SUNIL V

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ABOUT

Motivated Computer Science and Engineering student with a good foundation in programming and software development. Proficient in Python, Java, JavaScript and SQL, with experience in application development and algorithm optimisation. My engineering background, and prior work experience enhance my problem-solving and analytical skills. I'am Eager to apply my technical knowledge and teamwork to innovative IT projects.

EDUCATION

Jawaharlal Nehru New College of Engineering — **Shimoga, Karnataka**
Computer science and engineering — *Dec 2023 - Pursuing*

Acharya Polytechnic College — **Bangalore, Karnataka**
Diploma in Aeronautical Engineering — *Nov 2020 - March 2023*

Toyota Technical Training Institute — **Bangalore, Karnataka**
Full-time Apprenticeship – Automobile Assembly — *Apr 2016 - Aug 2019*

TECHNICAL SKILLS

Programming Languages: Python, C, Java **Web Development:** HTML, CSS, Javascript, php **Database:** MySQL
Libraries and Tools: Pandas, Numpy, Git **Software Development Methodologies:** SDLC, Agile **Data structures**
Cloud Computing **Machine Learning** **Networking fundamentals (TCP/IP, HTTP)**

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**