

# Ranajit Kenjale

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## Summary

ENTC graduate with hands-on experience in embedded systems and IoT. Skilled in C/Embedded C, microcontrollers, sensor interfacing, and communication protocols. Eager to learn and contribute as an Embedded software or Embedded hardware, Engineer under senior guidance. For real-world challenges.

## Skills

- |                                |                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------|
| • <b>Languages</b>             | : C, Embedded C, Python(basic)                                                   |
| • <b>Microcontrollers</b>      | : PIC, LPC, STM32, ESP32, ESP8266, Arduino, Raspberry Pi(basic)                  |
| • <b>Software</b>              | : MPLAB IDE, Keil Version, STM32 Cube IDE, Arduino IDE, Proteus                  |
| • <b>Comm. Protocol</b>        | : SPI, I2C, CAN, UART, MQTT, RS-485                                              |
| • <b>RTOS</b>                  | : Free RTOS (Task, Scheduler, Queue, Semaphores-basic)                           |
| • <b>IOT &amp; Networking</b>  | : IoT architecture, Sensor (Ultrasonic, Humidity, Infrared), OSI, TCP/IP (basic) |
| • <b>Linux &amp; Debugging</b> | : Linux shell (basic), Serial Monitor Debugging, Basic Debugging using IDE tools |

## Projects

### 1) Hand Gesture and Speech Recognition System

July 2024 – Sep 2024

- Developed Smart Assistive System with Gesture & Voice Control: Developed an advanced assistive system using Arduino Nano, integrating flex sensors, an ADXL345 accelerometer, and a voice module for recognizing hand gestures and speech commands. The system enables seamless interaction for users with disabilities, enhancing accessibility and ease of use.
- Real-Time Communication & Home Automation: Integrated an LCD display, GSM module, and relay module to facilitate real-time communication, remote control, and emergency alerts. Designed for applications in assistive technology, home automation, and emergency response, improving safety and convenience.

### 2) GSM Based Fire Detection Alarm

September 2023 - October 2023

- Designed a fire detection system that automatically detects fire and alerts the user via SMS and call using the SIM800L GSM module.
- Implemented with Arduino Nano, heat sensors, and additional components to ensure rapid detection and immediate communication of fire incidents.

## Education

### KJEL's Trinity Academy of Engineering, Pune University.

2021 - 2025

- B.E. – Electronics & Telecommunication | CGPA: 8.0

### Yashwantrao Chavhan Institute of Science, Satara

2020 - 2021

- HSC (Class XII) | Percentage: 87%

### New English School, Jihe, Satara

2018 - 2019

- SSC (Class X) | Percentage: 78 %

## Work Experience

### Tata Power Co. Ltd., Mumbai

Dec 2024 - Jan 2025

Intern

- Introduction to communication, automobile and cybersecurity system across Mumbai. Exposure to SDH, MPLS, fiber optics network.
- Hands on communication devices line for switches, splicing equipment's provided overall system study from power system communication provided.

## Academic and Extracurricular Achievements

- Sports Coordinator** – I have coordinated sports events and tournaments in the college Fest.
- Industrial Visit Coordinator** – I have coordinated industrial visits for students arranged by college.