

WOOSANG KIM

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EDUCATION

The University of Electro-Communications (UEC)

B.A. Informatics and Computer Engineering

Thesis: "Study on a Method for Stimulation of Periodontal Ligament Receptors by Transcutaneous Electrical Stimulation"

Advisor: Takuya Nojima, Associate Professor of Media Science and Engineering Program

Tokyo, Japan

Expected March 2024

RESEARCH EXPERIENCE

Nojima Laboratory, UEC

Undergraduate Researcher

Tokyo, Japan

March 2023 - Present

- Developed research proposals focusing on the generation of food textures through transcutaneous electrical stimulation of the periodontal ligament
- Conducted haptic research and introducing a new stimulation method leveraging Fusion 360, Arduino, and Processing
- Led the design and execution of experiments, resulting in the publication and presentation of findings at conferences

PUBLICATION & PRESENTATION

Kim, Woosang., Iwahama, Shiori., Sakurai, Sho., Hirota, Koichi., and Nojima, Takuya. (2023). *Investigation of Oral Sensory Information for Selective Stimulation of Periodontal Ligament Receptors*, The Virtual Reality Society of Japan, Tokyo, Japan.

Kim, Woosang., Sakurai, Sho., Hirota, Koichi., and Nojima, Takuya. (2023). *Investigation of Transcutaneous Electrical Stimulation to Periodontal Ligament Receptors and the Oral Sensory Information Generated*, The Virtual Reality Society of Japan SIG Haptics, Miyagi, Japan.

PROJECTS & LEADERSHIP

UEC Idea Demonstration Contest

Co-leader

Tokyo, Japan

May 2023 – December 2023

- Created a mask interface that recognizes mouth movements, leading to an award from Aflac Inc.
- Directed the creation of mask and hardware, overseeing programming and project organization

UT-virtual (Based in The University of Tokyo)

Member

Tokyo, Japan

September 2020 – March 2022

- Hosted an online exchange meeting with the XR Club at the University of Maryland, enhancing international collaboration and cultural exchange
- Coordinated project schedules, and developed VR games and showcased in exhibitions

TEACHING EXPERIENCE

UEC First-year Students Support Volunteer

Learning Assistant

Tokyo, Japan

April 2021 – March 2022

- Assisted first-year students in acclimating to college life and classes during the Corona pandemic

SKILLS & INTERESTS

- Programming Languages: C, Processing, Python, MATLAB
- Other: GitHub, Unity, Fusion360, Arduino, MS Office 365, Adobe Photoshop, Adobe Premiere Pro
- Languages: Korean (Native), Japanese (Fluent), English (Advanced)