

# Yueh-Po Peng



## Experience

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

## Education

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

## Research & Projects

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

## 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) <a href="#">Paper</a>   <a href="#">Demo</a>	
[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) <a href="#">Paper</a>	

## 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.