

NATTAMON SRITHAMMEE

Ph.D. Candidate in Computer Science ◊ Tokyo Metropolitan University, Japan

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Professional Summary

Ph.D. researcher specializing in Immersive Systems (XR) and Human-Computer Interaction (HCI). Expert in bridging the gap between human perception and virtual environments through data-driven analysis. Proficient in developing Python pipelines for high-dimensional sensor data (Quaternion/Kinematics) and designing controlled VR experiments. Published researcher in IEEE and Springer venues with a focus on perception-driven intelligent systems and human-centered AI.

Education

Tokyo Metropolitan University

Ph.D. in Computer Science (Specializing in Immersive Systems)

Tokyo, Japan
2024 – 2027 (Expected)

Thesis: A Study on the Influence of Audio on User Experience in Virtual Reality

Burapha University

M.Sc. in Data Science

Chonburi, Thailand
2020 – 2023

Thesis: Assessment Framework Development for Industrial Training with Virtual Reality

Burapha University

B.Sc. in Information Technology (Digital Industry Specialization)

Chonburi, Thailand
2016 – 2019

Research Experience

Multimodal Perception Analysis in VR

Graduate Researcher, Tokyo Metropolitan University

Tokyo, Japan
2024 – Present

- Investigating multimodal perception by analyzing head and gaze dynamics in immersive environments.
- Developed automated Python pipelines to process 60Hz sensor streams using quaternion orientation and kinematic feature extraction (Angular velocity, acceleration, and jerk).
- Designed controlled user studies to quantify the correlation between audio-visual stimuli and behavioral responses using statistical modeling and machine learning.

VR Simulation System for Forward Observer Training

Researcher, Digital Media and Interaction (DMI) Laboratory

Chonburi, Thailand
Mar 2024 – Aug 2024

- Developed a 3D simulation system for artillery forward observer training using immersive virtual environments.
- Implemented first-person training scenarios for target identification and explosion adjustment.
- Designed interactive controls for directional correction of artillery strikes (left, right, front, back, up, and down).
- Integrated terrain simulation, day/night environmental conditions, and realistic explosion visual effects.
- Implemented logging functions to record training data including explosion position and training duration.

XR Research & Development

Researcher, Burapha University

Chonburi, Thailand
2020 – 2023

- Engineered high-fidelity VR/AR training systems for industrial applications, leading to multiple peer-reviewed publications.
- Implemented data logging systems to capture user behavior within Unity, enabling evidence-based UX evaluation.
- Collaborated with cross-functional teams to deploy XR solutions for workforce skill assessment.

AR for STEM Education (Fundamental Fund Project)

AR Developer, KMUTT

Bangkok, Thailand
2021 – 2022

- Developed a mobile AR application using AR Foundation to visualize complex 3D geometric structures.
- Integrated spatial interaction modules that improved students' spatial reasoning through active learning.

Work Experience

Veeva Systems Inc.

Data Steward (Contractor)

Remote / Thailand
Jun 2023 – Feb 2024

- Executed data validation and structured research for a global pharmaceutical platform, ensuring 99%+ data accuracy.

NetDesign Host Co.

Technical Instructor (Contractor)

Bangkok, Thailand
May 2023 – Nov 2023

- Delivered advanced workshops in Python, Blender 3D, and UI/UX Design for industry professionals.

Faculty of Informatics, Burapha University

Teaching Assistant

Chonburi, Thailand
2020 – 2023

- Facilitated 350+ hours of instruction in NLP, Business Intelligence, and AR/VR Development.

Publications

Journal Articles

- Chonchaiya, R., **Srithamsee, N.** Augmented Reality as a Tool for Enhancing Geometry Learning and Improving Mathematical Understanding. **ECTI-CIT**, Vol. 19(2), 350–363, 2025.

Conference Proceedings

- **Srithamsee, N.**, Pannattee, P., Serizawa, M., Fukuchi, Y., Nishiuchi, N. Quantifying Audio Motion Coupling in Virtual Reality through Gaze and Head Dynamics. **KST 2026**, IEEE (In Press).
- **Srithamsee, N.**, Pannattee, P., Fukuchi, Y., Nishiuchi, N. Investigating the Impact of Sound Design on User Experience in Virtual Reality. **KST 2025**, IEEE, 341–345, 2025.
- Kubola, K., Jantarakongkul, B., Kongon, B., Kanangnanon, T., **Srithamsee, N.**, Jitngernmadan, P. Towards 3D Serious Game Simulation for Military Training. **JCSSE 2024**, IEEE, 656–661, 2024.
- **Srithamsee, N.**, Jitngernmadan, P. Holistic Evaluation Framework for VR Industrial Training. **IC2IT 2023**, Springer Nature, 171–182, 2023.
- Kubola, K., Jantarakongkul, B., Boonmee, P., **Srithamsee, N.**, Fongsamut, C., Jitngernmadan, P. VR Training Effectiveness Evaluation Based on Activity Data Analysis. **REV 2023**, Springer, 989–1001, 2023.
- Kanangnanon, T., Kraiduang, N., Sangnaul, J., **Srithamsee, N.** Mixed Virtuality CPR Training Development. **AUCC 2023**, 2023.
- **Srithamsee, N.**, Jantarakongkul, B., Kubola, K., Jitngernmadan, P. Increasing Awareness of Cellular Signals on Smartphones using Augmented Reality. **ICTC 2022**, IEEE, 412–416, 2022.
- Samutrat, T., **Srithamsee, N.**, Jitngernmadan, P. Interactive Education Content Design and Development Based on Augmented Reality. **AUCC 2019**, 2019.

Technical Skills

XR Stack: Unity 3D, C#, AR Foundation, OpenXR, VR Experiment Design, Blender
Data Science: Python (NumPy, Pandas, SciPy), Time-series Analysis, Kinematics, Quaternions
ML & Stats: Scikit-learn, Gradient Boosting, Statsmodels, Experimental Design
Design & UI: Figma, UX Research, Adobe Creative Suite, LaTeX
Dev Tools: Git, Linux, Jupyter, AWS Academy, SQL

Certifications & Awards

- **4th Place, Xplore Technology Award** (Phoenix Contact, Germany) 2023
- **Unity Certified User: Programmer** 2022
- **Google UX Design Professional Certificate** 2023
- **AWS Academy Cloud Foundations** 2022