MANOGYA SINGH SURYANSH

ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech in Engineering Physics	Indian Institute of Technology Delhi	7.44
2023	CBSE	P.D. Model Public School	95%
2021	CBSE	Kendriya Vidyalaya Coimbatore	96.4%

INTERNSHIPS

Jump Trading X TinkerTanker Bootcamp | High Performance Chat Server & Trade Data Query Engine (May - June, 2025)
- Amongst 14 students selected from Top IITs for **Systems Engineering Training** by **TinkerTanker** and **Jump Trading**
- Collaborated in team to build a high-performance chat server and a trade data query engine with low-level optimisations
- Built elastic **load testing** and **CPU profiling** framework using **perf** and **Flamegraphs** to guide optimisations
- Using insights from CPU profile, **optimised client monitoring** system to increase concurrent client capacity by **300%**
- Tested several network protocols **(TCP, UDP, QUIC)**, implemented UDP for **30%** faster internal communication

SCHOLASTIC ACHIEVEMENTS

Zonal Champion in Mimamsa, a team based research oriented science and math competition by IISER Pune (2024)
JEE Advanced 2023 Scored **183/360** with All India Rank **2384** among 180,000+ JEE Main qualified students (2023)
NSEP/NSEA Awarded Merit Certificate (**Top 1%**) in the *National Standard Examinations in Physics and Astronomy* (2023)
INAO Amongst the **Top 44** nationally to qualify for the *Orientation Cum Selection Camp-Astronomy* at HBCSE (2022)
KVPY Achieved **All India Rank 186** in KVPY Aptitude Test SA by the Indian Institute of Science (2022)

PROJECTS

Multi-Agentic Research Engine | NextJS, FastAPI, Langchain, Agentic AI, Dynamic RAG | Inter IIT Tech (Oct-Dec 2024)
- Built a **Multi Agentic** Deep Research Engine for Knowledgebase Management with **Dynamic RAG** on multiple sources
- Led the development of the backend using **FastAPI** with **RESTful** architecture for a fully managed user flow and saved knowledgebases which evolve over time. Integrated data pipelines and tools with LLM Agents for Dynamic Agentic RAG

AI Résumé Analyser | BERT, RAG | ARIES x Eightfold.AI Hackathon INNOV8 (Winning Entry) (April 2024)
- Implemented sentence embedding and retrieval for highlighting parts of the resume related to a specified focus area
- Implemented context based question-answering for uploaded résumé using open source LLMs on HuggingFace

Order Book Matching Engine and Stock Market Simulator | Data Structures, APIs, Flask | Personal Project (Nov 2024)
- Built a stock exchange simulator with a **heap-based order book matching engine** supporting limit and market orders
- Created **APIs for trading** operations (place/cancel orders, view positions) and **administration** (stock creation, allocation)

Landing Page of DevClub | ReactJS, TailwindCSS, Modern Web Design | For DevClub IITD (January 2025)
- **Single Handedly Designed, Coded and Deployed** the current DevClub Landing Page devclub.in with a modern design
- Implemented modern web stack with **React 18, TypeScript, Three.js** graphics for dynamic and interactive content

Custom Agentic Framework | Python, Regex, Subprocesses, Tool Architecture | Personal Project (April 2025)
- Built a **custom Langchain-like** framework with an extensible tool system, parsed with regex and executed in subprocesses
- Implemented tools for **shell-commands, file manipulation and a Python REPL** to create a **complete computer use** agent

TECHNICAL SKILLS

Programming & Languages C++, Python, Java, Shell (zsh/Bash), SQL, JavaScript, TypeScript, Git, GDB
Web Development & Databases FastAPI, NodeJS, ReactJS, NextJS, Flask, REST APIs, SQLite, MongoDB, PostgreSQL
Systems & DevOps Linux, AWS (EC2, S3), Docker, CI/CD, Microservices, Performance Optimization, Concurrency Programming

EXTRA CURRICULAR ACTIVITIES

Winner, INNOV8 Hackathon: Placed first in ARIES X **eightfold.ai** AI Recruitment Hackathon during Tryst 2024 (2024)
Winner, Placed first among 50+ Teams from IIT Delhi in Key of Krypton Cybersecurity CTF by CRAC (2024)
Top 5% Global Rank (**51**/1k+) in UIUCTF (Cybersec) (2024) | **Top 6%** (Rank **8**/134) in HackIITK CTF (Cybersec) (2024)
2nd Runner Up, Speedathon by Devclub x AI Square, a fast paced hackathon during Tryst 2024 (2024)
2nd Runner Up for the Quizzing Cup at the 7th **Inter IIT Cultural Meet** at IIT Patna (2024)
Represented IIT Delhi in the GenAI Problem Statement at the 13th **Inter IIT Tech Meet** at IIT Bombay (2024)

POSITIONS OF RESPONSIBILITY

Technical Secretary, Karakoram House IITD   *Will lead the hostel in upcoming Tech GC* (May 2025-Present)
Coordinator, DevClub   *Selected to a team of 8 Coordinators managing 500+ active members* (May 2025-Present)
Technical Coordinator, Physics and Astronomy Club, CAIC IITD (May 2025-Present)
Physics Society Executive, CAIC IITD   (2024-25) | **Quizzing Club Representative, BRCA IITD**   (2024-25)

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