

GURUSAIPRASADREDDY

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EDUCATION

- **Amrita Vishwa Vidyapeetham, Coimbatore**

B.Tech in Computer Science and Engineering

2023 – 2027

CGPA: 6.58/10

- **Narayana Junior College, Nellore**

Intermediate (MPC)

2021 – 2023

Percentage: 92.1%

- **Ratnam High School, Nellore**

SSC

2021

Percentage: 99.67%

TECHNICAL SKILLS AND INTERESTS

Languages: C, Java, Python

Developer Tools: Git, VS Code, Linux, Eclipse

Frameworks: React, HTML, CSS, JavaScript, React.js

Cloud/Databases: SQL (MySQL)

Soft Skills: Problem Solving, Teamwork, Communication

Coursework: DSA, DBMS, OOPS Concept, OS, Algorithms, Machine Learning, Computer Networks

PERSONAL PROJECTS

- **Dynamic Route Recalculation (Java, Dijkstra)**

2024

Traffic-aware routing system

- Implemented shortest-path algorithms and Union-Find for real-time updates.

- **Unified Payment Interface | HTML5, CSS3, JavaScript**

March 2024

Frontend simulation of a UPI payment platform

- Built a high-fidelity, mobile-responsive frontend replica of a UPI payment system using CSS Flexbox and Grid layouts.
- Implemented dynamic user interactions in JavaScript to simulate real-time transaction flows for utility bills, mobile recharges, and ticket bookings.
- Designed secure user authentication flows and optimized state handling to ensure a smooth, latency-free user experience without backend integration.

- **Genomic Sequence Aligner | Java, BWT Algorithm**

2025

Efficient DNA sequence matching tool

- Implemented optimized string-matching techniques for large-scale DNA sequences using the Burrows–Wheeler Transform.
- Added mutation detection functionality and reduced algorithmic time complexity from $O(n^2)$ to $O(n \log n)$.

- **Embedded Defense Radar System | STM32, Keil IDE**

June 2025

Prototype radar-based obstacle detection system

- Engineered a prototype radar system by interfacing an HC-SR04 ultrasonic sensor with a servo motor to scan a 180-degree area for obstacle detection.
- Developed efficient C firmware using Keil μ Vision to trigger sensor pulses, compute time-of-flight, and convert readings into precise distance and angle metrics in real time.
- Implemented interrupt-driven I/O for accurate motor positioning and synchronized sensor data acquisition, displaying results via serial monitor/OLED.

ACHIEVEMENTS

- **160 Days DSA Problem Solving Challenge (Certification)** GeeksforGeeks

2024

- **Smart India Hackathon (SIH) 2024 – Round 2**