

Tanish Majumdar

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SUMMARY

Ambitious software engineer with expertise in **web development, blockchain, machine learning, and quantitative finance**. Skilled in **React, React Native, Node.js, Postgres, Firebase, Solidity, Forge, AWS, and Docker**. I've built a **social media platform** for college students and a **carbon credit marketplace** on blockchain. I also developed a **momentum-based trading strategy** using **Backtrader** with **FIP, skewness, and volatility targeting**. Currently, I'm building a **RAG-based document assistant** that lets users upload and store files and query them through a chatbot using advanced retrieval techniques.

EDUCATION

Jadavpur University <i>Bachelor of Engineering in Information Technology CGPA: 9.14</i>	Kolkata, India 2023 – 2027
DPS Sushant Lok <i>CBSE – Class XII Score: 96.2%</i>	Gurgaon, India 2023

EXPERIENCE

Polycab India Ltd. SDE Intern	Dec 2024 – Feb 2025 Mumbai, India
<ul style="list-style-type: none">Developed an internal tool to automate employee management, improving data clarity by 30%Enhanced operational insights by 35% with interactive analytical graphs and detailed reportsIntegrated features for project and leave tracking, including a 4-week rolling planDesigned distinct access views for Admin and HR users, ensuring streamlined usability	

PROJECTS

Ecox 🔗 | *Blockchain, Smart Contracts, Web3*

- Minted and verified **20+ carbon credits** as **NFTs** via **smart contracts** on testnet
- Built **Chainlink**-powered auctions with live bidding via **WebSockets**, tested with **10+ mock bids**
- Integrated **Gemini sandbox** for simulated identity verification
- Deployed on testnet using **Hardhat** with gas-optimized contract architecture

AskVault 🔗 | *FastAPI, LangChain, Qdrant, RAG*

- Full-stack RAG app using **CrewAI, LangChain**, and **FastAPI** for contextual QA
- Parsed multi-format files via **unstructured**; tested on **15+ documents**
- Enabled semantic search with **Qdrant + MiniLM**; served **100+ queries**
- Integrated **LangChain tools** for hybrid retrieval with **agent workflows**

Quant Trading Strategy 🔗 | *Python, Backtrader, Quant*

- Built long-only strategy with **multi-factor ranking** and **risk-parity allocation**
- Used **TSMOM, Cross-Sectional Momentum, FIP, Skewness** for filtering
- Allocated capital using **Inverse Volatility Weighting**; **+89% backtest return (2023–24)**
- Generated Excel reports with **drawdown, volatility**, and trade logs for analysis

Campus Chatter 🔗 | *PERN Stack, Firebase, WebSockets*

- Real-time chat app with **Firebase auth** and college email verification (**10 demo users**)
- Live chat via **WebSockets**; tested **100+ messages/hour**
- Implemented fuzzy search with **Fuse.js** and **React Autocomplete**

SKILLS

Languages: C/C++, TypeScript, JavaScript, Python, SQL, Solidity, Rust
Technologies: React, LangChain, CrewAI, Unstructured, NextJs, FastAPI, MongoDB, Postgres, Prisma, TensorFlow, SciKit, ExpressJs, NodeJs, Firebase, Docker, AWS, Redis, Solidity
Achievements: Codeforces Rating 1457; ranked **Global 2199 / 47,000** in Codeforces Round 1005 (Div 2);
Finalist at IIT Kharagpur and IIT Delhi Blockchain Hackathons (2025)