Kai-Jie Lin

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Education

National Yang Ming Chiao Tung University   *Hsinchu, Taiwan*
Senior year of B.S. in Computer Science   *Sep. 2021 - Now*
- Overall GPA: 3.83/4.0
- Relevant Courses: Algorithm, Graph Theory, Operating System, System Administration, Machine Learning, Deep Learning

University of Illinois Urbana-Champaign   *Illinois, USA*
Exchange student in Computer Science   *Aug. 2024 - Dec. 2024*
- Relevant Courses: System Programming, Statistical Reinforcement Learning, Applied Parallel Programming

Experience

NVIDIA - NYCU Advanced Research Project   *Hsinchu*
Research Assistant   *Jul. 2023 - Sep. 2023*
- Research Topic: Reinforcement Learning for Bayesian Optimization
- Helping design the algorithm and implement the experiments. We demonstrate that our work constantly achieves better performance than previous works.

Publications

BOFormer: A Generalized Deep Q-Learning Framework for Multi-Objective Bayesian Optimization

Yu-Heng Hung*,**Kai-Jie Lin***,Yu-Heng Lin*,Chien-Yi Wang,Cheng Sun,Ping-Chun Hsieh
- **International Conference on Learning Representations (ICLR), 2025**
- Presenting a generalized deep Q-learning framework and propose *BOFormer*, which substantiates this framework for Multi-Objective Bayesian optimization via sequence modeling.

Projects

GPU Convolution Kernel Optimizations   *Illinois, USA*
Applied Parallel Programming Course Project, [Link]   *Sep. 2024*
- Optimizing the convolution kernel on GPU using CUDA and utilizing optimizations such as Tensor Cores, tiling, and kernel fusion.

UIUC Course Explorer Filesystem   *Illinois, USA*
System Programming Honor Project (Embedded System), [Link]   *Sep. 2024*
- Building a virtual filesystem on Raspberry Pi 5 through Filesystem in Userspace allowing for browsing of UIUC course information.

Multi-Objective Denoising Diffusion Policy Optimization   *Hsinchu, Taiwan*
Deep Learning Course Project, [Link]   *Jun. 2024*
- Fine-tuning diffusion models with multi-objective reinforcement learning from human feedback.

Cellphone Rating System   *Hsinchu, Taiwan*
Database Course Project, [Link]   *Dec. 2022*
- Using Django to build a website that allows users to rate cellphones and provide recommendations.

Multispeaker Transcription   *Hsinchu, Taiwan*
Meichu Hackathon Android Accessibility project, [Link]   *Oct. 2023*
- Deploy large language models Android app that identify the user who is speaking. Transcript the audio and display in the app.

Honors & Awards

Nov. 2022 **Bronze Medal**, 2022 ICPC Asia Taoyaun Regional Programming Contest   *Taoyuan, Taiwan*
Oct. 2022 **Bronze Medal**, 2023 ICPC Asia Taoyaun Regional Programming Contest   *Taoyuan, Taiwan*
Oct. 2023 **Bronze Medal**, 2023 Meichu Hackathon Google Group - Android Accessibility *Hsinchu, Taiwan*

Skills

Programming	C/C++, Python, Kotlin, Java, CUDA
Machine Learning	Scikit-learn, Pytorch, Botorch, Large Language Models, Diffusion Models, RLHF
Website/Mobile	Django, Android Studio, SQL, AWS, HTML, CSS, JavaScript