

Innovative Student Projects

Department of Computer Science and Engineering

Academic Year 2025–2026

The Department of Computer Science and Engineering continuously promotes **innovation, problem-solving, and industry-oriented learning** among students through faculty-guided project activities. Faculty members actively mentor students in developing innovative solutions that address real-world challenges in areas such as **automation, digital transformation, logistics optimization, healthcare technology, and smart health management**.

As part of this initiative, the following innovative student projects were successfully guided by faculty members during the academic year **2025–2026**.

1. Barcode Generation for Textile Batch Management

Guided by: Ms. S. Nageshwari, Assistant Professor, CSE

Students developed a **barcode generation system** for managing batches of spindles with fabric (Twisted Nylon) delivered to textile industries. The project aimed to improve **inventory tracking, product identification, and operational efficiency** in textile manufacturing environments.

Industry Associated: SRF

Project Duration: 25.06.2025 to 15.07.2025

2. Mobile Application for Digital Manual Data Entry

Guided by: Mr. N. Dharmaraj, Assistant Professor, CSE

This innovative project focused on designing a **mobile application to digitize manual data entry processes**. The system was intended to reduce paperwork, minimize human errors, and enhance the efficiency of organizational data management.

Industry Associated: RANE (RBL)

Project Duration: 25.06.2025 to 15.07.2025

3. Determining the Optimal Container Path Flow

Guided by: Mr. Subaree, Assistant Professor, CSE and Mrs. Divya Dharshini G, Assistant Professor, CSE

Students worked on an **optimization-based logistics project** to determine the most efficient container movement path. The project contributed to improving **transportation planning, reducing delays, and enhancing container flow management** in industrial operations.

Industry Associated: RANE (RBL)

Project Duration: 25.06.2025 to 15.07.2025

4. Advancing Healthcare Safety Through Ambulance Technology Integration

Guided by: Mr. N. Dharmaraj, Assistant Professor, CSE

This student innovation project explored the integration of **advanced digital technologies into ambulance systems** to improve emergency healthcare services. The project focused on **patient safety, real-time communication, and emergency response support** during medical transportation.

Presented at: TNSCST

Date: 28.08.2025

5. Smart Health Management Through WhatsApp – A Scalable Digital Companion for Chronic Care Support

Guided by: Mr. N. Dharmaraj, Assistant Professor, CSE

Students proposed a **WhatsApp-based smart health management system** to support individuals with chronic health conditions. The system was designed to provide **health reminders, communication assistance, and digital patient engagement**, making healthcare support more accessible and user-friendly.

Presented at: TNSCST

Date: 28.08.2025

The above projects demonstrate the departments commitment to **experiential learning, industry collaboration, healthcare innovation, and digital transformation**. Through continuous faculty guidance, students were able to apply theoretical knowledge to practical problems and develop solutions with **social, industrial, and technological impact**.