

# NESARA AMINGAD

Mysuru, India

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## Summary

Results-driven Software Engineer with experience in full-stack development and applied AI/ML. Built and deployed 4+ major projects from scratch using scalable microservices, containerized environments, and cloud platforms. Reduced bug reports by 40% via automation tools and shipped models achieving 92%+  $R^2$  accuracy. Passionate about creating efficient, user-focused software systems.

## Education

**JSS Science and Technology University**

**Nov 2022 – Jun 2026 (Expected)**

*B.E. in Computer Science and Engineering – CGPA: 8.31*

*Mysuru, India*

## Technical Skills

**Languages:** Python, JavaScript, Java, C, SQL, Bash

**Frontend:** React.js, Next.js, HTML, CSS, TailwindCSS

**Backend:** Node.js, Express.js, FastAPI, Spring Boot

**Data/ML:** Pandas, NumPy, Scikit-learn, Plotly, Recharts

**Cloud/DevOps:** Firebase, AWS (S3, EC2), Docker, Kubernetes, Redis, RabbitMQ, Git

## Projects

**AirVana – Smart AQI Intelligence Platform**

**May – Jul 2025**

*Tech: React, Spring Boot, RESTful API, PostgreSQL, Gemini API*

- Architected and deployed a full-stack, microservices-based air quality platform, achieving 92%  $R^2$  accuracy in PM2.5 prediction with a Random Forest model.
- Integrated Google's Gemini API to build 6 GenAI features, including an image-based pollution detector and a voice assistant for providing real-time health advisories.

**CodeReview.ai – AI-Powered Static Analysis Tool**

**Dec 2024 – Jan 2025**

*Tech: Python, FastAPI, GPT-4 API, Pylint, Docker*

- Engineered a static analysis tool leveraging the GPT-4 API to automate code reviews, reducing manual review time by 60% and identifying 92 critical vulnerabilities.
- Containerized the FastAPI application with Docker, enabling scalable processing of 1,500+ LOC submissions across three programming languages.

**F1 Race Strategy Simulation**

**Feb – Apr 2025**

*Tech: Python, Pandas, NumPy, Plotly, Scikit-learn*

- Developed a high-fidelity F1 race simulator that improved outcome prediction accuracy by 15% against baseline models by modeling tire degradation and track conditions.
- Validated model robustness by running 100+ Monte Carlo simulations to accurately forecast race dynamics and inform optimal pit-stop strategies.

## Hackathons & Competitions

### Competitive Programming

- Solved 200+ problems on LeetCode, steadily improving problem-solving skills and understanding of core data structures and algorithms.

**The Hopeful Handwritten – Mental Health Platform**

**Nov 2024**

- Top 30 Finalist at Inohax 1.0 Hackathon.
- Led the team in building a complete mental health MVP within 24 hours.

**Smart Blind Stick – IoT Assistive Device**

**May 2025**

- Designed obstacle detection system reducing collisions by 73% using ultrasonic sensors.
- Integrated GPS + Firebase for real-time emergency tracking with 1.5m accuracy.