RITESH KUMAR SINGH

Bhubaneswar, Odisha, India

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Education

C. V. Raman Global University	Bhubaneswar, Odisha, India
Bachelor of Technology in Computer Science and Engineering — CGPA: 7.91/10.0	*July 2023 – July 2027*

Technical Skills

Languages: Java, Rust, JavaScript, TypeScript, SQL, HTML5, CSS3
Backend: Node.js, Express.js, Bun, WebSocket, WebRTC, RESTful APIs, Microservices, Redis, Pub/Sub
Frontend: React, Next.js, React Native, Tailwind CSS, Responsive Design
DevOps & Cloud: Docker, Kubernetes, AWS (EKS, EC2, S3, Lambda, RDS), CI/CD, Terraform, Argo CD, GitHub Actions
Databases: PostgreSQL, MongoDB, Prisma ORM, Query Optimization, Database Design
Tools & Practices: Git, GitHub, Turborepo, Vitest, Unit Testing, Integration Testing, Agile, Scrum, Performance Optimization, Load Balancing, Caching, High Availability, Scalability

Experience

Open Source Software Engineer	**June 2025 – October 2025**
GirlScript Summer of Code (GSSoC)	*Remote*

- Delivered **20+ merged pull requests** across **5+ production repositories**, implementing critical features, optimizing performance by **30%**, and resolving **15+ high-priority bugs** in React, Node.js, and Python ecosystems
- Collaborated with **international development teams** using **Agile methodologies**, code reviews, and CI/CD pipelines to ship high-quality, scalable solutions with **95%+ test coverage**

Projects

Bloom: Enterprise Video Conferencing Platform | *Node.js, WebRTC, AWS, Kubernetes*   **GitHub**

- Engineered **scalable video conferencing platform** supporting **50+ concurrent HD streams** with **sub-200ms latency**, serving **1,000+ daily active users** using WebRTC and MediaSoup for real-time peer-to-peer communication
- Architected **microservices-based backend** with RESTful APIs for session management, media routing, and user authentication, handling **10,000+ API requests/day**
- Implemented **SIP protocol integration** for enterprise telephony and PSTN connectivity with **load balancing** across multiple regions
- Deployed on **AWS EKS** with **horizontal pod autoscaling**, Terraform IaC, and CI/CD pipelines reducing deployment time by **60%**

Swaraj Desk: Civic Engagement Ecosystem | *Next.js, React Native, PostgreSQL, AWS*   **GitHub**

- Developed **multi-platform civic solution** with mobile app, web portal, and admin dashboard serving **10,000+ users**, processing **500+ submissions daily** with **offline-first architecture**, geospatial heatmaps, and **RBAC** supporting **20+ languages**
- Architected **real-time notification system** using WebSockets and Redis pub/sub for instant updates, background job processing with async workers, and **SLA-based escalation** reducing response time by **40%**
- Integrated **AI-powered triage** with computer vision for image-to-form autofill, NLP-based auto-categorization, and spam detection achieving **95% accuracy**, plus multilingual **RAG chatbot** with voice support
- Deployed **containerized microservices** on AWS EKS with **horizontal autoscaling**, Cloudflare CDN reducing page load time by **50%**, achieving **99.9% uptime**

Achievements

- Solved **100+ algorithmic problems** on LeetCode (**Profile**) specializing in data structures, algorithms, dynamic programming, and optimization with focus on time/space complexity
- **Smart India Hackathon 2025 Finalist** - Selected among **top 1,500 teams** from **75,000+ participating teams** nationwide for innovative technology solutions
- **Cardano Hackathon 2025 Finalist** (India Blockchain Week Asia Edition) - Recognized for blockchain innovation