

SUSTAINABLE DEVELOPMENT GOALS



10. REDUCED INEQUALITIES

10.2 First-generation students

10.2.1 Proportion of first-generation students

In the academic year 2023-24, Chennai Institute of Technology admitted a total of 1440 students, of which 169 were first-generation students.

10.6 Measures against discrimination

10.6.7 Accessible facilities

The Institute has implemented a dedicated ramp facility on its pedestrian path to assist individuals with disabilities. This ramp is strategically designed to provide easy and safe access to the campus, ensuring that people with mobility challenges can navigate the area comfortably.



The Chennai Institute of Technology is committed to ensuring accessibility for all its students and staff, including those with disabilities. To support this, the institute has installed lifts on every floor of the campus. These lifts provide seamless access between floors, allowing individuals with mobility challenges to navigate the building with ease and independence.



The Chennai Institute of Technology is dedicated to providing an inclusive and accessible environment for individuals with disabilities. To further support this commitment, the institute offers wheelchairs for use by students, staff, and visitors who require mobility assistance. These wheelchairs are readily available at key locations across the campus, ensuring that those with mobility challenges can navigate the premises comfortably.



The Chennai Institute of Technology prioritizes accessibility and inclusivity for individuals with disabilities, and to support this, the campus is equipped with specially designed accessible toilets. These toilets are strategically located throughout the institute, ensuring that individuals with mobility challenges can access them easily and comfortably.



Snack and beverage vending machines are installed at wheelchair-accessible heights in all buildings, ensuring convenience for disabled individuals. These machines are well-maintained and fully operational at all times.



Signboards are installed to help persons with disabilities easily identify and access various facilities across the campus. These signboards provide clear directions to important locations such as classrooms, hostels, food courts, and auditoriums. They are designed with visibility and accessibility in mind, ensuring that everyone, regardless of physical ability, can move around the campus independently and confidently.



A private and hygienic lactation room is available in all major buildings for the comfort of staff and visitors. These rooms are properly maintained and fully functional to support nursing mothers.



Student Project Contributing to Reduced Inequalities

Object Identification Using Machine Learning for Visually Impaired

Computer Vision is a field of computer science and software engineering focused on recognizing and interpreting images and scenes. It encompasses various tasks like image recognition, object detection, image generation, and image super resolution. Object detection, a crucial aspect of Computer Vision, finds applications in face detection, vehicle detection, pedestrian counting, web image analysis, security systems, and autonomous vehicles. This project aims to utilize advanced object detection algorithms such as R- CNN, Fast R-CNN, Faster R-CNN, Retina Net, SSD, and

YOLO. These algorithms, powered by deep learning techniques, require a solid understanding of mathematical principles and deep learning frameworks like TensorFlow, OpenCV, and Image AI. By leveraging these methods, the project seeks to accurately detect objects within images, highlighting them with rectangular boxes and assigning tags to each identified object. Additionally, the project evaluates the accuracy of each detection method.

Sign speak: Audio to sign language converter

This project is based on converting the audio signals receiver to text using speech to text API. Speech to text conversion comprises of small, medium and large vocabulary conversions. Such systems process or accept the voice which then gets converted to their respective text. This paper gives a comparative analysis of the technologies used in small, medium, and large vocabulary Speech Recognition System. The comparative study determines the benefits and liabilities of all the approaches so far. The experiment shows the role of language model in improving the accuracy of speech to text conversion system. We experiment with the speech data with noisy sentences and incomplete words. The results show a prominent result for randomly chosen sentences compared to sequential set of sentences. This project focuses on building an effective means of communication for the especially abled people by the implementation of graphical hand gestures. We utilize the major principles of NLP (natural language processing) to make this project into a reality.

Visual Gestural Communication Deciphering: A Computer Vision Approach

Sign language is the only tool of communication for the person who is not able to speak and hear anything. Sign language is a boon for the physically challenged people to express their thoughts and emotion. In this work, a novel scheme of sign language recognition has been proposed for identifying the alphabets and gestures in sign language. With the help of computer vision and neural networks we can detect the signs and give the respective text output. The main purpose of this technology is to create algorithms and software that can accurately recognize and interpret hand gestures. Computer technology is used to capture the movements of gestures and convert them to text or speech. The system uses machine learning algorithms to recognize patterns in hand gestures and translate them into meaningful language. The accuracy of this device is very important as it directly affects the communication between the deaf and the hearing. Sign interpretation using computer vision has many applications, including education, medicine, and entertainment. This technology has the potential to bridge the communication gap between deaf and hearing people and provide easier communication solutions. As research in this area continues, we can expect to see major advances in translation technology in the future.

A Machine learning approach to human trafficking prediction

This study introduces a comprehensive method for identifying and predicting human trafficking using Machine-Learning. Given the urgent need for more efficient prevention and intervention techniques in addressing this pervasive crime, the conventional manual approaches are time-consuming. The proposed method automates the identification and prediction processes by leveraging various Machine-Learning techniques. It analyzes extensive data, including social media posts, individual demographics, and internet activity, to pinpoint potential victims and forecast their likelihood of involvement in human trafficking. Utilizing methods such as decision trees, support vector machines, and neural networks enhances the system's effectiveness. Employing cross-validation, model evaluation, and feature selection further boosts the accuracy of the system. This technique offers a substantial improvement in accuracy, aiding law enforcement organizations in their endeavors to combat this heinous crime.

Events to raise awareness for Reduced Inequalities

Disability Support Services – Promoting Inclusion and Equal Opportunities

Chennai Institute of Technology, through its Women Empowerment Cell (WISE), continues to foster an inclusive and supportive learning environment for all students, including those with disabilities. Alongside initiatives like awareness sessions on Women's Health, the institute actively provides Disability Support Services to ensure that every student can thrive academically, socially, and personally. These services include assistive infrastructure such as ramps, elevators, and accessible classrooms, along with personalized academic support, counseling, and peer mentoring. The institution also conducts awareness and sensitivity programs that encourage empathy, understanding, and inclusivity within the campus community. By integrating accessibility into every aspect of campus life, CIT empowers students with disabilities to participate fully in educational and extracurricular activities, ensuring no one is left behind.

