Peerawat Pannattee

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Career Objective

Passionate researcher with a strong foundation in **deep learning**, and hands-on experience in **computer vision** and **time-series analysis**. Currently pursuing a Ph.D. at *Tokyo Metropolitan University* (expected **Sept. 2025**), focusing on AI-driven **user experience (UX) assessment** in **virtual reality (VR)**. Strong interest in advancing broader AI applications, particularly in **large language models (LLMs)**, with a commitment to solving complex problems and driving innovation through intelligent systems.

Skills

Programming Languages: Python, C# (basic proficiency)
Tools & Libraries: PyTorch, Hugging Face, OpenCV, Unity, OpenXR
Research Areas: Applications of Artificial Intelligence, User Experience in Virtual Reality

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Research Experience

Ph.D. Research Assistant, *Nishiuchi Lab, Tokyo Metropolitan University* *2022 – Present*

- Developed a deep learning framework for **UX assessment in VR**, focusing on a **multimodal framework** considering both **behavioral cues** (e.g., body movements, facial expressions) and **objective visual attributes** (e.g., visual complexity, motion dynamics).
- Investigated factors such as **cybersickness**, **presence**, and **emotional states** in VR experiences.
- Designed VR simulations for research experiments and behavioral data collection.
- Co-authored research papers and actively contributed to academic discussions.

Research Assistant, *Deep Learning Research Lab, KMUTT* *2020 – 2022*

- Developed a deep learning framework for **fingerspelling recognition** in **continuous** and **real-world video settings**.
- Applied techniques such as **multi-task learning** and **contrastive learning** to enhance recognition accuracy.
- Contributed to research reports and co-authored academic publications.

Projects

LLM Project Playground *2025 – Present*
Repository

- Curated and implemented a series of hands-on toy projects to explore key aspects of **LLMs**.
- Investigated topics such as **model architecture**, **fine-tuning techniques**, and **dataset preparation** for domain-specific tasks.
- Documented insights and implementation details to share learnings with the community.

Undergraduate Senior Project *2018 – 2019*

- Developed a deep learning model for **sentiment analysis** of Thai restaurant reviews, applying **LSTM** and **word2vec** for improved text classification accuracy.
- Designed and implemented the complete **data preprocessing pipeline**, including web scraping, data cleansing, and text normalization.

Selected Publications

- **Pannattee, P.**, Fukuchi, Y., & Nishiuchi, N. (2024). *MUXAS-VR: Multi-dimensional User Experience Assessment System for Virtual Reality*. **Preprint**. [Access Preprint]
- **Pannattee, P.**, Shimada, S., Yem, V., & Nishiuchi, N. (2025). A deep learning framework for automatic assessment of presence in virtual reality using multimodal behavioral cues. *Neural Computing and Applications*, 1-21. https://doi.org/10.1007/s00521-024-10943-3
- **Pannattee, P.**, Kumwilaisak, W., Hansakunbuntheung, C., Thatphithakkul, N., & Kuo, C. C. J. (2024). *American Sign Language Fingerspelling Recognition in the Wild with Spatio-Temporal Feature Extraction and Multi-Task Learning*. *Expert Systems with Applications*, 243, 122901. https://doi.org/10.1016/j.eswa.2023.122901
- Shimada, S., **Pannattee, P.**, Ikei, Y., Nishiuchi, N., & Yem, V. (2023). *High-Frequency Cybersickness Prediction Using Deep Learning Techniques with Eye-Related Indices*. *IEEE Access*. https://doi.org/10.1109/ACCESS.2023.3312216
- Kumwilaisak, W., **Pannattee, P.**, Hansakunbuntheung, C., & Thatphithakkul, N. (2022). *American Sign Language Fingerspelling Recognition in the Wild with Iterative Language Model Construction*. *APSIPA Transactions on Signal and Information Processing*, 11(1). https://doi.org/10.1561/116.00000003

Awards

- **Best Paper Award**, 8th International Conference on Artificial Intelligence and Virtual Reality (AIVR), 2024.
- **National Research Award**, National Research Council of Thailand, for contributions to Thai sign language technology, 2024.
- **MEXT Scholarship**, Japanese Government, for Ph.D. studies.

Education

Ph.D. in Computer Science (Expected Sept. 2025)
Tokyo Metropolitan University, Tokyo, Japan
Research: AI-driven UX assessment in VR, focusing on multimodal input of behavioral cues and visual attributes.

M.E. in Electrical Engineering (2022)
King Mongkut's University of Technology Thonburi (KMUTT), Thailand
Research: Deep learning-based fingerspelling recognition in real-world dynamic settings.

B.E. in Electronics and Telecommunication (2019)
King Mongkut's University of Technology Thonburi (KMUTT), Thailand
Senior Project: Sentiment analysis of Thai restaurant reviews using deep learning approaches.

Languages

- **Thai:** Native proficiency
- **English:** Fluent

References

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