# Jaiditya Batra

### EDUCATION

VIT Bhopal University

B. Tech. Computer Science and Engineering (CGPA: 9.14)

Dyal Singh Public School

12th CBSE: 94.6% 10th CBSE: 96.8% 2022 - 2026Karnal, HR2012 - 2022

Bhopal, MP

## Experience

#### IBM Research | Research Intern

May 2025 - Aug 2025

- Contributing to an access-controlled modular LLM project by developing and optimizing LoRA adaptor composition strategies—output ensembling and parameter merging—for secure, domain-specific inference with optimal accuracy, performance, and efficiency.
- Utilizing inference engines like vLLM for efficient serving with paged attention, KV cache optimization, and dynamic adapter routing.
- · Benchmarking latency and memory overhead of composed LoRA modules across secure multi-tenant model deployments.

#### Projects

TerraSpin | AWS (EKS, Lambda, RDS), Docker Compose, Kubernetes, Terraform, GitHub Actions, Argo CD, Next.js, Airflow, Jenkins, Helm, NGINX, Karpenter, Prometheus | Github

May 2024 - Present

- Automated deployments of Next.js, Apache Airflow, Airbyte, and Flask using Terraform, Helm, and CI/CD pipelines in EKS clusters with scalable EFS network storage for persistent volumes supporting Airflow.
- Utilized Karpenter to provision spot instances with NodePools, optimizing resource utilization and reducing compute infrastructure costs by 70%.
- Configured the NGINX Ingress Controller for TLS termination within the cluster and optimized load balancer routing to send traffic directly to pods, reducing node-hopping and improving latency by 40%.

Sadak Soochak | Next.js, TypeScript, RDS, Flask, PostgreSQL, Prisma, Tailwind CSS, Python, PyTorch, OpenCV, Mar Sulsawriter, pdfkit, Streamlit | Github

Mar 2024 - May 2024

- Developed traffic regulation system using deep learning for traffic density data.
- Allows reporting road issues like potholes for resolution by involving social activists and government effectively with our 95% accurate
  machine learning model.

Fabels | Next.js, TypeScript, Tailwind CSS, Prisma, PostgreSQL, Vercel, Stripe, NextAuth, AWS S3, Zod, Radix UI Nodemailer | Github

Oct 2024 - Nov 2024

- Developed a platform for users to view, sell, and rate books, with admin dashboards to track sales metrics.
- Created an analytics dashboard for admins to manage sales, user engagement, and book performance.
- Built features for book browsing, purchasing, and rating, with secure PDF storage in AWS S3 using signed URLs to ensure secure, time-limited access to books.

## TECHNICAL SKILLS

Programming Languages: C++ (Proficient in Data Structures and Algorithms), JavaScript, TypeScript, Dart, Node.js

Frontend & Frameworks: React, Next.js, Express.js, Flutter, Tailwind CSS, Zod, Radix UI

Backend APIs: Node.js, Flask, RESTful APIs, PostgreSQL, MySQL, Prisma, Stripe, Nodemailer

DevOps & Cloud: AWS (S3, EKS, RDS, Lambda, IAM, Route53, CloudFront), Docker, Kubernetes, Terraform, Jenkins, Helm, NGINX

Databases ORMs: MongoDB, PostgreSQL, MySQL, AuroraDB, Mongoose, Prisma

# ACHIEVEMENTS

- Solved 200+ Codeforces problems and achieved a peak rating of 1250 (Pupil). Profile
- Solved 500+ LeetCode problems, ranked in the top 150k, earned dual 100-day streak badges, and a peak rating of 1530. Profile
- Innovate You 2024 24 Hour Hackathon, qualified under top 20 teams among 200+ team participated in day long hackathon organized in AISSMS, Pune. Project | Certificate

#### Hobbies

Chess (peak rapid rating on Chess.com: 1400) and badminton and table tennis enthusiast.

# Languages

Fluent in Hindi, English, Punjabi