SEZAKI LAB.

Urban Sensing and Ubiquitous Computing

Department of Informatics and Electronics

Department of Information and Communication Engineering,
Graduate School of Information Science and Technology
Socio-Cultural Environmental Studies,
Graduate School of Frontier Sciences

Information and Communication Engineering
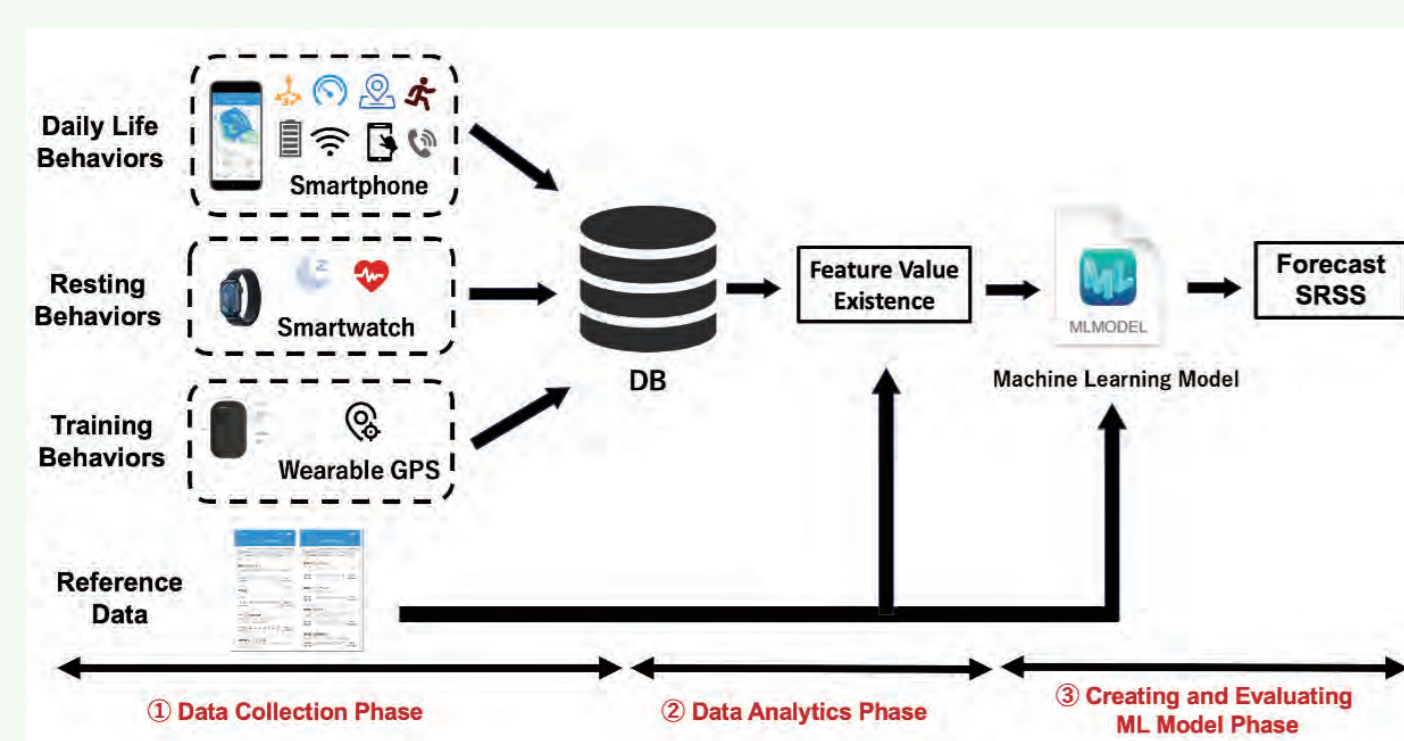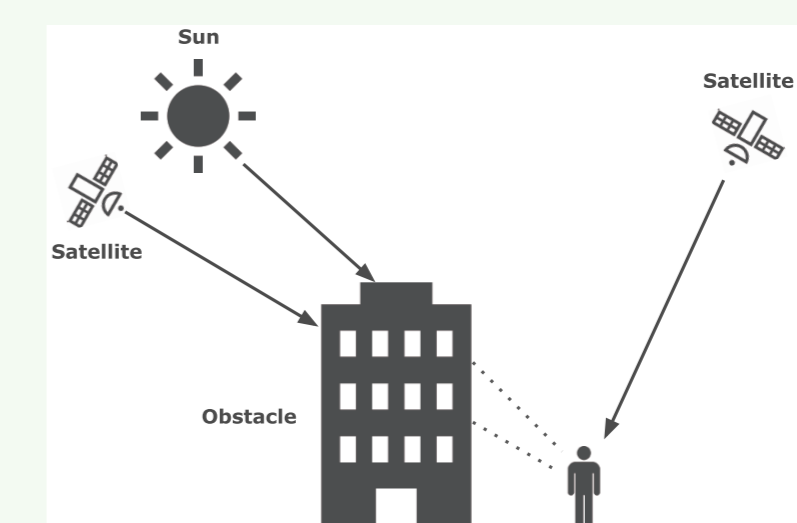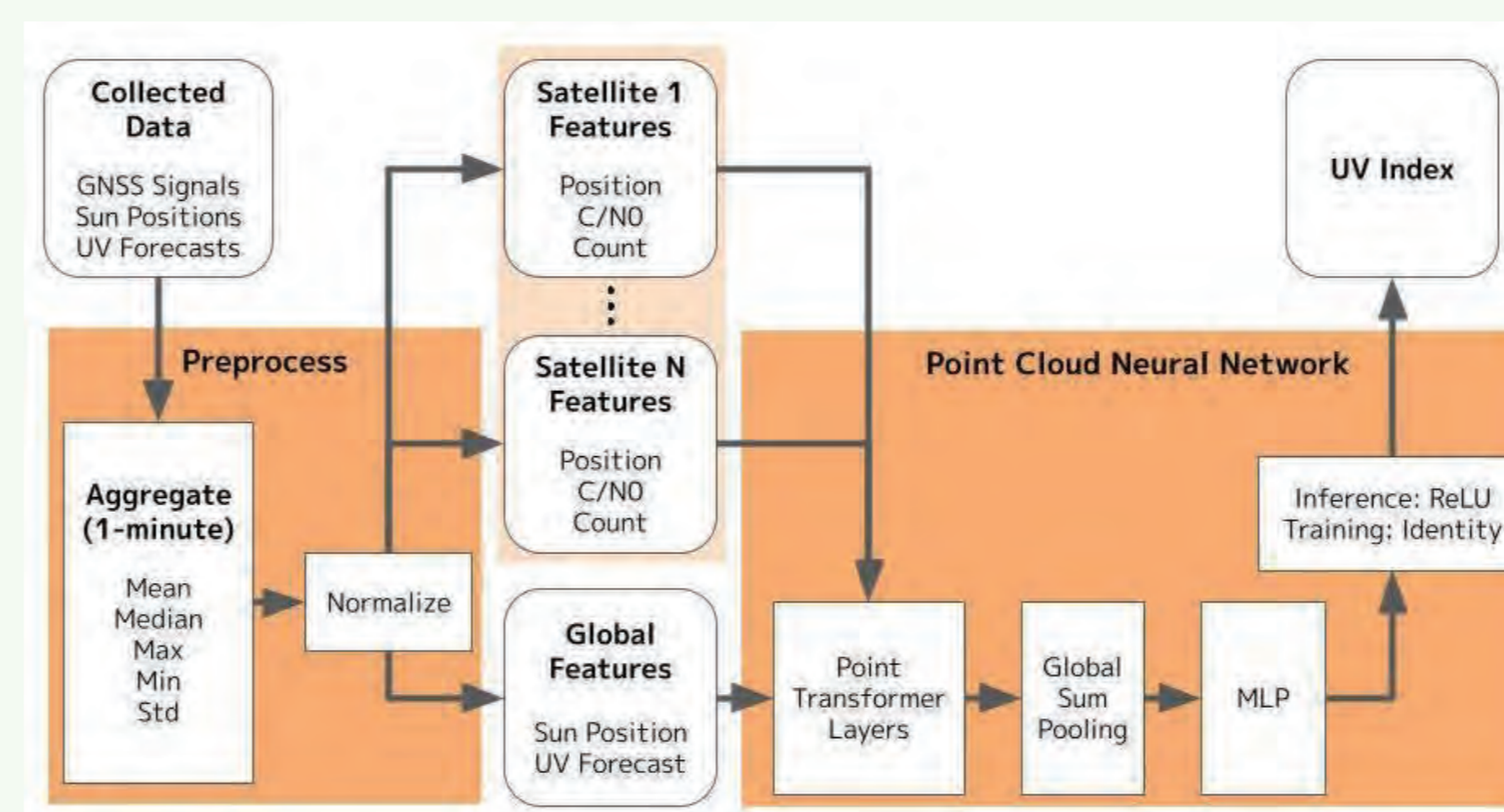
https://www.mcl.iis.u-tokyo.ac.jp/

