Yan-Heng, Lin

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Education

National Yang Ming Chiao Tung University, Hsinchu, Taiwan *Jul. 2022 – Present*

- Major in Computer Science
- Core Courses: Link

Experience

- **Undergraduate Researcher | ESSLab** *Sep. 2024 - Jun. 2025*
  - Developed an energy-aware inference strategy using Early Exit Neural Networks (EENN) for memory-constrained EH devices.
  - Optimized system sustainability under unstable power supply, maintaining a consistent 80% inference accuracy.

Projects

Text Sentiment Analysis System *Link*

- Developed a sentiment analysis model capable of predicting the sentiment of a given text
- Enhanced model to manage real-world Out-of-Vocabulary (OOV) words through Data Augmentation.
- Tool Used: Python, Kaggle

Homomorphic encryption on Machine Learning *Link*

- Developed a secure ML pipeline that enables model training and inference directly on encrypted data, ensuring end-to-end data privacy.
- Designed a Client-Server architecture where the server processes encrypted datasets from the client without ever accessing raw sensitive information.
- Tool Used: Python

Identification of Human (real) VS. AI-generated images *Link*

- Implemented with ResNet50-based binary classifier with ImageNet-pretrained weights reaching an
- Applied Transfer Learning, ColorJitter augmentation, and Cosine Annealing to maximize model generalization and accuracy.
- Tool Used: Python, Kaggle, PyTorch

Investigating Implicit Inverse Kinematics in LGTM Diffusion Model *Link*

- Implemented a hierarchical motion diffusion model (LGTM) capable of generating cohesive 3D human animations from natural language prompts.
- Analyzed the impact of prompt engineering on motion synthesis, comparing IK-like (spatial constraints) vs. FK-like (joint-based) descriptions to optimize semantic alignment.
- Tool Used: Python, PyTorch, fmbvh

Film Filter *Link*

- Develop a comprehensive movie review website.
- Users to filter shows based on specific criteria. The Web page let users provide ratings and fostering a vibrant community passionate about sharing and discovering diverse cinematic experiences on our it.
- Tool Used: Python, JavaScript, HTML, Django, Git

Skills

Languages: C++, C, Python, JavaScript, SQL, Shell Script

Framework: Vue, Django

Techniques: Image Processing, Network & System Administration, Operating System

Tools: PyTorch, OpenCV, Docker, Git, Linux, FreeBSD, Ubuntu

Awards

2nd Place | 2024 Meichu Hackathon *Nov. 2024*

3rd Place | 2023 Meichu Hackathon *Nov. 2023*

Extracurricular Activities

Member | NYCU Computer Science Student Association 2023 *Jun. 2023 - Jun. 2024*