# Guan-Hua Wen

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## Summary

Software engineer with experience in backend distributed systems, LLM, agent applications and data pipeline.

## Education

**National Taiwan University of Science and Technology** *Expected June 2027*
*Bachelor of Computer Science, 3rd Year, GPA: 4.20/4.3, Rank: Top 4%*

## Experience

**Fantasy X Games | Software Engineer Internship** *Jun. 2025 – Present*

- Decoupled the monolithic transaction merge into a Kafka-based event pipeline with consumer groups, achieving **3x throughput** and resolved out-of-order merge issues.
- Optimized Alert System by resolving N+1 query issue, reducing response time from **30s to 10s**.
- Designed 30+ ETL pipeline with Apache Airflow and ClickHouse, cutting storage requirements by **90% (400GB to 40GB)** and eliminating **20 hours/month** of manual preprocessing for the data team.

**Kiwis Security | Cyber Security Internship** *Mar. 2024 – Jul. 2024*

- Utilized PHP, JavaScript, MySQL, and Burp Suite to design web application vulnerabilities. Created attack scenarios to showcase how these vulnerabilities are exploited.

## Open Source Contributions

**Apache Mahout** *GitHub* ⬈ *Jan. 2026 – Present*
*An machine learning system focused on distributed computation, and emerging quantum data pipelines.*

- Optimize GPU amplitude encoding for CUDA tensors in zero-copy, and reducing encoding time by **33%**.
- Extended Mahout's QDP Python and Rust APIs to support float32 GPU pipelines.

**Astronomer dag-factory** *GitHub* ⬈ *Jun. 2025 – Present*
*A YAML-based library that generates Apache Airflow DAGs for simplified pipeline configuration and deployment.*

- Simplified scheduling by removing deprecated settings, improving compatibility with newer Airflow versions.

## Achievements

**Google Developer Groups On Campus NTUST | Lead** *Jul. 2024 – Jul. 2025*

- Served as one of the lead organizers of the DevJam TW 2025 ⬈, co-planning the GDG on Campus Hackathon.
- Delivered an AI-Workshop at Google DevFest Taipei 2024 ⬈, using LIT to analyze gemma model in keras.
- Awarded **Best Campus Leader** for outstanding contribution and leadership.

## Technologies

**Languages:** Python, Golang, Rust, TypeScript, JavaScript
**Frameworks:** PyTorch, CUDA, TensorFlow, Scikit-learn, FastAPI, React, Apache Airflow
**Databases:** PostgreSQL, MySQL, Redis, ClickHouse, MongoDB
**Tools:** LangChain, LangGraph, Kubernetes, Kafka, Docker, AWS, Google Cloud, Git (VMS), Linux
**Software Development:** Distributed Systems, Data Engineering