Research topics:
1. to consider the support of the creative social activities, which utilize networks, and the creation of new applications
2. to operate the network element, system technology and system development of various applications

Behavioral Change & Well-being

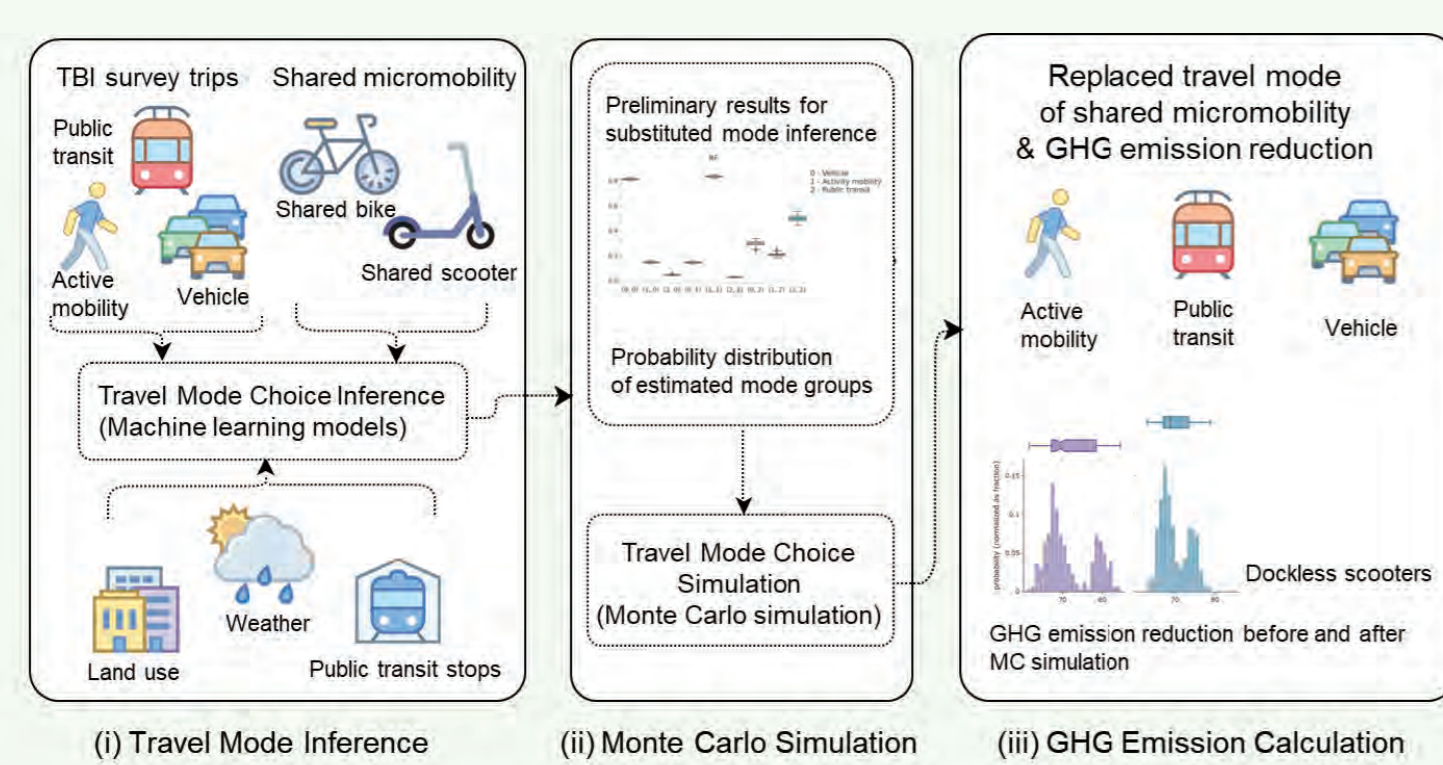**Sensing for detecting stress and recovery state of student-athletes**

