

RISHAV RAJ

rishav042023@gmail.com | [Linkedin](#) | [Github](#) | [Leetcode](#) | +91 9311571439

Education

VIT Bhopal University, Madhya Pradesh

September 2022 – June 2026*

Bachelor of Technology in Computer Science

CGPA: 8.34/10

Aakash Public School, New Delhi

April 2019 – May 2021

Intermediate – 88.6%

Dwarka, New Delhi

Projects & Experience

URL Shortener Service Project | Golang, Fiber/Echo, PostgreSQL, Redis | Personal | Dec 2024

- Developed a **high-performance** URL shortener handling **100K+ requests/day**, ensuring low-latency API responses (<50ms).
- Designed and optimized PostgreSQL schema, improving query performance by **30%** through indexing and efficient lookups.
- Integrated Redis caching, reducing database load by **60%** and achieving a **3x speedup** in URL resolution.
- Implemented rate limiting and API monitoring, preventing **95%+ of abusive traffic** and ensuring **99.99% uptime**.

Cloud-Native Serverless CI/CD Pipeline | Python (Terraform, AWS Lambda), Golang (API Backend), Docker, PostgreSQL | Personal | Feb 2025

- Built an **end-to-end CI/CD pipeline**, reducing deployment time from **1 hour to 5 minutes**, improving DevOps efficiency by **90%**.
- Designed and deployed a **containerized API backend** in Golang, supporting **10K+ concurrent users**.
- Automated infrastructure provisioning via Terraform, cutting manual cloud setup effort by **80%**.
- Enforced security best practices, reducing security vulnerabilities by **40%** through IAM role-based access controls and secret management.

JWT Authentication System | Golang, Gin, PostgreSQL | Personal | Mar 2025

- Developed a **scalable authentication system** using **JWT (JSON Web Tokens)**, handling **100+ user requests per second**.
- Implemented **token-based authentication with cookie handling**, achieving **99.9% session reliability** and **automatic token expiration after 24 hours**.
- Designed a **secure password hashing mechanism** using bcrypt, reducing password vulnerability risks by **80%**.
- Built a **RESTful API with Gin and PostgreSQL**, reducing authentication response time to **under 100ms**.
- Future Enhancements:** Planning to integrate **refresh tokens**, **role-based access control (RBAC)**, **two-factor authentication (2FA)**, and **email verification** to enhance security and scalability.

Technical Skills

- **Programming Languages:** Python, Golang, SQL, Bash.
- **Backend Development:** RESTful APIs, Microservices, gRPC, WebSockets, API Gateway.
- **Databases & Storage:** Linux, PostgreSQL, Redis, Amazon RDS, DynamoDB.
- **Cloud & DevOps:** AWS (Lambda, EC2, S3, IAM, API Gateway, CloudWatch, RDS, ECS, EKS), Nginx.
- **CI/CD & Automation:** GitHub Actions, Jenkins, ArgoCD, Terraform, AWS CloudFormation.
- **Databases:** MySQL, PostgreSQL.
- **Networking & Security:** DNS, TCP/IP, OAuth2, JWT, TLS/SSL, IAM, VPC, Load Balancing, Reverse Proxy.
- **Message Queues & Event-Driven Systems:** Kafka, RabbitMQ, AWS SQS, SNS.
- **System Design & Performance Optimization:** High Availability (HA), Load Balancing, Caching Strategies, Scalability Patterns

Achievements & Certifications

- Placed Top 20 in **Innovate You Techathon** a Hackathon out of **250+** teams.
- Certifications in AI/ML (3), Data Engineering (2), and Cloud Engineering (2) from Udemy and Coursera.
- Tackled **250+** questions, Top **40%** contests, and **7 badges** in LeetCode.
- Earned **GOLD Badges** for Python, and SQL on HackerRank.
- Led a team of **8** to conduct a club event and managed Event planning.