# AKASH KARMAKAR

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## Education

**Baruch College, Zicklin School of Business, MS in Finance** - New York — Aug 2024 – May 2026

- GPA: 3.6/4.0 , **Coursework:** Quantitative Investments, Econometrics, Machine Learning in Investment

**Jadavpur University, Bachelor of Engineering** — July 2018 – July 2022

- GPA: 3.5/4.0 , **Coursework:** Machine Learning, Mathematics 1 & 2, Numerical Methods

## Experience

**Quantitative Research Consultant**, WorldQuant, US — April 2025 – June 2025

- Designed and backtested over 130 trading signals for US markets, achieving exceptional performance metrics, including a portfolio Sharpe ratio of 3.2 and a RoMaD of 9.21 in backtesting.
- Optimized market-neutral portfolios and created alphas that generated annualized returns exceeding 22 percent while maintaining low drawdowns.

**Software Engineer**, Goprac – Bengaluru, India — June 2023 – April 2024

- Automated question upload process for interviews resulted in faster, safer, accurate uploads and cluster balancing which reduced the cost of labor by 30 percent and time by 20 percent.
- Collaborated with the product team and led the integration of AI-driven personalized feedback system on skills-based score parameters, optimizing assessment workflows and reducing friction by 40 percent removing manual review while directly improving efficiency for over 36,000 users.
- Engineered and implemented database procedures, functions, and API integrations to automate server-side operations, streamlining architecture, reducing processing and debugging time by 30 percent.

**Data Scientist Intern**, Celebal Technologies – Jaipur, India — July 2022 – Jan 2023

- Assessed advanced data mining techniques and conducted exploratory data analysis (EDA) on unstructured data, leading to significant insights for feature engineering.
- Analyzed and executed algorithms, K-Means Clustering, Regression to extract meaningful information from data.
- Designed prompts using Chain-of-Thought for Text2SQL, Multi-intent classification, medical report analysis and summarization tasks.

## Projects

**Portfolio Optimization and Efficient-Frontier Visualizer** — Github link

- Built a Python-based portfolio optimizer leveraging historical stock data to simulate 10,000 portfolios and visualize efficient-frontier analysis.Optimized asset allocation by maximizing Sharpe ratio using SLSQP method.

**EMA-RSI Trading Model** — Github link

- Implemented an algorithmic trading strategy using Python, combining Fast and Slow Exponential Moving Average (EMA) crossovers and Relative Strength Index (RSI) signals to generate automated buy and sell recommendations.

## Technical Skills

**Languages/Frameworks:** C , C++, Python , Java , Javascript , Node.js , React.js , SQL , PHP , Rust , Tensorflow

**Technologies:** Postman, Linux , NLP , AWS , MongoDb , SQL Server , XCode , Redis , Power BI , Excel , OpenAI

## Achievements

- Achieved US rank 3 and global rank 14 out of 76,867 in the IQC worldQuant 2025 (National 3rd place).
- Secured 3rd place in the Zicklin Graduate Entrepreneurship Competition 2025.
- Ranked globally 1056th in Google Kickstart 2021 coding competition round E.

## Certifications

- Options 101 , World Quant Gold , Forage (Quantitative Research) , Bloomberg Market Concepts , FRM (ongoing)