

RISHVIN REDDY

Software Engineering • Full Stack Development • Backend Systems

Python • React • SQL • Full Stack Development • Problem Solving

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GitHub Portfolio LinkedIn

Professional Summary

Computer Science Engineering student specializing in **Blockchain, IoT & Cybersecurity (BIC)** with strong interests in **Software Engineering, Full Stack Development, and Backend Systems**. Hands-on experience building **full-stack applications, authentication systems, database-driven platforms, and algorithmic solutions** through academic and personal projects. Strong foundation in **Python, JavaScript, React, SQL, Data Structures & Algorithms, OOP, Operating Systems, and DBMS**. Passionate about building **efficient, scalable, and user-focused software systems**.

Education

Woxsen University	Hyderabad, India
<i>B.Tech in Computer Science and Engineering</i>	2024 – 2028
<i>Specialization: Blockchain, IoT & Cybersecurity (BIC)</i>	CGPA: 9.01/10

Technical Skills

Programming Languages: Python, JavaScript, SQL, HTML, CSS
Frameworks & Libraries: React, Flask
Databases: PostgreSQL, SQL, DBMS
Software Engineering: Full Stack Development, Frontend Development, Backend Systems, RESTful APIs, Object-Oriented Programming (OOP), Application Development
Core CS Concepts: Data Structures & Algorithms (DSA), Operating Systems, Database Management Systems, Computer Networks, Problem Solving
Developer Tools: Git, GitHub, Antigravity IDE, Overleaf

Featured Projects

VoteSafe – Secure Biometric Voting System	React, Node.js, Express.js, PostgreSQL, AES-256-GCM
- Designed and developed a secure biometric voting platform using React, Node.js, Express.js, and PostgreSQL with fingerprint-based voter authentication. - Implemented AES-256-GCM encryption, biometric template validation, secure authentication workflows, duplicate vote prevention, and Merkle audit ledger mechanisms. - Built a full-stack architecture supporting frontend-backend integration, secure API communication, and database-driven identity validation.	
Text Search Engine Using Trie and Pattern Matching Algorithms Optimization	Python, DSA, Algorithm
- Developed a text search engine using Trie Data Structure, KMP, and brute-force pattern matching algorithms for optimized keyword indexing and retrieval. - Performed comparative algorithm analysis to evaluate search efficiency, retrieval performance, and time complexity optimization. - Contributed as Backend Developer in Team 11, implementing search logic and performance-oriented retrieval workflows.	
Smart Budget Planner	TypeScript, Dashboard Systems, Frontend Development
- Built an interactive budget planning application for income tracking, expense management, spending visualization, and financial planning. - Designed an intuitive dashboard interface for improved user experience and financial insights visualization.	
Outing Form Management System	HTML, CSS, JavaScript
- Developed a web-based outing management system supporting student request submission, administrative workflows, and structured approval management. - Implemented form validation, dynamic student management, and workflow automation for organized request handling.	
Interactive Disk Scheduling Algorithm Visualizer	Python, Operating Systems, Algorithm Simulation

- Developed an **interactive operating systems simulator** implementing **FCFS, SSTF, SCAN, C-SCAN, LOOK, and C-LOOK** disk scheduling algorithms.
- Designed comparative visualization workflows for **seek-time analysis, scheduling optimization, and performance evaluation**.

Technical Experience

Software Engineering Projects

Academic & Personal Engineering Work

- Designed and developed multiple **software systems, full-stack applications, and workflow-driven platforms** across domains including authentication, search systems, financial management, and automation.
- Built practical applications involving **frontend-backend integration, secure authentication workflows, database-driven systems, algorithmic problem solving, and interactive dashboards**.
- Applied software engineering concepts including **RESTful workflows, Object-Oriented Programming, Data Structures & Algorithms, debugging, system design, and optimization**.
- Worked extensively with technologies including **Python, JavaScript, React, Flask, PostgreSQL, SQL, and GitHub-based development workflows**.

Backend Developer – Team

Data Structures & Algorithms Project

- Contributed as **Backend Developer** in the development of a **Text Search Engine** using Trie-based indexing and pattern matching algorithms.
- Implemented **KMP pattern matching, brute-force search logic, indexing workflows, and retrieval optimization mechanisms**.
- Collaborated with team members to improve **algorithm efficiency, search performance, and backend implementation workflows**.

Patent & Innovation

Government of India Registered Design Patent – IoT Connectivity Device *Co-Inventor — Design No: 470097-001*

- Co-Inventor of a Government of India registered IoT hardware design patent focused on **secure device-to-cloud communication, telemetry systems, and intelligent connected infrastructure**.
- Contributed to innovation-oriented problem solving involving **secure communication workflows, authentication concepts, and scalable IoT connectivity systems**.

Certifications

- **Programming for Everybody (Python)** – University of Michigan (Coursera)
- **Data Structures Using Python** – Coursera
- **Object-Oriented Design** – University of Alberta (Coursera)
- **Java Programming** – Coursera
- **Introduction to Cyber Attacks** – New York University (Coursera)