UV index estimation leveraging GNSS signals available on smartphones and obstacle distribution around the user
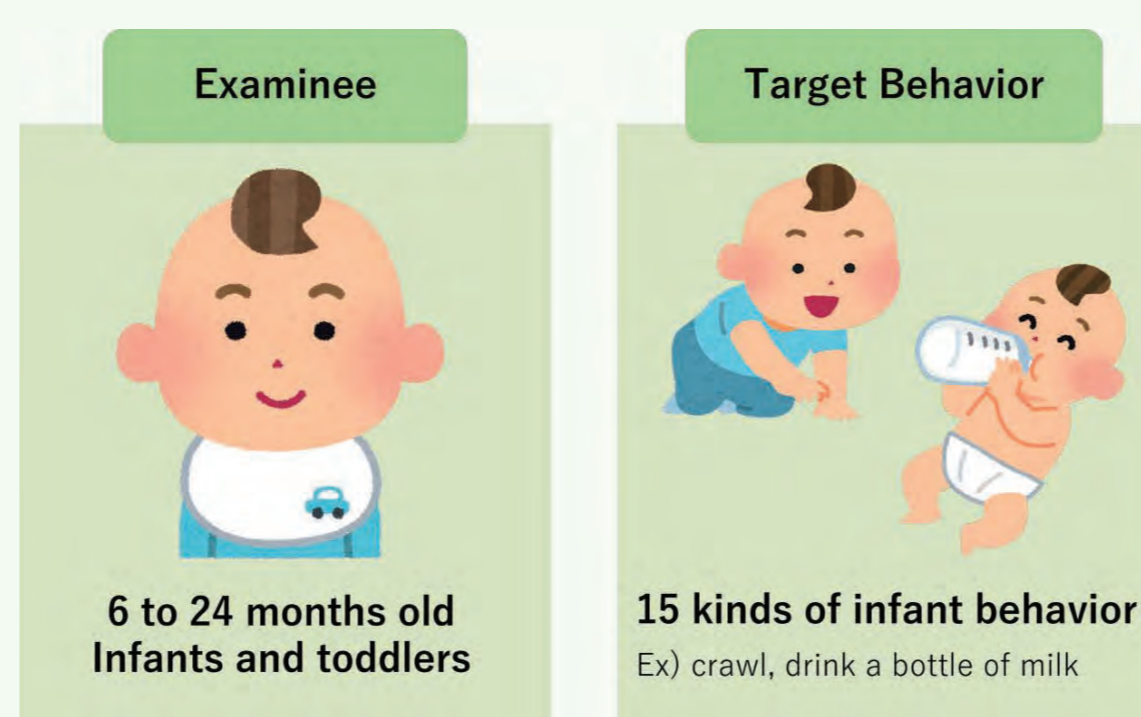

