

# Hrishi Patil

+91-9049565857 | [hrishi.patil.dev@gmail.com](mailto:hrishi.patil.dev@gmail.com) | [LinkedIn](#) | [GitHub](#) | Mumbai, India

## SUMMARY

---

Backend-focused Software Engineering student who built and deployed a distributed, Git-inspired version control system on AWS. Experienced in designing REST APIs, real-time systems, and production infrastructure using Node.js, Express, MongoDB, PostgreSQL, and Redis. Strong foundations in Data Structures, Algorithms, OS, DBMS, and Computer Networks.

## EDUCATION

---

### Rizvi College of Engineering

B.E. in Computer Engineering, Honors in AI & ML **CGPA: 9.5 / 10**

Mumbai, India

Aug 2023 – May 2027

## PROFESSIONAL EXPERIENCE

---

### Tata Tele Business Services

Dec 2025 – Jan 2026

Network Operations Intern

Navi Mumbai, India

- Onboarded 500+ enterprise devices onto Zabbix monitoring platform, managing telecom infrastructure alerts and performance metrics across production Linux systems
- Built VBA automation scripts to extract and pipeline data from Zabbix into MySQL/PostgreSQL databases, **reducing manual reporting time by 40%**
- Diagnosed performance and reliability issues on Linux-based enterprise networking infrastructure, gaining hands-on exposure to production system operations

## PROJECTS

---

### Track2Go | Next.js, Node.js, Express.js, AWS S3, Redis, MongoDB | [GitHub](#) | [Demo](#)

Jan 2026 – Mar 2026

- Designed and built a **distributed, Git-inspired code hosting platform** from scratch — implementing repository browsing, commit history, issue tracking, and a **custom CLI** supporting `init`, `add`, `commit`, `push` for local repository management
- Engineered a **hash-based object storage and commit-chaining system** that serializes file diffs, computes content hashes, and persists snapshots to **AWS S3** — mirroring core VCS internals without relying on Git libraries
- Architected a **production-grade infrastructure** on **EC2 + Caddy** (reverse proxy + auto TLS), MongoDB for repository metadata, Redis for JWT blacklisting, and Vercel-deployed Next.js frontend with syntax-highlighted file browsing

### CertJS | Node.js, Express.js, PostgreSQL, Drizzle ORM, Sharp | [GitHub](#)

Mar 2026 – Present

- Architecting a **document issuance and verification platform** with a **monorepo design** (`api`, `worker`, `core`, `db` packages) and an **async job pipeline** (API → queue → worker) decoupling request lifecycle from bulk certificate generation
- Built a **template rendering engine** using Sharp and SVG overlays for dynamic placeholder-based document generation, backed by a **multi-tenant PostgreSQL schema** modelling users, templates, jobs, and documents via Drizzle ORM
- Designing a **tamper-resistant verification system** using cryptographic document hashing and unique document IDs, with strict **service + repository layer separation** enforced across monorepo packages for maintainability and testability

### QuizBurst | Node.js, Express.js, React.js, MongoDB, Socket.IO | [GitHub](#) | [Demo](#)

Aug 2025 – Sep 2025

- Built a **real-time multiplayer quiz platform** on a **Socket.IO event-driven architecture** with live scoring, leaderboards, and sub-100ms update propagation across concurrent sessions
- Designed a persistent **Quiz Bank** with multimedia support in MongoDB, enabling structured quiz creation, versioning, and reuse — decoupled from session lifecycle for flexible replayability
- Implemented **room-based WebSocket session management** with graceful disconnect handling, player state reconciliation, and host-controlled game flow for reliable competitive gameplay

## PUBLICATIONS

---

### Infrared Vein Visualization and U-Net Segmentation for Clinical Accessibility

2025

- Co-author. Research on non-invasive vein detection using embedded computer vision and deep segmentation models, presented through the **RUMI Care Conference** proceedings. Publication details available upon request.

## TECHNICAL SKILLS

---

**Languages:** JavaScript (ES6+), TypeScript, Python, Java, SQL

**Backend:** Node.js, Express.js, REST APIs, JWT, WebSockets (Socket.IO), Redis (Caching & Blacklisting)

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

**Databases:** MongoDB, PostgreSQL, MySQL

**DevOps & Infrastructure:** AWS (EC2, S3), Docker, Linux, Nginx, PM2, Git, CI/CD Basics

**Core CS:** Data Structures & Algorithms, OOP, Operating Systems, DBMS, Computer Networks

## HONORS & ACHIEVEMENTS

---

**Avishkar Research Convention – 1st Place** (Mumbai University Level, 500+ teams)

Dec 2025

**Tech-A-Thon 25 Hackathon – 1st Place** as Team Leader

Apr 2025

**Prakalp 3.0 Hackathon – 3rd Place** as Team Leader

Apr 2025

**RizviTank Ideathon – 2nd Place**

Oct 2025