Cheng-Yi Tang

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EDUCATION

University of California, Irvine — **Irvine, CA**
***Master of Software Engineering**, GPA: 3.85/4.00* — Sept. 2024 - Dec. 2025 (Expected)
- Courses: Distributed Software Architecture, Reverse Engineering, Software Testing and Debugging

National Chengchi University — **Taipei, Taiwan**
Bachelor of Science in Management Information Systems — Sept. 2019 - June 2023
- Research Assistant: Human-Automation Interaction Lab [Google Scholar Profile]
- Courses: Data Structures, Algorithms, Operating Systems (NYCU), Database Systems, Computer Network

EXPERIENCE

Amazon Web Services (AWS) — **Seattle, WA**
Software Development Engineer Intern, AWS Billing Team — June 2025 - Sept. 2025
ETL Pipeline, Data Lake to Entity Status Dashboard
- Developed centralized Entity Status Dashboard, reducing operational troubleshooting time by 90% across 5+ teams.
- Built scalable ETL pipeline with **PySpark** to consolidate multiple data sources for near real-time monitoring.
- Achieved sub-5s latency on petabyte-scale lookups via Parquet-based **S3** partitioning and **DynamoDB** indexing.
- Deployed Glue, EventBridge, S3, DynamoDB, and Athena via CDK (TypeScript), cutting deployment time by 70%.

Raydium Semiconductor — **Hsinchu, Taiwan**
Software Engineer Intern, Touch IC Hardware Design Team — June 2024 - July 2024
Touch and Display Driver Integration Deep Learning Model
- Developed a lightweight depthwise CNN (0.06MB, 14K params, 18.46M MACs) for touchscreen environment classification, achieving 94% accuracy on 71K samples using **PyTorch**.
- Optimized model with 2D-to-1D reshape, reducing parameters by 17% and MACs by 52% with only 1% accuracy loss, enhancing hardware deployment feasibility.
- Applied baseline canceling and data augmentation to improve signal quality and model generalizability.

Intel — **Taipei, Taiwan**
Datacenter Technical Sales Specialist Intern, DCAI Platform Sales Enablement Team — July 2022 - July 2023
Design-win Project Tracking Tool
- Developed **Python** Dash desktop application enabling PMs and FAEs to monitor over 500 design-win projects.
- Automated data analytics and report generation using **Pandas**, reducing project tracking time from 4 hours to 1 sec.
- Created interactive **Plotly** dashboard for visualization, enabling real-time data analysis and reporting.

SKILLS

Languages	Java, Python, JavaScript, TypeScript, R, SQL
Web Development	React, Node.js, FastAPI, Django, Flask
ML & Data Science	PyTorch, TensorFlow, NumPy, Pandas, Scikit-learn, OpenCV
DevOps & Databases	Git, Docker, CI/CD, AWS, PostgreSQL, MySQL, MongoDB, DBeaver, Linux, Unix Shell

SOFTWARE PROJECTS

Versus | Next.js, FastAPI, Docker, PostgreSQL [GitHub] — May 2025
- Built a full-stack platform for tracking 1:1 games and sports results with win-rate analytics and league features.
- Deployed backend as **Docker** image on **Render** and frontend via **Vercel** for a seamless production-ready experience.
- Engineered efficient data fetching using SWR and optimized **PostgreSQL** schema for match history tracking.

Apache Cassandra CQL Test Suite Enhancement | Java, JUnit, JaCoCo [GitHub] — Mar. 2025
- Implemented partition testing for CQL query using **JUnit**, covering boundary conditions across multiple data types.
- Designed tests using Finite State Machine modeling to verify all stages of CQL query processing pipeline.
- Improve code coverage from 29% to 60% using **JaCoCo**, with method coverage increasing from 52% to 88%.
- Automated testing workflow with **GitHub Actions** to enforce CI in open-source CQL development.