SURYA RAJ

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GitHub **|** LinkedIn **|** Portfolio

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Bangalore, Karnataka, India

PROFESSIONAL SUMMARY

Entry-level Software Engineer and MCA graduate with hands-on experience in **full-stack development, AI-powered applications, backend systems, and database design**. Strong foundation in **Java, Python, SQL, REST APIs, cloud fundamentals (Azure)**, and real-time application development. Published researcher with proven ability to build scalable, production-ready solutions.

TECHNICAL SKILLS

Programming Language: Java, Python, C

Web & Application Development: HTML5, CSS3, JavaScript, React.js, Flask, Node.js, REST APIs

Databases: MySQL, PostgreSQL, SQLAlchemy, JDBC

AI & Machine Learning: Generative AI, Prompt Engineering, OpenAI API, Gemini API, Rule-Based AI Systems

Tools & Platforms: Git, GitHub, WebSockets, Leaflet.js, OpenStreetMap API

Cloud & DevOps: Microsoft Azure (AZ-900, AI-900), Cloud Fundamentals

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PROJECT EXPERIENCE

Agri Assist – AI-Powered Smart Farming Platform

Tech Stack: Python, Flask, SQLAlchemy, JavaScript, Leaflet.js, Open-Meteo API

- Developed a **full-stack web application** using Flask with secure authentication (Bcrypt + OTP email verification).
- Designed an **interactive geospatial mapping module** allowing users to draw farm boundaries and calculate land area dynamically.
- Integrated **weather and geolocation APIs** to generate AI-driven crop advisories and yield predictions.
- Implemented a **rule-based AI engine** to support data-driven farming decisions.

Coding Battle Royale – AI-Driven Multiplayer Coding Game

Tech Stack: React.js, Node.js, PostgreSQL, WebSockets, Gemini API

- Built a **real-time multiplayer coding platform** with matchmaking and live leaderboards.
- Integrated **Generative AI (Gemini API)** to dynamically generate coding challenges and real-time feedback.
- Created a **WebSocket-based architecture** to handle concurrent users and game state synchronization.
- Improved user engagement through competitive gameplay and instant AI evaluation.

Dine-In – Restaurant Reservation Management System

Tech Stack: Java, Swing, JDBC, MySQL

- Developed a **Java Swing desktop application** for managing restaurant reservations and table assignments.
- Implemented complete **CRUD operations** using JDBC and MySQL.
- Used a **multi-panel GUI** to manage customer check-in, check-out, and real-time table occupancy.

RESEARCH & PUBLICATIONS

- **"Coding Battle Royale: A Multiplayer Competitive Coding Game Using AI"**
  Published in International Conference on Innovative Computing Technologies and Applications (ICICTA), 2025

EDUCATION

Master of Computer Applications (MCA)
REVA University, Bangalore | 2023 – 2025

Intermediate (Physics, Chemistry, Mathematics)
BSEB **|** 2015 – 2017

Bachelor of Arts (Honours – Mathematics)
Maharaja College (VKSU), Ara | 2017 – 2020

Matriculation (10th)
CBSE **|** 2015