Derrick (Chun-Che) Lin

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Education

University of Illinois Urbana-Champaign — Champaign County, Illinois
Master of Computer Science — *Jan. 2024 – Present*

National Taiwan University — Taipei, Taiwan
B.S.E. in Electrical Engineering — *Sep. 2019 – Jun. 2023*
Minor in Economics

Experience

TikTok — San Jose, CA
Software Engineer — *Oct. 2024 - Present*

- Designed and developed the e-commerce payment platform, and participated in the construction of fund security.

American Express — Phoenix, AZ
Software Engineer — *Jan. 2024 - Oct. 2024*

- Enhanced **caching resilience** with **feature toggles** for digital banking services backend to increase system reliability.
- Designed and implemented **high-performance** and **OpenAPI-compliant APIs** using **asynchronous programming** in **Java Vert.x**, serving **2000 debit transactions per hour**.

LINE — Taipei, Taiwan
Software Engineer Intern — *Sep. 2022 - Jun. 2023*

- Architected and implemented a scalable **microservices** architecture for serving **150 million users** globally.
- Created **CI pipelines** building **Docker images** and measuring code quality with **SonarQube**, automated deployment to **Kubernetes** clusters with **ArgoCD**, and monitored with **Grafana** and **Prometheus**.
- Developed **REST** and **gRPC** APIs in **Golang** backend with **90% test coverage**, and enhanced code modularity and reusability with **dependency injection** and the service / repository pattern.
- Designed and implemented a high-performance data retrieval and storage system, utilizing cronjobs for automation and **multithreading** for efficient transfer of **27M records** from **Amazon S3** to **Redis** in **under 10 minutes**.

Yahoo — Taipei, Taiwan
Production (DevOps) Engineer Intern — *Jul. 2022 - Aug. 2022*

- Trained a **machine learning** model with **PyTorch** to predict if an incident needs human intervention.
- Created a **CI pipeline** to periodically fetch incident data from ServiceNow, classify incidents using the trained ML model, and update to Google Sheets, **reducing manual monitoring time by 30 minutes per day**.

RushPay — New Taipei, Taiwan
Software Engineer Intern — *Jul. 2021 - Dec. 2021*

- Built a unified platform integrating multiple ordering methods, payment systems, and delivery services, serving over **200 restaurant owners and 10k customers**.
- Developed full-stack features using **jQuery** and **Laravel**, with both relational (**MySQL**) and non-relational (**MongoDB**) databases for storage.
- Created a **CI/CD pipeline** to build and push the application **Docker** image into **GCR** and deploy to **GKE**.

Publications

- **C. -C. Lin**, Y. Chiang, and H. -Y. Wei, "Multi-Service Edge Computing Management with Multi-Stage Coalition Game Task Offloading," IEEE TNSM, 2024
- **C. -C. Lin**, Y. Chiang, and H. -Y. Wei, "Collaborative Edge Caching with Multiple Virtual Reality Service Providers Using Coalition Games," 2023 IEEE WCNC, Glasgow, United Kingdom

Projects

Live Classroom Monitoring with Embedded System and Cloud

https://github.com/dlccyes/LF2 *Python, Flask, Vue, Jetson Nano, AWS, ML*

- Developed a real-time face and emotion recognition system using **AWS Rekognition** on **Jetson Nano**.
- Built a web dashboard to visualize data using **Vue** and **Flask**, with **DynamoDB** as the data store.
- Created a **CI/CD pipeline** with **Github Action** to build and deploy the application to **AWS EC2**.

Full Stack Spotify Stats Site

https://playlastify.web.app/ *Python, Django, jQuery, GCP*

- Built a web app interacting with Spotify API in **Django** to visualize users' Spotify stats, serving **300 monthly users**, deployed on **GCP**.

Cursor Control and Written-Character Recognition

https://github.com/htyangs/Glove-Mouse *Python, Arduino, ML*

- Developed a replacement for mouse and keyboard with a glove full of sensors.
- Trained a classifier model using **GRU Networks** for character recognition, achieving **90% accuracy**.

Technical Skills

Languages: Python, Golang, Java, C, C++, PHP, SQL, JavaScript, HTML, CSS

Libraries/Frameworks: gRPC, GIN, GORM, Vert.x, Spring Boot, Django, Flask, Laravel, PyTorch, Vue

Tools: Git, Linux, MySQL, MongoDB, Redis, Docker, Kubernetes, Github Action, ArgoCD, AWS, GCP

Coursework

Discrete Math, Data Structures, Algorithms, Operating Systems, Computer Architecture, Computer Networks, Distributed Systems, Database Systems, Machine Learning