

# Sahaj Gaur

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## EDUCATION

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

## SKILLS

<b>Languages</b>	C++, Python, Java, C, JavaScript
<b>Numerical Computing</b>	NumPy, Pandas, scikit-learn, TensorFlow, Matplotlib
<b>Data Engineering</b>	PostgreSQL, MongoDB, Redis
<b>Backend</b>	Node.js, Django, FastAPI
<b>Frontend</b>	React.js, Next.js, HTML/CSS, Tailwind CSS
<b>Infrastructure</b>	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

### 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.

### Movie Recommendation System

- Built a web app that suggests similar movies using NLP-driven content-based filtering techniques.
- Integrated React frontend with a FastAPI backend for smooth user interaction and scalable performance.
- Leveraged metadata parsing and vector similarity to generate personalized recommendations in real time.

### Cause List Simplifier

- Built a web-based tool that parses and simplifies court cause lists using automated scraping and filtering.
- Designed for legal professionals to quickly access and search case listings by date, court, or party name.
- Currently used by practicing lawyers to streamline their daily workflow and reduce manual data lookup.

## 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**.