

Lab name: Mobilizing Information Technology Lab., Taiwan Tech

Advisor: Jenq-Shiou Leu (呂政修)

Mobilizing Information Technology Lab (MITLab) led by Prof Jenq-Shiou Leu established since 2007, focuses its researches on mobile communication technologies and applications, utilizing Machine Learning and Cloud/Fog Computing to provide smart and user-friendly services through the integration of IoTs and sensor networks.

The projects developed by MIT lab over the years include Positioning and Navigation System, Family Care using IoTs, Intuitive Natural User Interface for Smarthome, along with Internet Security and Malicious Behaviors Monitoring associated with them. Briefs are listed as follows.

- The Indoor/Outdoor Positioning and Navigation systems, using techniques such as fingerprinting with various EM signals such as Wifi and Bluetooth, Pedestrian Dead Reckoning with Inertial Measurement Unit in mobile devices, and ensemble machine learning to reduce localization errors.
- Family Care for Smarthome services can provide smart home care applications by utilizing sensors in embedded system to detect and analyze environmental factors such as humidity, temperatures, UV index, SpO₂, and PM 2.5 particles, along with biometrics information from wearer using wearable sensors.
- Non-intrusive, Human Centric, Intuitive Natural User Interface for Smarthome Services, utilize technologies such as Augmented Reality, Image Processing, Natural Language Processing, and Deep Learning, along with appliances such Smart Speakers, and IP Cameras, combined with embedded system to provide better UX for users seamlessly and ubiquitously.



Group photo of lab members and alumni in the MITlab

Lab Web: <http://mit.et.ntust.edu.tw:8080/>