

Sahaj Gaur

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EDUCATION

2023 - Present	B.Tech (Computer Science Engineering) at VIT University, Vellore	(CGPA: 8.64)
2021-2022	Class 12th CBSE	(85.2%)
2019-2020	Class 10th CBSE	(91.8%)

SKILLS

Languages	C++, Python, Java, C, JavaScript
Numerical Computing	NumPy, Pandas, scikit-learn, TensorFlow, Matplotlib
Data Engineering	PostgreSQL, MongoDB, Redis
Trading Libraries	Zipline, Backtrader, TA-Lib
Backend	Node.js, Django, FastAPI
Frontend	React.js, Next.js, HTML/CSS, Tailwind CSS
Infrastructure	Docker, AWS (EC2, S3), Git, GitHub

WORK EXPERIENCE

Defence Research and Development Organisation (DRDO) – Summer Intern May 2025 – June 2025

- Research at SSPL, Delhi, on precision instrumentation and secure defense systems.
- Developed AI-enhanced atomic timekeeping algorithms; achieved 71% lower Allan deviation compared to KPW in a 30-day GPS-synced simulation.
- Contributed to system analysis and technical documentation with cross-functional teams.

FitMapp – SDE Intern Nov 2024 – Feb 2025

- Led a backend team of 3 in designing robust system architecture that improved development efficiency and accelerated feature delivery.
- Built scalable backend services and integrated third-party APIs to expand core functionality.

PROJECTS

Real-Time Multi-Exchange Latency-Arbitrage Simulator

- Engineered a simulation platform in Python processing 500,000+ order book updates/sec across multiple exchanges, enabling realistic latency and execution modeling.
- Modeled price dislocations and probabilistic fills to evaluate arbitrage strategies over 10,000+ simulated trades, improving backtest fidelity.
- Developed an interactive dashboard to visualize real-time order book dynamics and strategy performance, enhancing analysis efficiency by 40

GAN-Powered Option Valuation Engine

- Designed a hybrid GAN-CNN architecture that improved equity option prediction accuracy by 18% over baseline models.
- Generated 50,000+ synthetic samples to augment sparse market data and boost model generalization.
- Delivered a real-time valuation tool supporting high-volatility trading scenarios with enhanced reliability.

LEADERSHIP EXPERIENCE

The AI and ML Club (TAM), VIT Vellore (Web Development Head) Aug 2024 – Present

- Led system design and development of the club website, managing a team of 10 and supporting 5,000+ users during **Gravitas 2024**.
- Drove initiatives that increased club participation by over 400% within one year.
- Delivered technical workshops, including an 8-hour AI session at **Data Alchemy 2.0**.