



EDUCATION

| Year | Degree/Exam | Institute | CGPA/Marks |
|------|-------------------|----------------------|------------|
| 2027 | B.TECH | IIT Kharagpur | 8.63 / 10 |
| 2023 | CBSE XII (AISSCE) | Campus Public School | 90.2% |
| 2021 | CBSE X (AISSE) | DAV Public School | 88.8% |

INTERNSHIPS

Full Stack Developer Intern | wiZe | Incubated under IIM Bangalore (<https://wize.co.in/>) **[Sep '24 - Nov '24]**
(Objective: Built an AI-powered platform to provide smart, personalised career help for **50 lakh+** engineering students across diverse domains)
• Built a frontend using **Next.js** and **SSR** to improve load speed by **24%**, reduced latency by **120ms**, integrating **MongoDB** for data retrieval
• Reduced re-renders by **15%** by optimizing multi-step state management logic and integrating **15+ RESTful APIs** with robust flow control
• Engaged **7300+** users during alpha launch of an AI Resume Analyzer feature and evaluating **12+ resume** attributes across **5+ career** tracks

Research Intern | Deakin University **[May '25 - Present]**
(Objective: Creating a quantum classifier using amplitude encoding for more accurate classification on real datasets via quantum hardware)
• Achieved **100% accuracy** on Iris subsets (classes 1 & 2, 1 & 3) using a **quantum interference circuit**, validating efficient quantum technique
• Built **75-gate circuits** with decomposed **Toffoli** and **SWAP** gates, enabling execution on **IBM's 5-qubit** device under strict gate constraints
• Improved accuracy on non-linear datasets (Iris 2 & 3, circles) by **7%** using **quantum feature maps**, **2-state encoding**, and **QML** techniques

COMPETITION/CONFERENCE

Gold | Inter IIT Tech Meet 13.0 | Dream 11 - Fantasy Points Prediction **[Nov '24 - Dec '24]**
(Objective: Built a GenAI-powered fantasy cricket platform to rank players and assign points using ensemble models and domain-rich features)
• Engineered **50+ features** on trends, contests, and team stats using CricSheet and ESPN data for format-wise modeling in T20, ODI and Test
• Designed ranking pipelines with **112.9 MAE**, **7.07 ACP** and **21 MAPE** in T20; processed **17000+** samples to model distribution and results
• Explored **10+ strategies** including Mixture of Experts, AutoML and tuning and deployed **3 XGBoost** models for optimal role-wise accuracy
• Built 5+ interactive GenAI features like **chatbots** and **summarizers**; integrated into a UI for team building, comparison, and model insights

Perplexity Hackathon (<https://cv-genie.onrender.com/>) **[May '25]**
(Objective: Built an AI-powered CV analysis platform offering real-time resume feedback and optimization via semantic and structural review)
• Built full-stack app with **Next.js**, **Framer Motion**, **Express**, **postgresql** and added **UI animations**, and auth, with **87% Lighthouse** score
• Engineered **15+ custom APIs** and **10+ preprocessing pipelines** for resume parsing, feature extraction, and structured PDF data handling
• Integrated **Perplexity's Sonar** model to generate **5+ CV metrics** with real-time chart visualizations and server-side JSON-based analytics

PROJECTS

DeepFake Detection Platform | Self-project (<https://scan-x.vercel.app>) **[Sep '24 - Oct '24]**
(Objective: Built a secure blockchain-based AI platform to detect AI-generated content, analyzing text, images, and video for **2000+ users**)
• Leveraged **React.js**, **Tailwind**, and **Three.js** to build a fast, interactive web app with onchain features via **Coinbase Wallet** and **Base Kit**
• Used **XceptionNet** for deepfake detection, achieving **0.96 F1**, **99.65% accuracy**, and **0.97 AUC**, outperforming **ResNet** and **EfficientNet**
• Utilized **DistilBERT** for AI-text detection (**98% accuracy**) and **Haar Cascade** for face detection (**25ms latency**, **100% frontal accuracy**)
• Deployed smart contracts using **Solidity** and **Hardhat** on the **Base Sepolia** testnet with **Pinata IPFS** for secure and decentralized storage

Financial Time-Series Forecasting with TradeGAN | Self-project **[Dec '24 - Jan '25]**
(Objective: Modeled directional returns on equities using a GAN-based probabilistic forecasting framework for investment decision optimization)
• Implemented **TradeGAN** with **PnL**, **MSE**, and Sharpe objectives, boosting Sharpe Ratio to **3.18** from **2.09**, enhancing risk-adjusted returns
• Enhanced return sign classification using PnL, Sharpe-aware loss, achieving **85%** directional accuracy, **2.88-fold** PnL gain over LSTM models
• Applied gradient **norm-based** weighting to balance loss terms, reducing **MSE by 64%**, improving volatility with **58%** lower STD in markets

AWARDS AND ACHIEVEMENTS

- Active competitive programmer on platforms like Codeforces (**Peak Rating: 1606**, handle: harsh21112005) and AtCoder (**Rating: 1418**)
- Won the Global Creative Prize in the **WalletConnect** Hackathon and ranked among the Top 3 overall finalist in the **ScrollHacks** Hackathon
- Won the Quadratic Prize pool in the Coinbase Hackathon (**Based India**) and cleared the intra-college round of the **Smart India Hackathon**
- Nationally ranked among the **top 2.7%** with an All India Rank (AIR) of **4944** out of 1.6 lakh+ competitive candidates in JEE Advanced 2023

SKILLS AND EXPERTISE

Skills: Competitive Programming | Algorithm and Data Structure | OOPS | Machine Learning | Deep Learning | MLOps | Web Development
Languages: C++ | C | Python | Javascript | TypeScript | Java | Solidity | Bash | YAML | Rust | Dockerfile Language | SQL | Markdown
Libraries/Frameworks: C++ STL | Langchain | Pytorch | Tensorflow | React.js | Next.js | Node.js | Express.js | ScikitLearn | HuggingFace
Tools/IDEs: Jupyter Notebooks | AWS | NeoVim | VS Code | Azure | Postman | Docker | GitHub | Vercel | Gradio | Render | Firebase | Git

COURSEWORK INFORMATION

Academic Courses: Programming and Data Structures | Probability and Statistics | Transform Calculus | Advanced Calculus | Linear Algebra
Numerical and Complex Analysis | Programming and Data Structures Lab | Engineering Graphics and Design Lab | Fluid Flow Lab | DIY Lab
MOOCs: Data Structure and Algorithm | Machine Learning Specialization | Deep Learning Specialization | Generative Adversarial Networks
Specialization | Mathematics for Machine Learning | Summer Of Quant from IIT KGP | Summer Analytics from IIT Guwahati | CP Camp

EXTRA CURRICULAR ACTIVITIES

Social and Cultural: **Gold** – Inter-IIT So-Cult Meet 6.0 (Street Play) | **Gold** – Spring Fest Street Play | **Silver** – Inter-IIT So-Cult Meet 6.0 (Short Film Making) | **Silver** – Open IIT Standup | **Bronze** – Open IIT Monologue | Member – Inter-IIT So-Cult Meet 7.0 (Street Play) | Acted in Fresher Productions of Pravah and Comedy Club | Acted in Films for the Film Society | Member – Rajendra Prasad Hall (GC Street Play)
Other: Associate Quant researcher at Quedy Club | Member - Kharagpur Blockchain Society, Pravah, Technology Comedy Club, Spark4AI