# Anirudh Lakhotia

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# Education

**PES** University

Sep. 2021 – May 2025

Bachelor of Technology in Computer Science, Cumulative GPA: 9.51/10

Bengaluru, India

- MRD Scholar Among the top 5% of students in the batch.
- Technical Lead at Google Developer Student Clubs, PES University Designed and facilitated interactive workshops on Databases, Web Development and Machine Learning.
- Relevant Coursework: Data Structures, Machine Learning, Deep Learning, Natural Language Processing, Cloud Computing, Operating Systems, Data Analytics, Big Data, Software Engineering, Database Management Systems.

Amazon Sep. 2023 – Oct. 2023

Machine Learning Summer School

Remote

Remote

• Selected for the Amazon India Machine Learning Summer School program with a national selection rate of 5%.

# Experience

Nokia Jun. 2024 – Present

Intern

- Engineered an ETL pipeline for processing 100GB+ of daily geospatial data
- Implemented Apache Druid for data storage, enabling queries on 30 million rows with response times under 1 second
- $\bullet$  Introduced geospatial indexing, reducing query time by 90% and memory utilization by 50%

PES Innovation Lab Jun. 2023 – Aug. 2023

Research Intern

Bengaluru, India

- Developed DistilledChaos, an automation tool that performs data-driven chaos testing for engineers, reducing the time needed for testing by over 50% and improving system resilience in **distributed systems**.
- Managed a Kubernetes cluster for seamless deployment, scaling, and optimization.
- Diagnosed 30% more errors within microservices, contributing to enhanced system stability and performance.

Cisco Jul. 2019 – Feb. 2020

Student Intern

Bengaluru, India

- Designed a front-end interface using Angular and Bootstrap, resulting in a 50% increase in user engagement.
- Achieved a server load rating of **300+** concurrent users by deploying to AWS EC2.
- Architected a MongoDB database schema for the app, supporting 1000+ users in a distributed environment.

## **Projects**

#### Multilingual Large Language Model [Link]

Jan. 2024 – Present

- Secured \$5,000 from Microsoft by winning the open-source AI hackathon supported by Meta and Microsoft
- Architected data pipelines for cleaning and processing diverse Indian language datasets for LLM pre-training, reducing processing time by 50%.
- Designed and developed a multilingual Mixture of Experts (MoE) model with support for text in 3 languages English, Hindi, and Kannada.
- Performed LLaMa-2 7B fine-tuning, optimizing experts via continual and domain adaptive pre-training.

## Distributed Load Testing System [Link]

Oct. 2023 - Nov. 2023

- $\bullet \ \ \text{Developed a distributed load testing system coordinating up to 8 nodes, achieving 10,000+ requests/second throughput}$
- Implemented a real-time metrics dashboard for min, max, mean, and median latencies with update intervals of less than 1 second
- Introduced a fault-tolerant Kafka communication layer with 99.9% uptime, supporting multiple test patterns

#### High-Performance Stock Analytics Platform [Link]

Oct. 2023

- Spearheaded the development of a stock visualization dashboard for 7000+ companies, featuring candlestick charts, moving averages, summary statistics, and RSI metrics.
- Devised and optimized a database to effectively store and query over 42 million records.
- Implemented advanced time-series database optimizations, achieving 600x faster read times compared to an unoptimized PostgreSQL database.

## Technical Skills

Languages: Python, C, C++, Java, JavaScript, LATEX, SQL, NoSQL, Bash

Developer Tools: Git, VS Code, Vim, Docker, Kubernetes, Elasticsearch

Technologies/Frameworks: ReactJS, NodeJS, ExpressJS, TailwindCSS, Bootstrap, Apache Spark, Apache Kafka, Pyspark, Grafana, Linkerd, Istio, Fluentd, Pytorch, Tensorflow, Huggingface, Unsloth