

# Abhay Singh Patel

✉ abhaysingh@iitbhilai.ac.in | 🌐 Abhay-86 | Portfolio | 🌐 Abhay | LeetCode | 📞 6392002533

## SUMMARY

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Full-Stack Software Engineer specializing in **distributed backend systems, scalable microservices, and DevOps automation**. Experienced in building production systems using **Django, Next.js, and Docker** while designing **CI/CD pipelines and automated cloud infrastructure** using **Terraform and Ansible**. Proven track record of improving system performance through **Redis caching, asynchronous task queues, and GPU-based infrastructure automation**.

## EDUCATION

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2020 – 2024 **Indian Institute of Technology (IIT) Bhilai**, B.Tech in Computer Science Raipur, Chhattisgarh, India  
2017 – 2019 **Central Academy**, Intermediate Kota, Rajasthan

## WORK EXPERIENCE

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**Software Engineer | AuraML (DeepTech Company)** Currently | Remote, Bangalore, India

- Designed and implemented a **centralized CI/CD pipeline with automated deployments** using **GitHub Actions**, improving deployment reliability across multiple microservices.
- Implemented **centralized authentication and authorization using Keycloak with OAuth 2.0**, enabling secure **Single Sign-On (SSO)** via Google and GitHub across internal platforms.
- Developed an **asynchronous task queue system for Image-to-3D processing APIs**, enabling background job execution with real-time polling updates in the frontend.
- Automated **GPU instance provisioning for robotics simulations** using **Terraform and Ansible**, dynamically creating and terminating compute resources for simulation workloads.
- Built microservices including a **Rust-based storage service** and a **WebRTC communication service**, integrated via **API Gateway and Nginx reverse proxy**.
- Developed backend services using **Django** and frontend modules using **Next.js** as part of a scalable DeepTech platform.
- Deployed **LLM-powered workflows** including a Sales WhatsApp Bot and automated pipelines for generating **USD (3D environment) assets**.

**Tech:** Terraform, Ansible, Rust, C++, Django, Next.js, Docker, GitHub Actions, Nginx, WebRTC, Microservices

**Software Engineer | IVY Homes (Tech-enabled Business)** Bangalore, India

- Implemented **Redis caching for CMS APIs**, reducing data retrieval latency by **50%** and improving overall platform responsiveness.
- Built backend APIs and automation workflows integrated with **Zoho Flow, WATI, and Zepto Mail**, enabling automated communication workflows that handled **70% of customer messaging operations**.
- Designed and deployed **data scraping pipelines on GCP**, automating ingestion and processing of large-scale property datasets.
- Implemented **GCP Pub/Sub messaging** to support **real-time communication across microservices**, improving reliability of asynchronous data processing.
- Designed scalable APIs and optimized **PostgreSQL database schemas**, improving backend query efficiency for frontend modules built in **Next.js**.

## Software Engineer | MAQ Software (MNC)

May – Nov 2024 | Hyderabad, India

- Worked on **Azure** Data Lakehouse for large-scale data storage and analytics.
- Cleaned and transformed datasets using **PySpark**.
- Developed Power BI dashboards and custom visualization cards for analytics.

**Tech:** Azure, PySpark, Power BI, Data Lakehouse

## INTERNSHIPS

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### Web Developer Intern | Param Innovations

May – July 2023 | Bangalore, India

- Built frontend interfaces using **Chakra UI** and **React** hooks for accessible design.
- Developed responsive static websites and optimized state management for faster performance and SEO.

**Tech:** React, Chakra UI, JavaScript, SEO Optimization

### Runner-up – Smart India Hackathon | NTRO

Aug 2022 | Remote

- Developed an end-to-end prototype for ransomware detection in university systems during a 24-hour hackathon.

### Developer Intern | Agronomist Agrotech (College Startup)

Jan – Mar 2023 | Remote

- Worked on **Raspberry Pi** functionalities and enhancements.
- Contributed to the web interface using **Next.js**.

## PROJECTS

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### LinkedIn Job Application Automation

[GitHub Link](#)

Automated LinkedIn job applications using **Selenium**. Working on integration with **OpenAI API** for dynamic autofill based on job descriptions.

*Tech: Selenium, Python*

### Buy-Sell Platform

[GitHub Link](#)

Developed a marketplace platform for students to buy/sell items within college using **React** and **Node.js** with JWT authentication.

*Tech: React, Node.js, Express, JWT*

## SKILLS

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### Languages

JavaScript, Python, C++, Rust, SQL

### Backend

Django, Django REST Framework, Node.js (Express), Microservices Architecture

### Frontend

Next.js, React.js

### DevOps & Cloud

Docker, Terraform, Ansible, GitHub Actions, Nginx, Linux, GCP (Pub/Sub, Kubernetes)

### Systems & Tools

WebRTC, Redis, API Gateway, CI/CD Pipelines, Async Task Queues

## ACHIEVEMENTS

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- **Expert (1640)** on Codeforces and **4 (1783)** on CodeChef.
- **Rank 1** in college and **1091 rank** in CodeKaze'23.
- **Runner-up** at Smart India Hackathon 2024.
- Captain of district cricket team; Defender of district football team.
- Global Rank **1544** in Google Kickstart (Round E).