



VIMANSH MAHAJAN

New Delhi, India | vimansh22572@iiitd.ac.in | +91 9756515463

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EDUCATION

Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi)	CGPA: 9.19 / 10.00	2022 - Ongoing
<ul style="list-style-type: none">Bachelor of Technology (B.Tech.) in Computer Science Engineering (CSE)Achievements: IIITD Dean's List – Academics (2024–25); National Semi-Finalist, Flipkart GRiD 7.0 (2024); Top 5% Finalist, Adobe GenSolve Hackathon 2024; Organiser, TEDxIIITD; Member, Placement Cell; Batch Representative, Student Senate		
The Vivekanand School, Narela, New Delhi	CBSE XII: 97.2%	2022
<ul style="list-style-type: none">Achievements: JEE Mains 2022 – 99%ile (AIR 9,200); JEE Advanced 2022 – Qualified (AIR 10,109)		
Delhi Public School, Noida	CBSE X: 96.8%	2020

PROFESSIONAL EXPERIENCE

Bank of New York (BNY) Software Engineer Intern	May 2025- July 2025
<ul style="list-style-type: none">Built and deployed a content automation platform using Spring Boot, Python-integrated LLM, and Oracle DB, with Angular frontend transforming unstructured finance notes (text/images) into publish-ready articles.Implemented domain-aware segmentation and contextual visual placement; containerized and deployed services on Google App Engine.	
Complex Systems (CoSy) Lab UG Researcher	Jan 2025- May 2025
<ul style="list-style-type: none">Built RecipeGPT, a recipe generation system using the Recipe1M dataset, achieving human-like outputs with BERTScore > 0.85 and ROUGE score of 0.32.Applied a custom NER model to extract structured ingredient entities, enhancing input consistency and model understanding.Developed a 3-stage GPT-2 fine-tuning pipeline: pretrained on 100k+ recipe instructions, conditioned on raw ingredients and titles, then fine-tuned with NER-enhanced inputs using special tokens and label masking.	
TavLab UG Researcher	Aug 2024- Dec 2024
<ul style="list-style-type: none">Predicted IC50 values for HDAC6 inhibitors using ADMET and BlueDesc datasets by extracting molecular descriptors and evaluating compound efficacy.Built and optimized ML models with advanced data preprocessing, feature selection, and statistical analysis, accelerating compound screening and aiding potential drug candidate identification through computational chemistry and bioinformatics.	

SKILLS

Tools & Technologies: Python, Java, C++, Spring Boot, PostgreSQL, Hugging Face Transformers, REST APIs, Git, JUnit, MySQL, Bootstrap
Technical Skills: Data Structures, Algorithm Design & Analysis, DBMS, Object-Oriented Programming, Machine Learning (ML), Natural Language Processing (NLP), System Design, Computer Networks, Network Science
Certification: Ethical Hacking, The Complete Python Bootcamp (Udemy)
Soft Skills: Teamwork, Effective Communication, Adaptability & Rapid Learning, Problem Solving, Efficiency Under Pressure

PROJECTS

Healthcare Answer Summarisation Python, PyTorch, Hugging Face Transformers, LoRA	Apr 2025
<ul style="list-style-type: none">Built a BART-large-CNN + LoRA pipeline to generate perspective-specific summaries (Information, Suggestion, Experience, Question, Cause) from medical Q&A data.Designed a dual-head classifier and improved generalisation by selectively fine-tuning on hard examples with an initial BERTScore < 0.84.Outperformed a FlanT5 baseline by +3.24 BLEU and +0.0355 BERTScore (final: BLEU 5.61, BERTScore 0.8782).	
OptiWealth: Quantitative Portfolio Optimization Platform Spring Boot, Python, yfinance, React, PostgreSQL	Nov 2025
<ul style="list-style-type: none">Designed and implemented a distributed portfolio analytics system with Spring Boot backend orchestrating Python microservices, computing multi-portfolio metrics: returns, volatility, Sharpe ratio, VaR/CVaR, beta, max drawdown, and diversification.Implemented time-series forecasting and risk modelling using ARIMA (price trends), GARCH (volatility), and Monte Carlo simulations, enabling forward-looking scenario analysis.Developed portfolio optimization pipelines (efficient frontier simulation, max-Sharpe, min-volatility) with scheduled market analysis and AI-generated investment summaries.	
Speech-Driven AI Assistant with LLM Integration Python	Dec 2023
<ul style="list-style-type: none">Developed a speech-driven AI assistant integrating LLM-based response generation with real-time voice input.Integrated speech recognition and pyttsx3 for accurate voice input and natural responses, enabling a seamless user experience.	

EXTRACURRICULARS

- Coding Platforms:** Leetcode, Codeforces (Pupil- Max Rating: 1275)
- Hobbies:** Debate, Fitness, Badminton
- Volunteering Experience:** Volunteer at Seva Sankalp NGO