CHEN-YI HUANG

黃晨懿

Certified Kubernetes Administrator, dedicated software engineer, persistent learner, and enthusiastic open source contributor. Have 6 years experience in Python and 3 years experience in Linux administration. Skilled in automation of system administration, operation, monitoring, and cloud-native solution such as Kubernetes and Containerization. Confident in self-learning and large-scale 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
VM, Container	Kubernetes, Docker, Linux SysAdmin, 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

May 2021–Present **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 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

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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
- Participation of issue discussion. @ Windows Subsystem for Linux

Talks & Slides share

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

May 2019 **Buddy System**

Projects

May 2022 **DCGM exporter extended for aliyun gpushare**

- Support aliyun gpushare-scheduler-extender in Nvidia dcgm-exporter
- 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.

Master thesis

Title *Solving Traveling Salesman Problem with the Kernel-enabled Attention*

Supervisor Shi-Chun Tsai

Description We built on top of the prior state-of-the-art work who borrow the Transformer to solve the TSP. Motivated by the implicit dot product inside the kernel methods, we replace the scaled dot product with kernel in the attention mechanism. In our experiment, we archive shorter tour with a similar approach.

Certification & Award

- Certified Kubernetes Administrator (CKA)
- Arctic Code Vault Contributor @ GitHub