Peerawat Pannattee

pannattee-peerawat@ed.tmu.ac.jp LinkedIn Google Scholar

Career Objective

A passionate and innovative researcher with a strong foundation in deep learning and its applications in human behavior and psychology. 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 VR technologies and AI, while contributing to the development of cutting-edge solutions in human-computer interaction.

Education

Ph.D. in Computer Science (Expected September 2025)
Tokyo Metropolitan University, Tokyo, Japan
Research Focus: Leveraging deep learning techniques to assess user experience (UX) in virtual reality (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 user experience (UX) in virtual reality (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.
- Participated in research discussions and contributed to the writing of reports and research papers.

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

- Developed deep learning algorithms for fingerspelling recognition in dynamic, real-world video settings.
- Conducted experiments and engaged in research discussions under the guidance of Prof. Wuttipong Kumwilaisak.
- Contributed to the preparation of reports and research publications.

Publications and Awards

Selected Publications

- Pannattee, P., Fukuchi, Y., & Nishiuchi, N. (2024). *MUXAS-VR: Multimodal User Experience Assessment System for Virtual Reality*. **Under Review**.
- 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**.
- 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.
- 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.
- 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).

Awards

- **Best Paper Award**, 8th International Conference on Artificial Intelligence and Virtual Reality (AIVR), 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:** Basic proficiency