# Joe (Yung-Hung) Huang

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## EXPERIENCE

**System / DevOps Engineer**                                                Jun. 2025 – Present
*Logic Solutions Inc.*

- Designed, implemented, and maintained **scalable, reliable, and observable product system architectures** across **AWS and on-premise / hybrid environments**.
- Operated and maintained **AWS cloud infrastructure** (VPC, EC2, RDS, Load Balancers, ...etc), ensuring system stability, security, and performance for production workloads.
- Automated infrastructure provisioning and system initialization using **Infrastructure as Code (IaC)**, leveraging **Terraform, Terragrunt, Atlantis, Packer, and Ansible** to build reusable AMIs and standardized service stacks.
- Built and maintained **CI/CD pipelines** using **Jenkins and GitLab**, including authoring and maintaining **Groovy scripts** to support build, deployment, and operational workflows.
- Performed **root cause analysis and troubleshooting** for service errors, performance issues, and system anomalies using **Linux CLI tools, metrics, and logs** across cloud and on-premise environments.
- Extended system **observability and reliability** by integrating **Prometheus, Grafana, Alertmanager, Consul, and custom exporters**, enabling proactive monitoring and incident response.
- Supported deployment, upgrades, and operational maintenance of product systems deployed in **customer environments**, including **AWS, Cloudflare, and hybrid on-premise setups**.
- Reviewed and operated an existing **GitOps-based Kubernetes deployment** using **GitLab and Argo CD** on **AWS EKS**, originally introduced as part of a CNCF-aligned containerization initiative.
  - ✴ Led the **controlled decommissioning of Argo CD–managed Kubernetes workloads** after evaluating system scale, cost, and operational overhead, determining that the current product stage did not yet justify full Kubernetes adoption.
  - ✴ Identified and resolved **Argo CD and Helm chart compatibility issues**, including backward-incompatible YAML parsing behavior that prevented clean teardown of managed workloads, ensuring safe removal without leaving orphaned resources.
  - ✴ Safely **scaled down all worker nodes while preserving the EKS control plane**, maintaining the ability to reintroduce Kubernetes-based deployments in a future migration phase when system scale and requirements mature.

**System/Site Reliability Engineering (SRE)/DevOps Engineering**          Nov. 2023 – Dec. 2024
*Mending Technology CO., LTD.*

- Supported a **cryptocurrency exchange platform** on AWS and on-premise infrastructure, focusing on making large-scale systems more controllable through **environment isolation**, **infrastructure automation**, and **reliability-oriented practices** across development, test, staging, and production environments.
  - ✴ Built a Docker container-based **toolbox** for **troubleshooting and automation development** across **AWS and on-premise environments**, enabling team members to quickly **set up standardized workflows**.
  - ✴ Worked with the team to **build an on-premise development environment** using **VMware vSphere, Kubernetes (kubeadm), and MetalLB**, reducing dependency on a shared AWS environment and improving developer productivity and environment isolation.
  - ✴ Implemented **Infrastructure as Code (IaC)** using **Pulumi (Python) and Ansible** to automate infrastructure changes in the **production environment** and provision a **staging environment** for QA, SRE, and DevOps teams.
  - ✴ Participated in **SRE/DevOps roadmap discussions** focused on improving system controllability, including Docker image hardening, observability enhancements, and automation of incident response workflows, aiming to reduce reliance on individual experience when diagnosing production issues.
  - ✴ Overall, my work focused on **turning complex cryptocurrency exchange infrastructure** into systems that are **easier to reason about, operate, and recover from failures**.

**Site Reliability Engineering (SRE)/DevOps/Cloud engineering**           Nov. 2021 – April. 2023
*CloudRock Technology Co., Ltd*

- Worked from a Cloud to SRE/DevOps engineer in a consulting environment, supporting **multiple client systems** (e.g., social/chat applications, payment systems, sports data platforms, and live streaming services) by designing, migrating, and operating systems across **AWS, GCP, Alibaba Cloud, and Cloudflare**.
  - ∗ Designed and evolved **CNCF-aligned system architectures** by introducing **Docker containerization, Kubernetes orchestration, and Ingress-Nginx + cert-manager** across different project phases.
  - ∗ Built and operated cloud-native systems using managed services (**EC2, EKS, GKE, ELB, RDS**) and self-hosted middleware (**Nacos, RocketMQ, Redis**), balancing cost, performance, and operational complexity.
  - ∗ Maintained and troubleshot **multiple Kubernetes clusters** for client environments, providing performance tuning, deployment optimization, and incident-level support.
  - ∗ Built and maintained **GitLab CI and Jenkins pipelines** for client projects, including optimization of **.gitlab-ci.yml** and Bash-based GitLab Runner workflows, reducing cross-region CI execution latency and improving pipeline stability.
- Developed a **Python-based automation project (boce-crawler)** to collect external network metrics and provide a reliable monitoring data source.
  - ∗ Implemented a **scheduled data collection pipeline** using Python and crontab to extract metrics from third-party websites, transform the data, and load it into **MariaDB** as a **Grafana data source**.
  - ∗ Designed a temporary **fallback monitoring solution** to mitigate data loss caused by instability of a third-party monitoring API, ensuring **continuous metric availability** for approximately three months until a replacement service was adopted.
- Participated in a long-term support project (**Dragon**), a **video streaming platform** built on the open-source **SRS** project and Kubernetes.
  - ∗ Contributed to building a **hybrid cloud infrastructure** across **GCP and Alibaba Cloud**, supporting server-side live stream restreaming to multiple platforms.
  - ∗ Evaluated and prototyped CI/CD workflows using **GitLab webhooks and Tekton Pipelines** as an alternative to GitLab Runner, exploring cloud-native pipeline execution models.

