Vikrant Mehta

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🎓 Education

Indian Institute of Technology (IIT), Madras
BS in Data Science and Applications, with CGPA: 9.72

2021 – 2025
Chennai, Tamilnadu

H.P.T. Arts and R.Y.K. Science College
BA in Psychology, with Percentage: 83.42%

2018 – 2021
Nashik, Maharashtra

H.P.T. Arts and R.Y.K. Science College
High School, Valedictorian with Percentage: 96.42%

2016 – 2018
Nashik, Maharashtra

◔ Experience

VuNet Systems
Software Engineer Intern

Oct 2024 – Present
Bangalore, Karnataka

> Developed **VectorServe**, an internal AI application that used huggingface transformers, rerankers, and text-moderation models, along with Weaviate vector database
> Optimized the inference time of these models using techniques such as flash attention, ONNX graph optimizations, and quantization, along with implementing API rate limiting using **slowapi**.
> Followed design patterns, software engineering practices from Google's Book to create maintainable software
> Wrote exhaustive coverage and performance tests using PyTest and containerized the application using **Docker**

Indian Institute of Technology(IIT), Madras
Teaching Assistant, Data Structures, Algorithms

Jun 2024 – Present
Chennai, Tamilnadu

> Led problem solving sessions on **data structures** and **algorithms**, and coding challenges on Leet Code
> Built a curated repository on **GitHub** for future students of the course: Repository
> Was an academic mentor to a group of students

Metaforge Engineering (I) Pvt. Ltd

Feb 2023 – Dec 2023
Nashik, Maharashtra

> I led the automation and data analysis efforts in our family business to save personnel time, and encourage data driven decision making
> Implemented an automation tool in Python tool using **Pandas** and Regex, reducing manual processing time from 3 days to 3 hours. Involved **data cleaning and preprocessing**
> Developed production planning algorithm using **Google Sheets** and **Apps Script**, achieving a 75% reduction in personnel time, and encouraged data driven decision making.

Indian Institute of Technology(IIT), Madras
Teaching Assistant, Mathematics for Data Science-II

Oct 2022 – Dec 2022
Chennai, Tamilnadu

> Prepared solution documents, and tutorials for students from diverse backgrounds on linear algebra and multivariable calculus, using tools like Manim.
> Handled the Discourse community discussion forum for the course

🧪 Projects

AlgoMatrix

> Achieved "Best Project" award for a group project developing a learning portal that uses GenAI capabilities for enhanced learning GitHub. The project demo can be watched here.
> **Features:** Summarizing lecture contents and weekly performance, doubt clarifying chatbot, question generating practice assignment helper, authentication, RESTful APIs
> **Techstack:** Flask, ReactJS, PyTest, SQLAlchemy

The Shakespeare in Me

> Implemented transformers architecture from scratch including multi-headed attention, residual connections, and layer normalization and trained it on the works of Shakespeare to create a decoder-only GPT. GitHub
> **Techstack:** PyTorch, Jupyter Notebooks

BDM Capstone Project: Production Analysis

> Conducted comprehensive **data analysis** on production data to identify bottlenecks and key impactful machines. Developed **data visualizations** using the Google Workspace Suite to effectively communicate findings.

📖 Relevant Coursework

Data Science Coursework: Machine Learning Techniques, Deep Learning, Statistics for Data Science, Mathematics for Data Science, Large Language Models, AI: Search Methods for Problem Solving, Reinforcement Learning

Programming Coursework: Data Structures and Algorithms Using Python, Software Engineering, Data Management Systems (DBMS), Software Testing, OOP Using Java, Advanced Algorithms

Fundamentals: Computer Systems Design, Operating Systems

🌐 Volunteering and Leadership:

Meta Lawn Tennis Academy
Founder

Oct 2020– Jun 2022
Nashik, India

> Founded and ran a lawn tennis academy to spread love of Lawn Tennis in Nashik, wherein we taught tennis to students of all ages.

Gajapanth Siddhakshetra Gurukul
Volunteering, Maths Educator

Nashik, Maharashtra

> Taught mathematics and basic computer skills to school going kids

Maharashtra State Tennis Team
Captain

November 2016
Hyderabad, India

> Captained the Maharashtra Lawn Tennis team for the National School Games of 2016
> Won an National Level Bronze in the individual event

✺ Honours and Certifications:

Certificate of Academic Distinction
Awarded to a select set of students who achieved a CGPA of higher than 9.5

May 2024
IIT Madras

Cleared CFA Level 1
Achieved more than 90 percentile worldwide

Feb 2024
CFA Institute, USA