduce operational costs.
- Documented thorough k8s installation and operation guide that help pre-trained member leveraing automation tool and deploying a cluster within **1 day**.
- Assisted colleagues in resolving the issue in Ansible, Linux SysAdmin, and Kubernetes.

Oct 2020 –Jan 2021

Engineer, COMPUTER INTEGRATION MANUFACTURER, TSMC *Hsinchu, Taiwan*
- Developed the web crawler to download **hundreds** of candidate resumes and general resume parser which achieved up to **95%** extracted information accuracy.
- Wrote integration-test under possible scenarios and detailed documents including building procedure and class diagram for senior's project.
- Pioneer of Robotic Process Automation and efficient i18n support for reporting APP.

Education

2018–2020   **Master of Data Science**, *Institute of Data Science & Engineering*, National Chiao Tung University, Hsinchu, Taiwan

2014–2018   **Bachelor of Science**, *Department of Computer Science & Engineering*, Yuan Ze University, Taoyuan, Taiwan

Open Source Contributions

○ Found the redundant calculation of derivative of power function
  in various deep learning frameworks.   @ PyTorch, JAX, Autograd

○ Support kubeadm v1beta3 patches in both
  InitConfiguration and JoinConfiguration   @ kubespray

○ Bug reporting   @ Python extension for Visual Studio Code

Talks & Slides share

Feb 2023   **The Journey to the Kubernetes Networking**

Dec 2021   **The Journey to the Kubernetes metrics @ Kubernetes Summit 2021**

Dec 2019   **Auto Differentiation**

May 2019   **Buddy System**

Projects

March 2023   **Court Reserveration Helper**
  ○ CLI program for court reservation in the concurrency way.
  ○ Capture HTTP packets from Wi-Fi (Mac with airport) and Android App.
  ○ Adopted in Rust embracing the beauty of multi-threading, safe, strong type.

May 2022   **DCGM exporter extended for aliyun gpushare**
  ○ Support aliyun gpushare-scheduler-extender in Nvidia dcgm-exporter
  ○ Identify pod resource & pod name by Kubelet pod resource & client-go API
  ○ Provide k8s GPU instrumentation, monitoring solution in **memory usage (MB)** level

March 2021   **Web Assembly rendering in Rust Playground**
  ○ Renderred and displayed Web Assembly from compiled Rust code.
  ○ Support both Rust Playground (React) and mdBook (native JS) frontend rendering
  ○ Support various wasm crates including wasm-pack, yew etc.

June 2020   **Real-time Traffic Anomaly Detector**
  ○ Anomaly detection in NCTU administration networks.
  ○ Designed and implemented the data pre-processing pipeline
    with Apache Kafka, Spark and MongoDB.
  ○ Processed data-stream in real time up to **30 kB/sec** and transformed into feature vectors to
    further predict.

Sep 2019   **AutoDiff from Scratch**
  ○ Simple neural network library supporting auto-differentiation
  ○ Reported an issue and solved it in various deep-learning libraries during the development.
  ○ Enabled high-level layer usage and had already tested on real-world dataset.

Certification & Award

○ Certified Kubernetes Administrator (CKA)

○ Arctic Code Vault Contributor @ GitHub