

Yueh-Po Peng



Experience

AI Engineer Gate.io	Oct 2024 – Present Taipei, Taiwan (Remote)
Research Assistant Institute of Information Science, Academia Sinica MCTLAB Supervisor: Dr. Li Su Research Topics: Self-Supervised Learning, Medical Imaging <ul style="list-style-type: none">Surveyed end-to-end self-supervised learning methods for decoding mental states from fMRI data.Conducted distributed training experiments on high-resolution 4D medical images (fMRI) using TWCC HPC.Proposed a whole-brain feature selection method for decoding musical pitch from fMRI [2].	Mar 2022 – Oct 2024 Taipei, Taiwan
AI Engineer Intern Tomofun Research Topics: Computer Vision, Large Language Models, Multimodal Learning <ul style="list-style-type: none">Developed an automatic short music video generation system for daily pet clips.Fine-tuned visual language models (e.g., BLIP), achieving a 20.6% improvement in visual question answering.Enhanced LLaVA image inference speed by 250% with only a 3% accuracy reduction.Developed APIs for visual language models using llama.cpp/ollama for image-caption pair datasets.	Mar 2023 – Jul 2024 Taipei, Taiwan

Education

National Taiwan University <ul style="list-style-type: none">M.S. in Data ScienceThesis topic: Whole-Brain Feature Selection Methods for Decoding from fMRI Data	Feb 2023 – Jun 2024 Taipei, Taiwan
National Taiwan University <ul style="list-style-type: none">B.S. in Computer Science and Information Engineering (CSIE)	Sep 2019 – Jan 2022 Taipei, Taiwan

Research & Projects

Guitar Effect Removal <ul style="list-style-type: none">Proposed a two-stage method to remove distortion effects from guitar recordings using Positive Grid VST plugins.Achieved 20% higher audio quality than the best baseline, rated by 26 professional guitarists.Published in DAFx 2024 [1].	Collaboration with Positive Grid ML Team
Whole Brain fMRI Feature Selection <ul style="list-style-type: none">Proposed a two-stage method to extract fMRI features and predict musical pitch.Demonstrated 2-fold improvement over ROI-based feature selection in fMRI-music analysis.Published in ICASSP 2023 [2].	

Publications

[1] Lee, Y. S.*, Peng, Y. P.* , Wu, J. T., Cheng, M., Su, L., & Yang, Y. H. "Distortion Recovery: A Two-Stage Method for Guitar Effect Removal," Proc. Int. Conf. Digital Audio Effects 2024 (DAFx'24). (* equally contributed) Paper Demo
[2] Cheung, V. K.*, Peng, Y. P.* , Lin, J. H., & Su, L. "Decoding Musical Pitch from Human Brain Activity with Automatic Voxel-Wise Whole-Brain FMRI Feature Selection," Proc. IEEE Int. Conf. on Acoustics, Speech, and Signal Processing 2023 (ICASSP'23). (* equally contributed) Paper

Skills

- Languages/Frameworks:** Python, PyTorch, TensorFlow, Pandas, Scikit-learn, Slurm, Flask, HTML, JavaScript, C++, C, Linux.
- Skillset:** Machine Learning, Self-Supervised Learning, Medical Imaging, Music Information Research, Distributed Training.