

# Vikrant Mehta

Website: [vikrantmehta123.github.io](https://vikrantmehta123.github.io)

Email : [vikrantmehta123@gmail.com](mailto:vikrantmehta123@gmail.com)

LinkedIn: [/vikrant-mehta/](https://www.linkedin.com/in/vikrant-mehta/)

Mobile : +91-9405119506

## EDUCATION

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- **Indian Institute of Technology (IIT), Madras** Chennai, India  
*BS in Data Science and Application; GPA: 3.82 (9.56/10.0)*  
*Sep. 2021 – Sep. 2025*

## EXPERIENCE

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- **VuNet Systems** Bangalore, India  
*Big Data Engineer*
  - **LogstashConverter:** Engineered a custom Logstash-to-KafkaStreams compiler after evaluating and deprecating alternative GenAI-based approaches. This slashed pipeline migration time from 4 weeks to just 2 days (a **93% reduction**), resulting in significant man-hour and cost savings. Designed and implemented modules for the Parser, AST Optimization, and Code Generation.
  - **Data Enrichment:** Assumed ownership of a business-critical data enrichment pipeline for ingesting external data into Kafka that had repeatedly caused production instability. Permanently resolved long-standing, recurring issues through deep analysis of Debezium connectors, PostgreSQL, and Kafka, and introduced optimizations to improve performance & stability such as custom Single Message Transforms.
- **VuNet Systems** Bangalore, India  
*Data Science Intern*
  - **VectorServe:** Architected and deployed this internal AI tool using **FastAPI** to streamline vector database interactions. Engineered robust APIs that served as the backbone for company-wide **RAG** and **Agentic workflows**, significantly reducing the time-to-market for internal AI tools. Implemented and experimented with research such as Late Chunking to improve retrieval relevance.
- **Indian Institute of Technology Madras** Chennai, India  
*Teaching Assistant*
  - Conducted weekly problem-solving sessions for **50+ students**, guiding them from brute-force approaches to asymptotically optimal algorithmic solutions on LeetCode through time and space complexity analysis.
  - Simplified advanced topics such as Network Flows and Dynamic Programming using first-principles and step-by-step execution traces during interactive sessions, enabling students to independently derive correct solutions.
  - Designed and authored a structured curriculum and curated problem library that continues to serve as the primary learning resource for **100+ active learners per month**.

## PROJECTS

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- **GPT-2:** Implemented GPT-2 from scratch using PyTorch along with several other research papers such as Late Chunking, WaveNet, etc.
- **miniRegex:** Implemented a mini regex engine which parses regex expressions and matches them against text. Implemented the Parser and Matcher, with features like Quantifiers, Named Captures, and CharacterClasses.

## PROGRAMMING SKILLS

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- **Languages:** Python, Javascript, C++, SQL, Java
- **Technologies:** Clickhouse, Kafka, Kubernetes, FastAPI

## AWARDS AND RECOGNITION

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- **CFA Level 1:** Cleared Level 1 of CFA with over 90 percentile.
- **VuNet Rising Star Award:** Awarded for exceptional contributions at VuNet Systems.