LUN-YU YUAN

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OBJECTIVE

Self-motivated Master's graduate in Information Technology with solid skills in software development, problem-solving, and team collaboration. Seeking a role in software, firmware, or AI/ML engineering to apply expertise in Large Language Models, deep learning, and real-time systems. Driven to build robust applications with real-world impact.

EDUCATION

Universität Stuttgart, Stuttgart, Germany   OCT 2022 – May 2025

M.Sc. Information Technology – Specialization in Computer Hardware/Software Engineering

- **Research Project:** *Interpretability Study of Large Language Models with Probing Techniques*
- **Thesis:** *Training LLMs on Domain-Specific Knowledge Base with Reinforcement Learning Based on Preference Data*
- **Relevant Coursework:** Deep Learning, Laboratory Course High Performance Programming with Graphics Cards, Operating Systems, Real-time Concepts for Embedded Systems, Robust System Design

Chung Yuan Christian University, Taoyuan, Taiwan   SEP 2017 – JUN 2021

B.Sc. Electrical Engineering – Specialization in Communication and control systems

PROJECTS

Training LLMs on Domain-Specific Knowledge Base with Reinforcement Learning Based on Preference Data [GitHub]   DEC 2024 – MAY 2025

- Fine-tuned Llama-3 on a synthetic physics QA dataset, applying Direct Preference Optimization (DPO) and its variant methods (DPO-Positive, DPO-Shift) to enhance factual accuracy and alignment. *[Llama 3, DPO, DPO-Positive, DPO-Shift]*

Interpretability Study of Large Language Models with Probing Techniques [GitHub]   NOV 2023 – APR 2024

- Explored Llama 2 interpretability, using probing techniques to analyze intermediate layer outputs, visualized results, and applied statistical methods to enhance AI transparency. *[PyTorch, Llama 2, Logit Lens, Tuned Lens, Probing Techniques]*

Canny Edge Detection with GPU Acceleration (OpenCL) [GitHub]   JAN 2024 – MAR 2024

- Optimized edge detection using OpenCL and OpenCV in C++, achieving faster processing on GPU. *[OpenCL, OpenCV, C++]*

WORKING EXPERIENCE

Institute for Parallel and Distributed Systems (IPVS), Universität Stuttgart   JUN 2023 – MAR 2025

Research Assistant

- **DETERMINISTIC6G [GitHub]**
  (i) Developed and optimized OMNeT++/INET framework modules in C++, integrated TSN (IEEE 802.1AS) gPTP for high-precision time-synchronization across wired and wireless domains.
- **INET Framework [GitHub]**
  (i) Revised and refactored gPTP protocol implementation (IEEE 802.1AS), improving modularity, error handling, and bridging capabilities between wired and wireless domains in TSN simulations.
  (ii) Developed multi-domain synchronization and models demonstrating gPTP in various network topologies.

SKILLS

Programming Languages: Python, C/C++, Shell Script(Bash), Verilog (HDL)

Frameworks / Tools: PyTorch, HuggingFace, OpenCL, OpenCV, Git, GitHub, GitLab (with basic CI/CD experience), Linux

Languages: Chinese (Native), English (IELTS 6.0), German (B1 course, Goethe-Institut Taipei)