AKASH KARMAKAR

Brooklyn, NY | akash.karmakar@baruchmail.cuny.edu | 347-853-5872

linkedin.com/in/karmakarakash659 | github.com/karma659

Experience

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

- Designed and backtested over 150 trading signals for US, EMEA and APAC markets, achieving exceptional performance metrics, including a portfolio Sharpe ratio of 2.24 and a RoMaD of 9.21 in simulation.
- Optimized market-neutral portfolios and created alphas delivering annualized returns exceeding 15% with low drawdowns, validated through multi-regime analysis, parameter sensitivity tests and robustness checks to ensure stability and minimize overfitting.

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

- 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 removing manual review while directly improving efficiency for over 36,000 users.
- Automated question upload process for interviews resulted in faster, safer, accurate uploads by implementing auto-validation and cluster balancing which reduced the cost of labor and time.
- Engineered and implemented database procedures, functions, and API integrations to automate server-side operations, streamlining architecture, reducing processing and debugging time.

Data Scientist , Celebal Technologies – Jaipur, India   July 2022 – June 2023

- Designed prompts using Chain-of-Thought for Text2SQL, Multi-intent classification and medical report analysis.
- 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.

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

Projects

Dynamic Sector Rotation with Machine Learning   Github link

- Designed and implemented a LightGBM-based sector rotation strategy integrating PCA and K-Means clustering for market regime detection and ETF allocation optimization, achieving a Sharpe ratio of 1.12 in-sample. Conducted robust backtesting across 2014–2025 market regimes, outperforming the Pairs Portfolio benchmark in out-of-sample returns (8.76% vs. 7.35%) while controlling drawdowns.

Portfolio Optimization and Efficient-Frontier Visualizer   Github link

- Portfolio optimizer leveraging historical stock data to simulate 10,000 portfolios and visualize efficient frontier.

Mern Ecommerce Website (Node.js , React.js , Redux , MongoDB)   Website link

- Full-stack e-commerce website with JWT authentication, search functionality and a user-friendly cart system.

Education

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

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

Jadavpur University, Bachelor in Engineering - Kolkata   July 2018 – July 2022

- GPA: 3.7/4.0 , **Coursework:** Machine Learning, Mathematics 1 & 11, Numerical Methods