### IoT Bootcamp (Full-Stack & System Fundamentals Training) <span style="float:right">Jan. 2021 – May. 2021</span>
*Industrial Technology Research Institute (ITRI)*

- Completed an intensive hands-on training program covering **web development fundamentals, system programming, Linux environments, networking basics, and IoT system integration**.
  - ∗ Implemented basic **front-end web pages using pure HTML, CSS, and JavaScript**, followed by backend development with **PHP and MySQL** for data persistence and integration.
  - ∗ Built a local **Linux (Ubuntu) development environment using VirtualBox** and practiced foundational **Linux system programming concepts**, including process management, file systems, and networking fundamentals.
  - ∗ Acted as a technical lead during team-based projects by introducing **Git and GitLab** for source code management, enabling collaborative development and version control workflows.
  - ∗ Led the implementation of an **IoT monitoring system (IndoorAirBox)** using **Raspberry Pi and ESP8266**, focusing on temperature and humidity data collection with available course resources.

## PROJECTS

### homelab <span style="float:right">Jun. 2023 – Present</span>

- From **CNCF's Definition** , trying to build **lightweight Hybrid Cloud infrastructure** for **enhancement of personal tech stacks, building personal apps...etc**
- **Tech Stack**: Python, Bash, Golang, Rust, JavaScript/TypeScript, HTML5, CSS, Cloudflare, AWS, Linux ,Proxmox Virtual Environment, Docker, k3s/k0s cluster(Lightweight Kubernetes), *-exporters, Prometheus, Grafana, ELK stack, Terrform, Ansible, Github Actions, Jenkins Container Registry, service mesh (linkerd), MongoDB, PostgreSQL, MySQL, InfluxDB, ... etc

### resume <span style="float:right">Mar. 2023 – Present</span>

- Building **a online CV website** based on **LaTeX** to record my experience, projects, education, skills.
- Render a CV file via **single HTML-CSS-JavaScript transform from PDF Source with pdf2htmlEX** or access **PDF file directly via built-in PDF viewer of browsers(Google Chrome, Brave, Firefox, Safari...etc)**

- Learning concepts of **Serverless services via Cloudflare Workers and Pages**
- Development and Deployment CI/CD pipelines with **Bash, Docker, GitHub, Cloudflare Pages** to make **Proof of concept.**
- **Tech Stack**: LaTeX, pdf2htmlEX, Bash, JavaScript/TypeScript, node.js, React, Next.js, GNU Make, Github, Linux, Docker, Nginx, Cloudflare Workers and Pages

**setup devops environment**                                                    Dec. 2022 – Present

- Building **a personal notes website** based on **Material for MkDocs** to render Markdown files to web pages.
- **Tech Stack**: Python, Bash, Yaml, Markdown, Github, GitHub Actions, Linux, Docker, Nginx, Cloudflare

## EDUCATION

**National Dong Hwa University**                                                    Sep. 2016 – Jan. 2019
*Master of Science in Materials Science and Engineering*                          Shoufeng, Hualien

- **Thesis**: Ultrafast Pump-probe Transient Absorption Spectroscopy of Layer-controllable Molybdenum Disulfide Films
- **Research**: Semiconductor Materials

**National Dong Hwa University**                                                    Sep. 2012 – Jun. 2016
*Bachelor of Science in Materials Science and Engineering*                        Shoufeng, Hualien

- Program of Advanced Materials

## SKILLS

**Languages**: Mandarin (native), English (professional working proficiency)
**Programming Languages**: Python(proficient), Bash(competence), SQL(competence), Golang(beginner), Rust(beginner)
**Version Control**: git
**Frameworks**: Django, FastAPI, Selenium, pandas, SQLAlchemy
**Operating system**: Linux(proficient), macOS(beginner), Windows(beginner)
**Continuous Integration(CI) & Continuous Delivery(CD)**:GitLab Runner, Github Actions, Jenkins, Tekton Pipelines, Argo CD
**Streaming & Messaging**: Apache RocketMQ, RabbitMQ
**Scheduling & Orchestration**: Kubernetes(EKS, GKE, ACK, k0s...etc), KEDA
**Service Proxy**: NGINX, HAProxy, MetalLB, Envoy
**Service Mesh**: Consul
**Coordination & Service Discovery**: Apache Zookeeper, Nacos, Netflix Eureka
**Container Registry**: Harbor
**Automation & Configuration**: Ansible, Atlantis, Terraform, Terragrunt, Pulumi, Ansible
**Cloud Providers**: AWS, Google Cloud, Alibaba Cloud, Cloudflare
**Certification**: AWS Certified Solutions Architect Associate, AWS Certified Cloud Practitioner