

# Rishav Raj

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## Professional Summary

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Detail-oriented Software Engineer skilled in Python backend and REST API development. Writing clean and efficient code. Collaborative problem-solver eager to contribute technical skills and deliver impact in backend engineering roles.

## Technologies

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**Languages:** Python, SQL, Bash

**Frameworks and Tools:** Fast API, PostgreSQL, Redis, Postman

**Cloud & DevOps:** AWS, Docker, Git, Jenkins, Linux

## Education

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VIT Bhopal University, B.Tech in Computer Science

Sept 2022 – May 2026

- CGPA: 8.47/10
- **Coursework:** Data Structures and Algorithms, Networking, Cloud Architecture, Software Engineering

## Projects

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**AI-Powered Resume Analyzer ATS Optimizer, Link** VIT Bhopal

March 2025 – April 2025

- Engineered a high-performance REST API using FastAPI serving **500+** concurrent users with **99.5%** up time.
- Implemented resume parsing achieving **92%** accuracy in extracting skills, experience, and education data.
- Designed PostgreSQL database schema with optimized indexing, handling **1000+** resume records.
- Deployed using Docker containers with automated CI/CD pipeline reducing deployment time by **70%**.

**Intelligent Research Assistant, Link** VIT Bhopal

May 2025 – June 2025

- Engineered an AI agent (LangChain, Gemini 1.5 Flash) for automated, multi-source research, reducing manual gathering time by **40%**.
- Developed a Streamlit web interface for real-time query and display, enhancing user accessibility and processing **100+** queries.
- Improved research efficiency, user interaction, and code reliability up to **90%** through a comprehensive AI-driven system.
- Optimized LangChain pipeline achieving **40% faster** query processing through efficient chunking strategies

**High-Performance URL Shortener Service, Link** VIT Bhopal

July 2025 - Aug 2025

- Developed **production-ready** URL shortening API handling **1,000+ requests/minute** with load balancing.
- Implemented custom short URL algorithm generating collision-free 6-character codes for 56+ billion URLs
- Built Redis-based caching achieving **99.2%** cache hit rate and **sub-100ms** response times
- Implemented database connection pooling and async operations improving throughput by **3x**.
- Created **rate limiting** middleware preventing abuse with IP-based throttling and API key management.

## Achievements

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- **Problem Solving:** Solved 500+ coding problems on LeetCode and HackerRank, focusing on algorithms and system design.
- **Hobbies:** Published 15+ technical blogs on backend development best practices, reaching 200+ developers monthly.
- **Soft skills:** Organized 3 cloudzone club events, reached a total attendance of over 200 guests while leading a team of 8.