

## Professional Summary

Aspiring Backend Developer with practical experience in building web applications using Python, Flask. Proficient in SQL and Git for efficient backend development. Comfortable collaborating with UI teams using Figma. Passionate about solving real-world problems, quick to learn, and a reliable team player.

## Education

B. Tech in Electronic and Communication Engineering at,  
S.R.M Institute of Science and Technology, Ramapuram, Chennai,  
*June 2023 – May 2027*  
CGPA: 8.56/10

## Projects

### Career Toolkit (Full Terminal-Based Career Assistant):

Built a terminal-based career assistant with three modules: Resume Scanner, Resume Creator, and SRM CGPA Calculator. Developed a content-aware resume scoring system using keyword extraction from PDF/DOCX files. Automated resume generation in .docx and .pdf with customizable sections and clickable links. Implemented GPA tracking with CGPA history logging in MySQL. Integrated MySQL for storing scans, CGPA logs, and activity with robust error handling. Followed a modular Python design with real-time input, formatted outputs, and persistent storage.

*Tech Used: Python, MySQL, PyMuPDF, python-docx, docx2pdf*

### Smart Terminal Assistant:

Built a Linux-based voice-controlled terminal automation tool that performs tasks such as PDF merge/split, Word-to-PDF conversion, image-to-PDF, file organization, and email automation. Implemented natural voice output using Google TTS with VLC playback, and speech input using SpeechRecognition. Designed fully modular components (PDF tools, file tools, email sender, voice assistant) and a clean interactive terminal UI using Rich. Focused on offline functionality, smooth performance, and real-time voice command execution within a Linux environment.

*Tech Used: Python, SpeechRecognition, gTTS, Python-VLC, PyPDF2, python-docx, docxcompose, Pillow, SMTP, Rich, Linux (Ubuntu)*

### Earthquake Auto-Shutdown System using Embedded Machine Learning:

Implemented a real-time seismic activity detection system using ESP32 and MPU6050, integrating a trained Edge Impulse ML model for vibration classification. Achieved 97% accurate detection of earthquake patterns and automated critical responses such as relay-based machine shutdown, buzzer/LED alerts, and cloud notifications via Azure IoT Hub (MQTT). Developed end-to-end embedded logic, sensor data acquisition, on-device inference, and cloud communication pipeline to build a reliable safety automation solution.

*Skills/Tech Used: Embedded C/C++, ESP32, MPU6050, Edge Impulse, Machine Learning, IoT, MQTT, Azure IoT Hub, Sensors, Real-Time Systems.*

### Job Viewer:

Developed a web application that analyzes resumes to extract skills and experience using NLP. Implemented user authentication and profile management modules. Enabled upload and parsing of PDF, DOCX, and image formats. Designed a clean and responsive UI using Figma, HTML, CSS, and JavaScript. Built backend logic for job recommendation and CRUD operations with SQLite.

*Tech Used: Python, Flask, SQLite, spaCy, PhraseMatcher, HTML, CSS, JavaScript, Figma*

### Terminal-Based Password Generator:

Developed a secure terminal-based application that generates strong random passwords and we store them in a MySQL database with user-defined labels like Gmail, Facebook. Implemented password history tracking with timestamps, enabling users to retrieve previously generated passwords. Built an interactive command-line interface for password creation, storage, and retrieval. Enhanced user interaction through a simple terminal-based menu system, ensuring usability and security.

*Tech Used: Python, MySQL*

### Interactive Financial Dashboard:

Created a web app to help users understand their spending through interactive charts and visuals. Designed a simple, mobile-friendly interface for smooth use on any device. Built the backend in Python with Flask to provide financial data through an API. Added real-time updates so the dashboard shows the latest information without refreshing the page.

*Tech Used: HTML, CSS, JavaScript, Chart.js, Python, Flask*

## Skills

**Languages:** Python, C++, SQL (MySQL, SQLite) Data Structures & Algorithms, OOPs

**Developer Tools:** Git/GitHub, Excel, VS Code, Postman, Unix/Linux (Ubuntu)

**Libraries:** pandas, NumPy, getpass, Random, python-docx, MySQL -Connector, NLP, spaCy, gTTS, PyPDF2, Rich, SMTPLib

**Frameworks:** Flask, REST API

## Certifications

- Certified in Internet of Things (IoT) through NPTEL examination.
- Python programming in GUVI Platform
- Verilog HDL Fundamentals for Digital Design and Verification – Udemy
- Embedded System Developer Virtual Internship by Microchip
- CI/CD learned through Simplilearn
- Attended the Code Craft ML Workshop organized by IETE-ECE department