

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

- **Languages** : C, Embedded C, Python(basic)
- **Microcontrollers** : PIC, LPC, STM32, ESP32, ESP8266, Arduino, Raspberry Pi(basic)
- **Software** : MPLAB IDE, Keil Version, STM32 Cube IDE, Arduino IDE, Proteus
- **Comm. Protocol** : SPI, I2C, CAN, UART, MQTT, RS-485
- **RTOS** : Free RTOS (Task, Scheduler, Queue, Semaphores-basic)
- **IOT & Networking** : IoT architecture, Sensor (Ultrasonic, Humidity, Infrared), OSI, TCP/IP (basic)
- **Linux & Debugging** : 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**, spicing 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.