Peerawat Pannattee

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Career Objective

A passionate researcher with a strong foundation in deep learning and its applications in both image, video, and time-serries data. Currently pursuing a Ph.D. at Tokyo Metropolitan University, I specialize in the use of artificial intelligence (AI) to assess user experience (UX) in virtual reality (VR) environments, focusing on factors such as cybersickness, presence, and emotional state. My goal is to advance the understanding of human cognition and behavior through the integration of VR technologies and AI, while also exploring the potential of AI to drive innovation across various domains. I am eager to apply my expertise to diverse fields, leveraging AI to solve complex problems and unlock new possibilities in both research and real-world applications.

Education

Ph.D. in Computer Science (Expected September 2025)
Tokyo Metropolitan University, Tokyo, Japan
Research Focus: Leveraging deep learning techniques to assess UX in VR environments, with an emphasis on multimodal behavioral cues.

M.E. in Electrical Engineering (2022)
King Mongkut's University of Technology Thonburi (KMUTT), Bangkok, Thailand
Research Focus: Application of deep learning for fingerspelling recognition in real-world continuous video settings with dynamic conditions.

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

Research Experience

Ph.D. Research Assistant
Nishiuchi Laboratory, Tokyo Metropolitan University, Tokyo, Japan
2022 - Present

- Designed and conducted research experiments under the supervision of Prof. Nobuyuki Nishiuchi.
- Investigated factors influencing UX in VR, with a focus on elements such as cybersickness, presence, and emotional states.
- Developed VR simulations to facilitate research experiments and collect behavioral data for analysis.
- Designed and implemented an automated framework for UX assessment in VR, utilizing deep learning and machine learning techniques.
- Actively contributed to research discussions, co-authoring reports and papers for academic publication.

Research Assistant
Deep Learning Research Laboratory, KMUTT (in collaboration with NECTEC), Bangkok, Thailand
2020 - 2022

- Developed a state-of-the-art deep learning-based method for fingerspelling recognition in dynamic, real-world video settings, achieving significant recognition accuracy (under the guidance of Prof. Wuttipong Kumwilaisak).
- Contributed to the preparation of reports and research publications.

- Awarded the National Research, Award by the National Research Council of Thailand for the contribution to the field.

Publications and Awards

Selected Publications

- Pannattee, P., Fukuchi, Y., & Nishiuchi, N. (2024). *MUXAS-VR: Multimodal User Experience Assessment System for Virtual Reality*. **Under Review**. [Access Paper]
- Pannattee, P., Shimada, S., Yem, V., & Nishiuchi, N. (2024). *A Deep Learning Framework for Automatic Assessment of Presence in Virtual Reality Using Multimodal Behavioral Cues*. **Under Review**. [Access Paper]
- 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**, awarded by the National Research Council of Thailand for contributions to the field of Thai sign language technology, 2024.
- **MEXT Scholarship**, Awarded by the Japanese Government for Ph.D. studies

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Skills

- **Programming Languages:** Python, C# (basic proficiency)
- **Tools and Frameworks:** PyTorch, Unity, OpenCV, OpenXR
- **Research Expertise:** Deep Learning, Machine Learning, Virtual Reality Development

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Languages

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