CHANG-SHENG LEE

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EDUCATION

National Taiwan University of Science and Technology Sep 2021 – June 2025

B.S. in Computer Science and Information Engineering **Overall GPA 4.19/4.30**

- Certificate of Achievement (Top 5% of class): Fall 2021, Fall 2022, Fall 2023, Spring 2024
- Capstone Project: *Spine2D Skeleton Auto-Generation*
  - Achieved editable 2D animations from static images and reduced manual rigging time in animation workflows by applying keypoint detection model for skeleton and mesh coordinates generation

PUBLICATIONS

[1] **Chang-Sheng Lee**, Ling-Jyh Chen. *Can AI Outsmart Firewall Errors? a Study on LLMs for Anomaly Generation and Detection*. IEEE Conference on Dependable and Secure Computing, Taiwan, 2025.

[2] **Chang-Sheng Lee**, I-Chen Lee, Ling-Jyh Chen. *Enhancing Firewall Rule Anomaly Detection via LLM Alignment*. International Conference on Technologies and Applications of Artificial Intelligence, Taiwan, 2025.

RESEARCH AND WORK EXPERIENCE

Academia Sinica, Institute of Information Science Taipei, Taiwan

Research Assistant Jan 2025 – Present
Advisor: Ling-Jyh Chen

- Revealed strengths and limitations of state-of-the-art LLMs in handling firewall rule anomaly tasks by systematically evaluating LLMs' performance in anomaly generation and detection
- Achieved over 98% accuracy (from 37%) in enhancing LLMs' firewall rule anomaly detection capability by applying supervised fine-tuning and reinforcement learning
- Strengthened LLM robustness in firewall rule anomaly detection by applying curriculum learning, enabling stable detection from simple two-rule to complex multi-rule datasets

Academia Sinica, Institute of Information Science Taipei, Taiwan

Research Assistant Intern July 2023 – June 2024
Advisor: Ling-Jyh Chen

- Pioneered open-source and resilient solutions for disaster recovery and off-grid communication by researching a long-distance, low-power, self-organizing network (mesh) communication system
  Project page: github.com/IISNRL/TWC_Mesh

INDUSTRY-ACADEMIC COOPERATION PROJECTS

International Games System Co., Ltd. – Game & AI Bot Development May 2022 – Feb 2024

- Led a team of five in designing a rule-based bot and improving search efficiency for winning hands by introducing a tree-based data structure in the Hong Kong Mahjong AI Bot Development project (C++)
- Designed a backend to manage game sessions in the Japanese Mahjong Game Development project (C++)
- Developed testing tools in the Xue Liu Hong Zhong Mahjong Game Development project (Python)