

# SUNIL V

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## ABOUT

Detail-oriented and driven Computer Science and Engineering student with strong programming and software development foundation. Skilled in Python, Java, JavaScript, and SQL, with practical experience in full-stack development, real-time systems, and algorithm optimization. Demonstrates strong problem-solving and analytical skills. Passionate about contributing to high-impact IT projects and collaborative environments.

## EDUCATION

### Jawaharlal Nehru New College of Engineering

Computer science and engineering

Shimoga, Karnataka

Dec 2023 - Pursuing

### Acharya Polytechnic College

Diploma in Aeronautical Engineering

Bangalore, Karnataka

Nov 2020 - March 2023

### Toyota Technical Training Institute

Full-time Apprenticeship – Automobile Assembly

Bangalore, Karnataka

Apr 2016 - Aug 2019

## TECHNICAL SKILLS

**Programming Languages:** Python, C, JavaScript, Java

**Database:** MySQL, MongoDB

**Concepts:** SDLC, Agile, Data Structures, Cloud Computing, Machine Learning, Networking (TCP/IP, HTTP)

**Web Development:** HTML, CSS, JavaScript, PHP

**Libraries:** Pandas, NumPy

**Frameworks/Tools:** React, Node.js, Express, Git, OpenCV,

## PROJECTS

### • Quick Meal

Quick Meal is a full-stack food ordering app built with React(Vite), Node.js, Express, MongoDB, and Tailwind CSS. It features secure JWT authentication, a dynamic admin dashboard, robust REST APIs, and a clean, modular design using Mongoose, role-based access, and a real-time, mobile-friendly UI - delivering a smooth, and cloud-ready food tech.

### • Full-Stack Instant Messaging Platform

Developed a full-stack real-time chat application using Node.js, Express.js, and Socket.io, enabling instant messaging with a modern, responsive interface. Implemented secure JWT authentication and a MongoDB database to persist user data and chat history. Leveraged Socket.io for live, bi-directional communication—showcasing expertise in real-time web technologies and seamless frontend-backend integration.

### • Face Detection

Optimized real-time face detection using OpenCV and Haar Cascade classifiers by profiling bottlenecks and applying frame skipping, threading, and memory caching techniques. Replaced default frame processing, reducing latency by 50+ ms per frame under high-load video streams. Resulted in a 30% boost in processing throughput.

### • Encoding Decoding using Huffman code

Developed a robust data compression utility using java script and php, implementing Huffman Trees with custom Min-Heap and Priority Queue structures. Enhanced traditional methods by introducing frequency-based pre-sorting and bit-level stream encoding, leading to a 30% memory footprint reduction.

### • Face Filter App

Developed a Python-based real-time face filter application using OpenCV and MediaPipe to detect facial landmarks and overlay virtual filters like glasses and mustache. Optimized performance for smooth video streaming and accurate filter placement.

## INTERNSHIP

### IoT Data Analysis Intern

Sumana Embedded Technologies

June 2025 – Present

- Assisting in the development of data-driven insights by analyzing real-time sensor outputs from IoT-enabled embedded systems. Working with large streams of time-series data to detect anomalies, optimize device performance, and support predictive maintenance. Additionally, exploring wireless communication protocols like MQTT and BLE, and helping synchronize device metrics securely with cloud platforms.

## CERTIFICATION/SHORT COURSES

- Automotive SkillsDevelopment Council (ASDC)
- Japan-India Institute forManufacturing (JIM)
- National Apprentice Certificate(NAC)

## ACHIEVEMENTS

- Secured **First Place** in **Tech — Cyber Loop**
- Won **First Place** in **Primed: Hackathon**
- Secured **Third Place** in **Quizstatic**
- Secured **Third Place** in **Tech — Codizz**
- led the organization **TechZone 2k25**
- Hosted and Organized **Anveshana 2k25**