Satwik Singh

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EDUCATION

Indian Institute of Information Technology Bhopal — Bhopal, MP
Bachelor of Technology in Information Technology | CGPA: 9.28 — *Nov 2022 – Jun 2026*
- **Relevant Coursework:** Object Oriented Programming, Operating Systems, Computer Networks, Computer Architecture **(Teaching Assistant)**, Database Management Systems, Data Structures Algorithms.

ACHIEVEMENTS

- **Winner, Smart India Hackathon 2024** (**Top 200 of 900,000+**); led the development of **WireTrack**, for **NALCO**.
- **Grand Finalist, Smart India Hackathon 2023** (**Top 0.1% of 900,000+**); developed **IQMDIS**, for the **MoRD**.
- **Grand Finalist, Scale +91 Hackathon 2024**; presented to the **Minister of Education** at **Fintech Festival India**.
- Rated **4-Star (1816) on CodeChef** and **Expert (1625) on CodeForces**; solved 500+ problems on **LeetCode**.
- **Secured Build for Bharat Fellowship 2025** (**Top 19 of 25,300+ applicants**); appointed to **NHAI**.
- **Flipkart Grid** 5.0 and 6.0 **Semifinalist**; **GeeksForGeeks** DSA Challenge 2023 - **Rank 4**.
- Google Cloud Jam 2024 - **Silver Medalist,** CodeBhoj Intra-Bhopal Tournament - **Runner Up**.

EXPERIENCE

Indian Highways Management Company Ltd. (NHAI) — May 2025 – Aug 2025
Build for Bharat Fellow (Product & Engineering) — *Dwarka, New Delhi*
- Owned end-to-end **design, planning, and execution** of **FASTag Annual Pass & RajmargYatra**, driving adoption to **1.5M+ users** and **Rs.310 Cr+ revenue** in 10 days; Ranking #23 on PlayStore and 4 on AppStore.
- Contributed to critical code (**Distance Calculation Algorithms, Kotlin translation modules, React web components**), while collaborating with cross-functional teams across web, mobile and backend.
- Worked alongside infra teams during peak traffic, supporting debugging and tuning at **50k+ requests/sec**.

IIIT Bhopal Website Cell — Jan 2024 – May 2025
Lead Developer — *Bhopal, India*
- Led a team of 3 to **redesign the official IIIT Bhopal website** using MERN stack, delivering a fast & scalable site.
- Designed **90% of the architecture** and implemented **core APIs** powering dynamic content on the front-end & CMS.

Amazon — Jul 2024 – Aug 2024
Machine Learning Summer School — *Remote*
- Selected among top **0.03% of 85,000 applicants** for intensive month-long ML training with Amazon ML leads.
- Trained in advanced **Deep Learning, LLMs, Generative AI** principles with hands-on real-world projects.

PROJECTS

Cloud Resume | *AWS S3, CloudFront, Route 53, API Gateway, Lambda, DynamoDB, Terraform* — Live Github
- Deployed a globally distributed, fault-tolerant site using **S3, CloudFront, and Route 53**, achieving sub-50ms latency.
- Built a serverless backend with **API Gateway, Lambda, & DynamoDB** to handle real-time concurrent requests
- Automated full-stack infrastructure provisioning via **Terraform**, reducing environment setup time by **90%**.
- Implemented 3 **CI/CD GitHub Actions** for reproducible, zero-downtime deployments of both versions.

WireTrack | *Node.JS, React, Next.JS, Tailwind, Tensorflow, OAuth, JWT, Docker* — Live Github
- Developed a real-time AI prediction system with integrated monitoring, **winning Smart India Hackathon 2024**.
- Deployed ML models on SCADA servers to forecast wire properties **at NALCO Plants,** reducing defect costs by **7%**.

Seeker | *TypeScript, NodeJS, Tailwind, Ollama, DeepSeek-R1, VSCode API* — Live Github
- Launched an **open-source VSCode LLM assistant** with 350+ models, acquiring **900+ daily active users**.
- Engineered low-latency, real-time inference system with WebSocket streaming, achieving sub **100ms response times**.

DepInsight | *NodeJS, JavaScript, CLI, NPM* — NPM Github
- Built a powerful **CLI tool** to manage project dependencies, improving security, license compliance, and bundle efficiency.
- Achieved **35k+ cumulative installs**; performing real-time dependency impact analysis across multiple projects.

SKILLS AND CERTIFICATIONS

Languages: C++, Python, JavaScript, TypeScript, SQL, HTML/CSS, Dart, HCL
Backend & Frameworks: Node.js, Express.js, PostgreSQL, MySQL, MongoDB, REST APIs
Distributed Systems & Infra: AWS, GCP, Docker, Terraform, Docker, CI/CD, Github Actions
Frameworks & Security: React, Next.js, Tailwind CSS, Flutter, OAuth 2.0, JWT
Certificates: Oracle Cloud Infrastructure Foundations, Google Cloud Foundations (8+ sub-certificates).