Chen-Wei (Wilson) Chang

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Full-time Availability: 01/2027

EDUCATION

Virginia Tech M.S. in Computer Science *Alexandria, VA,* 08/2024 - 12/2026

• Coursework: Software Engineering, Web Application Development, Database Management Systems, AI Tools for SWE

National Dong Hwa University B.S. in Computer Science *Taiwan,* 09/2019 - 06/2023

• Coursework: Data Structures, Algorithms, OOP, Operating Systems, Computer Architecture, Upper-Division GPA: 4.45 / 4.50

WORK EXPERIENCE

Scorched Nebraska / Virginia Tech , *Research Assistant* 09/2025 - 01/2026

- Engineered a dual-write observability pipeline using Zstandard/JSON to sanitize PII and ensure security compliance
- Developed a state persistence layer to track diff-based changes and measure sub-second WebSocket latency

TSMC, *AI Research and Development Intern* 06/2025 - 08/2025

- Deployed Qwen3 on H100 GPUs using SGLang, delivering scalable inference APIs for high-throughput applications
- Built an Agentic AI system using OctoTools to automate FDC parsing, anomaly detection, and RAG-based SOP retrieval
- Reduced manual data interpretation time by **70%** by implementing logic-driven log analysis pipelines and visual reports
- Improved anomaly resolution speed by **80%** by optimizing incident response workflows, saving projected **$620K** annually

Virginia Tech, *Research Assistant* 08/2024 - 05/2025

- Reduced inference latency by **57%** and optimized system performance by implementing a selective escalation logic
- Improved F1 to **0.90** and precision to **0.95** by adding a fine-tuned LLaMA tie-breaker to multi-model majority voting
- Increased LLaMA-3 8B adversarial scam detection accuracy **30%** to **0.87** by applying LoRA with 4-bit quantization

Shin Kong Financial Holding, *Software Engineering Intern* 01/2023 - 02/2023

- Developed a credit card management system, integrating a Vue.js frontend with backend APIs to streamline workflows
- Reduced data processing time by **90%** by architecting Python Automation scripts for large-scale data organization
- Cut processing time by **50%** for converting COBOL and DOT files to CSV with a Tkinter GUI

SKILLS

Programming Languages: Python / SQL / C++ / C / JavaScript / TypeScript / Swift / Solidity
Web Development: PostgreSQL / HTML / CSS / React.js / Vue.js / Flask / FastAPI / RESTful API
Cloud & Tools: AWS / Docker / Git / GitHub / Selenium / Tkinter / Heroku / VMware (Linux) / MacOS / Windows
AI & ML: LangChain / OctoTools (Agentic AI) / PyTorch / Scikit-Learn / Hugging Face / NLTK / NumPy / Pandas / Matplotlib

Publications (1st Author)

" *Exposing LLM Vulnerabilities: Adversarial Scam Detection and Performance*" *IEEE BigData BigEACPS 2024*

" *Scam-Shield: Multi-Model Voting and Fine-Tuned LLMs Against Adversarial Attacks*" *IEEE BigData BANDIT 2025*

" *RailEstate: An Interactive System for Metro Linked Property Trends*" *ACM SIGSPATIAL 2025*

SELECTIVE PROJECTS

Full-Stack E-commerce Shopping Platform | *React, TypeScript, Java, MySQL* 08/2024 - 12/2024

- Architected a RESTful API backend using Java (DAO patterns) to manage user data and product inventory in MySQL
- Developed a responsive Single Page Application (SPA) frontend using React.js and TypeScript
- Deployed the application on a Tomcat server, ensuring reliable transaction handling and session management

Transit-Aware Housing Analytics Platform | *PostgreSQL, PostGIS, React, Python* 02/2025 - 05/2025

- Built a geospatial data visualization tool using React and Leaflet, analyzing 25-year property trends
- Implemented a high-performance NL2SQL engine on Supabase (PostgreSQL), delivering sub-second query execution
- Designed a secure backend agent that validates generated SQL queries against the schema to ensure intent accuracy