Gurusaiprasadreddy

+91-7995522939 gurusaireddy1234@gmail.com Gurusaiprasadreddy LinkedIn Profile

Education

- **Amrita Vishwa Vidyapeetham, Coimbatore** *2023 – 2027*
  B.Tech in Computer Science and Engineering CGPA: 6.7/10
- **Narayana Junior College, Nellore** *2021 – 2023*
  Intermediate (MPC) Percentage: 92.1%
- **Ratnam High School, Nellore** *2021*
  SSC 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 μVision 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**