

# Wei-Hsiang (Matt) Wang

✉ mattwang44@gmail.com | 🌐 mattwang44 | 🌐 Wei-Hsiang Wang | 📞 +886-988-211-953

## SUMMARY

---

- Experienced backend engineer with expertise in DevOps and cloud architecture
- Built cloud-based distributed systems, including extension frameworks, fintech solutions, and ML detection system
- Key contributor and project lead in the Taiwanese Python community

## WORK EXPERIENCE

---

### GoFreight

*Apr 2022 - present*

GoFreight revolutionizes the logistics industry with innovative solutions tailored to streamline forwarders' operations.

*Senior Backend Engineer - Innovative Solutions*

#### Extension Framework

- Architected API gateway and notification gateway enhancing integration capabilities for partners, incorporating associated OpenAPI spec generator, rate-limiter, and token-based authentication system.
- Developed event-driven architecture and adapters to efficiently deliver invoices and shipment data in customized formats, optimizing data exchange for enhanced user experience.
- Elevated service observability by partnering with the DevOps team to introduce Grafana for real-time monitoring/alerting based on metrics from AWS EKS, Snowflake, and Elasticsearch.

#### Fintech - Payment Integration

- Architected and implemented a secure cross-platform data communication flow by coordinating efforts from cross-functional teams.
- Accelerated decision-making on the product-side by delivering insightful metrics and dashboards, leveraging data pipeline and Snowflake in collaboration with the data team.

#### Core System - Freight Management

- Administrated the development of the air cargo tracking system, providing real-time visibility and efficiency for airline forwarders.
- Built the event processing pipeline, constructed the portal that accelerating the customers' operations, and conducted extensive surveys of airline traffic patterns and tailored the service to cater to the diverse needs of different airlines.

### Umbo Computer Vision

*Oct 2018 - Sep 2021*

UmboCV targets to boost the surveillance industry with cloud-based AI systems for detecting human or vehicle intrusion.

*Backend Engineer - Cloud AI Team*

#### CV Detection Services of Event-based & Stream-based Product

- Developed multiple event-filtering logic based on motion value, deep-learning-model output mask analysis, and human-examining feedback. Raised system automate rate from 40% to 90% while sustaining 10x channel growth.
- Reconstructed event-based service from AWS Lambda function to an HTTP server built on FastAPI and AWS ECS.
- Improved server throughput by 20% through serving with Gunicorn, handling I/O-bounded tasks asynchronously, and leveraging FFmpeg in GIF generation, with metrics from load testing using Locust as proof.

#### System & Per-Camera Performance Monitoring

- Implemented ETL cronjobs deployed to AWS EKS with Helm for importing event metadata to Elasticsearch, which powers the customer usage analysis and system healthiness monitoring.
- Assembled cross-services latency tracing dashboards with the association of alerting mechanism by utilizing New Relic Tracing.

#### Human-in-the-Loop Service for Boosting Detection Accuracy

- Solved scalability issues by revamping the human-interacting mechanism with AWS API Gateway for WebSocket.
- Enhanced filtration logic based on a time-weighted scoring algorithm that boosted overall automation rate by 8% while achieving 98% recall rate.
- Reduced average request latency by 30% through MongoDB optimization, such as rectifying indexes to accommodate usage patterns, refining queries for index-covered query plans, & adopting read-write separation.

## COMMUNITY EXPERIENCE

---

### Python Official Documents Translation (zh-TW)

*Coordinator & Translator*

*Jul 2021 - Present*

- Led the team of volunteers to boost the Traditional Chinese translation progress from 2% to 40%.
- Systemized translating workflows, standardized wordings, and hosted monthly meetups.
- Automated process for syncing CPython doc source string and established CI/CD pipelines using GitHub Actions.

### PyCon Taiwan

*Lead/Member - Web Team*

*Mar 2020 - Oct. 2023*

- Led a team of 10+ volunteer developers to maintain the 2021-2023 official website and the proposal submission/review platform in Django.
- Rebuilt the frontend from scratch in Nuxt.js to replace the old Django templates for lower maintenance cost and better support of SEO and i18n.
- Administrated the GCP infrastructure for all dev teams (web, data, and automation) and managed cost structure.

### PyTorch Taipei

*Coordinator & Speaker*

*Feb 2018 - Sep 2018*

- Held weekly meetups (around 25 members) focusing on the convolutional neural networks (CNN) papers in computer vision domain & the model implementation in PyTorch.

### Google Taiwan AI Bootcamp

*Teaching Assistant*

*Jul 2018*

- Mentored participants to build deep learning models in Tensorflow on Google Colaboratory.

## TECHNICAL SKILLS

---

**Languages:** Python, Node.js

**Web Development:** Django, FastAPI, Flask, Express.js, Vue.js/Nuxt.js, TailwindCSS

**Cloud Services:** AWS (EC2, S3, ECS, SQS, Lambda, API Gateway), GCP (GCE, GCS)

**Databases:** MySQL, MongoDB, Redis

**CI/CD & IaC:** Terraform, Serverless, GitHub Actions, Jenkins, TravisCI

**Logging & Monitoring:** Grafana, Elastic Stack, New Relic

**Data Engineering:** dbt, Snowflake

## CERTIFICATE

---

**MongoDB Certified Associate Data Modeler**

*Mar 2024*

**AWS Certified Solutions Architect - Associate**

*Aug 2023*

**Redis Certified Developer**

*Nov 2021*

**HashiCorp Certified: Terraform Associate**

*Nov 2021*

**Astronomer Certification for Apache Airflow Fundamentals**

*Nov 2021*

**Google Cloud Certified Associate Cloud Engineer**

*Jun 2020*

## EDUCATION

---

**National Taiwan University**

*M.S., Mechanical Engineering (Research Topic: Mechanism Design & Patent Analysis)*

*Aug 2016 – Aug 2018*

*B.S., Mechanical Engineering*

*Aug 2012 – Aug 2016*