Societal Transformation

Spatial Analytics

Estimation of greenhouse gas emission reduction by shared micromobility system

Mobile & Wearable Sensing

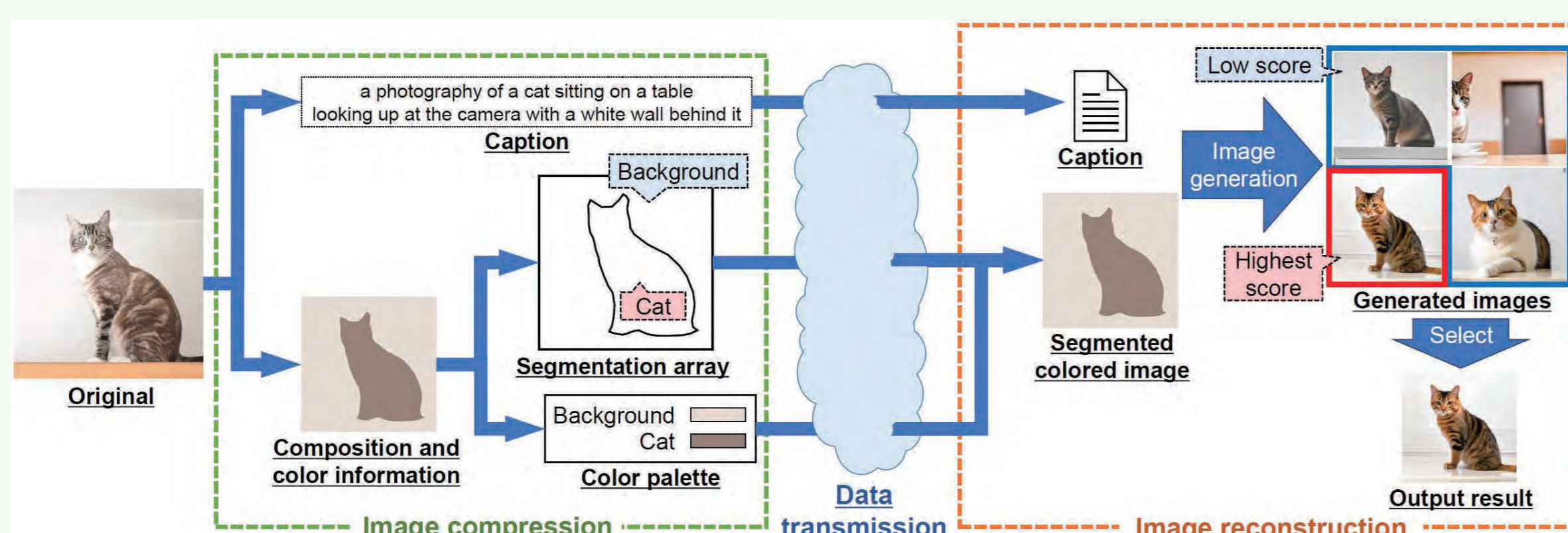**Detecting childcare activities using wearable devices**

Examinee — 6 to 24 months old Infants and toddlers

Target Behavior — 15 kinds of infant behavior Ex) crawl, drink a bottle of milk

Detecting postpartum depression using indoor environmental sensors
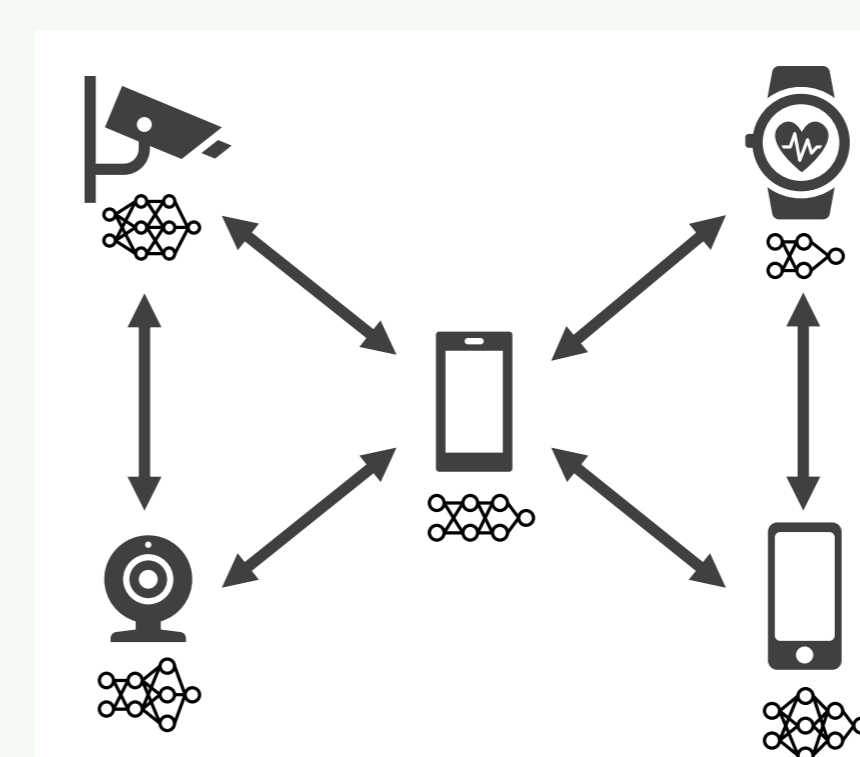

Analysis & Estimation

Wireless Sensor Networks & Decentralized Learning

Semantic communication leveraging generative AI for capacity-limited networks

Privacy-protecting distributed machine learning for wearable and IoT devices

Fundamental Technology

Institute of Industrial Science, The University of Tokyo