



HACKATHON for Persons with Special Needs

17-18th Oct 2022, IIT Madras Research Park



A two-day hackathon was organized by a team led by Prof. Pradipta Biswas, CPDM, IISc in collaboration with the India-EU ICT Standardisation collaboration project at the Indian Institute of Technology Madras, Research Park during 17-18, October 2022.

SSMI hackathon webpage: <https://cambum.net/I3DLab/HackathonSSMI.htm>

The objective was to develop new use cases for the ongoing research on developing "inclusive and safe eye-gaze-controlled human-robot interaction (HRI) systems for persons with severe speech and motor impairment (SSMI)" at the I3D lab, CPDM, IISc.

I3D Lab: <https://cambum.net/I3D.htm>

During the hackathon, people with SSMI were trained to use cyber-physical systems and associated eye gaze-controlled human-robot interfaces and were encouraged to propose requirements & solutions relevant to their interests. The new use cases that emerged from the hackathon will contribute to the rehabilitation process of users with disabilities. For example, users with a severe motor impairment will be able to draw, paint, and type using low-cost robotic manipulators and personalized interfaces.

The hackathon will be followed by a workshop (on 28th and 29th Nov 2022) involving Indian and EU experts to discuss the outcome of the hackathon and explore the sustainability of the proposed solutions and prospective India-EU collaboration for the development and standardization of new assistive technologies. <https://www.indiaeu-ictstandards.in/>

The project will also contribute and collaborate with EN 301 549, the European standard for digital accessibility which specifies requirements for information and communications technology (ICT) to be accessible for people with disabilities, where Prof. Pradipta is a member of the expert committee which is also adopting EN 301 549 for India's banking websites.

Media coverage of the SSMI hackathon:

<https://timesofindia.indiatimes.com/city/bengaluru/bengaluru-technology-helps-quadruplegic-kids-communicate/articleshow/94977065.cms?from=mdr>
