



## Sachin Singh

Roll No.: 2306114

Bachelor of Technology

Computer Science and Engineering

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### EXPERIENCE

#### •HSBC

Summer 2026

Incoming Trainee Software Engineer

India

- Secured a competitive 10-week internship offer via on-campus recruitment
- Selected to **collaborate** within a cross-functional **Agile** team, utilizing strong **communication** and **adaptability** to drive enterprise software solutions.

### EDUCATION

#### •National Institute Of Technology, Patna

2023-2027

B.Tech Computer Science and Engineering

CGPA: 8.28

#### •Sanskaar International School

2022

Intermediate Education(CBSE Board), UP

Percentage: 86.2

#### •Vidya Vahini School

2020

Secondary Education(CBSE Board), UP

Percentage: 89.8

### PROJECTS

#### •ReeShal - Hotel & Tourism Platform

GitHub | Live Demo

Full Stack, JWT, Cloudinary, Express.js

- Developed an interactive **tourism information portal** featuring hotels, restaurants, and local attractions
- Implemented secure **Role-Based Access Control (RBAC)** using JWT to ensure **100% data privacy** for users
- Optimized media delivery using **Cloudinary**, reducing image load time by **40%** and enhancing **User Experience**
- Engineered an advanced search algorithm with **MongoDB** indexing, cutting query response time by **300ms**
- Integrated **MapBox APIs** for location visualization and directions.
- Deployed on **Render** with **MongoDB Atlas** for scalable data management

#### •Whispr, Real-Time Chat Application (Full Stack)

GitHub | Live Demo

MERN Stack, Socket.IO, JWT, Tailwind CSS, Zustand

- Engineered a high-concurrency messaging architecture using **Socket.IO**, achieving **sub-100ms latency**
- Implemented secure **JWT authentication** and **bcrypt** password hashing for user security.
- Built a responsive React UI with **Tailwind CSS** and managed client state using **Zustand**
- Developed a robust **Express.js API** with **MongoDB** for data persistence and user management
- Enabled real-time features: instant messaging, user online/offline status, and read receipts
- Deployed on **Render** with robust error handling, maintaining **99.9% system uptime** during stress testing

### TECHNICAL SKILLS

**Programming Languages:** Java, Python, C (Proficient in Data Structures & Algorithms)

**Web & Backend:** Node.js, Express.js, REST APIs, WebSockets, JWT, Passport.js

**Frontend:** HTML, CSS, JavaScript, React.js, Bootstrap, Tailwind CSS

**Databases:** SQL, MongoDB, Mongoose ODM, Database Design

**Tools & Platforms:** Git, GitHub, Docker, Cloudinary, Multer, Nodemon, MongoDB Atlas, Render

**Computer Science Fundamentals:**

- **Object-Oriented Programming (OOP):** Encapsulation, Inheritance, Polymorphism, Abstraction
- **Software Engineering:** SDLC, UML, Design Patterns, Cohesion & Coupling, Code Review, Testing (Black/White Box), Software Testing (Unit, Integration, System)
- **Operating Systems (OS):** Process Scheduling, Memory Management
- **Database Management Systems (DBMS):** SQL, Normalization, Transactions
- **Networking:** TCP/IP Stack, HTTP, DNS, UDP, Socket Programming

### ACHIEVEMENTS

- Advanced to **Round 2** of the **Meta Hacker Cup**, ranking among top global competitive programmers
- Earned **Oracle Certified Professional** badge in **Generative AI (2025)** with a distinction score of **96%**
- Certified in Data Structure and **Algorithm** in Java by Apna College
- **Certified** in Java Programming by **NPTEL** (National Programme on Technology Enhanced Learning)
- Secured **Elite Gold** certification with **98%** score in "The Joy of Computing using Python" by **NPTEL**
- Achieved peak rating of **1669** on **LeetCode** (Top 15% globally) and solved 400+ algorithmic problems
- Qualified for 2nd stage of National Talent Search Examination (**NTSE**) (Government of India, 2020)
- Three-time **National Science Olympiad (NSO)** Level 1 qualifier (2015, 2016, 2018)
- Awarded a **cash prize** and certificate for securing first rank by **LIC**, Prayagraj (2016, 2018)

### CODING HANDLES

•**Leetcode:** sachinsingh8 | Max rating: 1669, Solving DP and graph problems

•**CodeChef:** sachhu114 | 2-Star (Rating: 1511)

•**Codeforces:** sachhusingh11 | Engaged in the competitive programming through regular practice