10 REDUCED INEQUALITIES

977
Number of Int'l Students from Developing Countries

2,880
Number of First Generation Students Starting a Degree

50%
Proportion of First Generation Students

Outreach

ITS Develops Sensor-Based Mosque to Promote Accessibility and Inclusion

The Community Service team from the Department of Architecture at ITS developed a sensor-based mosque prototype for the visually impaired at the Yayasan Pendidikan Anak-Anak Buta (YPAB) in Surabaya. The initiative aims to improve accessibility and comfort in worship spaces for individuals with visual disabilities, where existing facilities remain limited. The design allows users to interpret spatial information through sensory cues, featuring two key elements: guiding tiles to assist users in navigating from the entrance to the prayer area, and handrails installed along pathways and walls to provide tactile orientation support. Scheduled for inauguration in October 2024, this project serves as a model for disability-friendly religious facilities, reflecting ITS' commitment to reducing inequalities and promoting accessible design in public spaces.

Research

ITS Students Develop Neutrack AI Glove to Empower Visually Impaired and Alzheimer's Patients

The Memory Reboot Team from Department of Informatics developed the Neutrack AI Glove, an assistive device integrating AI and computer vision to support visually impaired and Alzheimer's patients. The glove interprets visual surroundings into audio cues and voice guidance, enabling users to navigate safely and recognize familiar faces.

Tested at YPAB Surabaya, the Neutrack AI Glove demonstrated its ability to enhance independence and safety for users. Its innovative use of sensors, voice commands, and facial recognition earned them first place at Hackfest Indonesia 2024. The device later refined using recycled materials for the Google Solution Challenge 2024, highlighting its sustainable and inclusive design.

65 Scholarly Output

0.47 Field-Weighted Citation Impact

188 Citation Count

ITS Wins IEEE EPICS Grant for Inclusive Physical Therapy Technology

Department of Electrical Engineering received the prestigious Engineering Projects in Community Service (EPICS) grant from the Institute of Electrical and Electronics Engineers (IEEE) to develop a Smart Mobile Inclusive Learning (SMILE) system.

SMILE integrates camera-based deep learning technology with an interactive hand therapy game designed to assist individuals with physical disabilities in their rehabilitation process. Collaborating with the Yayasan Pembinaan Anak Cacat (YPAC) Surabaya, the team found that the tool not only made therapy sessions more engaging, but also significantly improved patients' enthusiasm and progress during treatment.

Teaching

Cultivating Accessibility Awareness through Assistive and Welfare Technology Course

The Study Program of Medical Technology has offered the Assistive and Welfare Technologies course since 2023. Originally introduced under the Department of Biomedical Engineering, the course focuses on inclusive innovation and the design of assistive devices that enhance the quality of life for people with disabilities.

Students learn how to apply Universal Design principles and design thinking to develop practical and empathetic solutions for diverse user needs. The curriculum combines theoretical foundations with hands-on projects, encouraging learners to engage in ideation, prototyping, and product testing tailored to the challenges faced by people with physical or cognitive impairments.

Stewardship

Supporting Students through Financial Aid and Accessible Facilities

In 2024, ITS strengthened access to higher education through expanded scholarships and financial aid, awarding 11,447 undergraduate scholarships totaling Rp117.54 billion with support from alumni, ITS Endowment Fund Management Institution (LPDA-ITS), state-owned enterprises, government agencies, regional governments, industry partners, and foundations, while postgraduate students received assistance from 36 providers, covering 412 enrolled postgraduate students.

Complementing these initiatives, ITS improved campus accessibility and inclusivity. Classrooms, laboratories, and public spaces now feature ramps, tactile paths, elevators, and assistive technologies, supported by academic, mobility, and counseling services to ensure all students can thrive in a welcoming environment.

396 Number of Students with Disabilities

1,62% Proportion of Employees with Disabilities