

# Ishan Kakodkar

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## EDUCATION

### Stevens Institute of Technology

Master of Science in Financial Engineering

Relevant Coursework: Advanced Derivatives, Stochastic Calculus, Portfolio Theory, Pricing and Hedging

Hoboken, NJ

**Aug 2024 - Present**

### National Institute of Technology, Goa

Bachelor of Technology in Electrical and Electronics Engineering

Relevant Coursework: Data Structures and Algorithms, Economics, Numerical Methods, Optimization Techniques

Ponda-Goa, India

**Aug 2018 - June 2022**

## WORK EXPERIENCE

### Stevens Institute of Technology

Graduate Student Assistant

- Assisted incoming students by making outreach calls and addressing program and campus inquiries.
- Supported the organizing team in managing operations for the SFS Cavalcade North America 2025 Conference.

Hoboken, NJ

**March 2025 - Present**

### IHUB-Data IIIT Hyderabad

Junior Research Fellow

- Engineered real-time data processing pipeline for multi-sensor integration (IMU/GPS) achieving 99.5% accuracy
- Designed blueprint for the Road Traffic Quality Index and implemented it using various road parameters

Sri City, India

**Oct 2023 - July 2024**

### WorldQuant Research (India) Private Limited

Brain Research Consultant

- Implemented and optimized Long-Short Market Neutral strategies across multiple timeframes and data classes
- Leveraged statistical arbitrage techniques and machine learning models to enhance investment strategies
- Developed 30+ profitable alpha strategies for global equity markets achieving Sharpe ratios greater than 2.0

Remote

**Feb 2023 - July 2024**

### Jio Platforms Limited

Graduate Engineer Trainee

- Developed high-performance Python APIs for ad analytics, reducing query latency by 10%
- Maintained and optimized in-memory database Redis for handling user advertising preference data
- Developed ARIMA-based forecasting model for ad impressions data with 85% prediction accuracy

Bengaluru, India

**June 2022 - Feb 2023**

## PROJECTS

### Automated Risk & Performance Analysis via RAG on SEC Filings

- Implementing a RAG system using Mistral 7B to extract risk factors and financial metrics from Apple's SEC filings.
- Designed and applied the F1-score metric to benchmark model accuracy against a manually annotated dataset.

**May 2025 - Present**

### Data Analysis Based Quantification of Road Quality Index (RQI) for Two-Wheelers

- Built functioning multi-sensor box prototype and implemented edge computing techniques on it for RQI measurement
- Developed end-to-end framework for measuring and quantifying road quality parameters using multi-modal datasets.
- Project was funded by IHUB-Data IIIT Hyderabad and publication is in pipeline

**Oct 2023 - July 2024**

### Deep Q-Learning Based Agent for Equity Trading

- Implemented Double Deep Q-Network achieving 15% annualized return in backtesting (2-year period)
- Optimized reward function design to balance risk-adjusted returns and transaction costs

**Oct 2023 - Dec 2023**

### American Sign Language Detection and Study of Convolutional Neural Networks

- Achieved ASL frames detection with 92 percent accuracy using three layer CNN and batch normalization.

**Jan 2022 - June 2022**

## SKILLS

**Technical Skills:** Python, C++, R, SQL, MATLAB, C, TensorFlow, Transformers Library, Pandas, Sklearn, SciPy, Excel

**Teaching:** Teaching Assistant for Database Management Systems, Academic Mentor for Mathematics for DS I & II

## AWARDS & ACHIEVEMENTS

- Financial Risk Manager (FRM) Exam Part 1 Passed
- Global Alphathon WorldQuant 2022 Worldwide Team Rank 157
- WorldQuant Challenge Gold Level
- Merck India Charitable Trust Scholarship Award

## PUBLICATIONS

- S. Rallabandi, **I. G. S. Kakodkar** and O. Avuku, "Ethical Use of AI in Social Media," *Proceedings of 2023 International Workshop on Intelligent Systems (IWIS)*, Ulsan, Republic of Korea, 2023, 1-9