

Rishit Belani

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EDUCATION

Columbia University

New York, NY

MS in Data Science, GPA: 3.6/4

Aug 2025 - Dec 2026

AI Applications in Finance, Finance and Structuring, Statistical Inference, Machine Learning, Applied Deep Learning

Bharati Vidyapeeth University

Pune, IN

Bachelor of Technology, Computer Engineering, CGPA: 9.2/10

Jul 2019 - Jul 2023

Machine Learning, Descriptive and Inferential Statistics, Big Data Analytics, Systems, Data Structures and Algorithms

WORK EXPERIENCE

FlexTrade Systems

New York, NY

QUANTITATIVE RESEARCH INTERN

Jun 2026 - Present

- Replaced the incumbent XGBoost model in FlexTrade's sell-side TCA product with an Almgren-Chriss-based pre-trade and post-trade cost model spanning intraday to multi-day execution horizons delivering 80% faster inference at comparable accuracy while forecasting implementation shortfall from order size, liquidity, volatility, spread, and horizon.
- Improved cost-forecast WinR² by 60% on high-cost tail executions by developing tail-lift model variants, where standard impact models systematically underestimate, validated via cross-validation with strictly pre-trade inputs eliminating post-trade leakage.
- Building a RAG pipeline to automate compliance and onboarding contract review across 30,000+ pages of buy-side client documentation, reducing manual legal review workload.
- Mentored undergraduate interns on order-fill probability modeling, guiding research design and validation methodology.

Ask2.ai

New York, NY

QUANTITATIVE RESEARCHER

Jan 2026 - June 2026

- Reduced missed defaults by 21% at fixed precision on non-collateralized loan portfolios (banks and insurers) by building a joint hierarchical PD/LGD/EAD framework ensembling LSTM, XGBoost, MLP, and Transformers to capture the costlier errors.
- Prevented regime-driven model decay by engineering a dual feature-selection pipeline mutual information scoring for predictive power, a concept drift index to flag regime-unstable features removing 96% of candidate features that degraded out-of-cycle.
- Cut data errors 28% by building automated validation and stress-testing tooling for portfolio and risk teams decisions.

Siemens

Pune, IN

SOFTWARE DEVELOPMENT ENGINEER

Jul 2023 - May 2025

- Developed production time-series forecasting models (LSTM, ARIMA and variants) for building energy demand, reducing forecast error by 30% vs. baseline and cutting data-processing time 50% via automated ETL pipelines serving stakeholders.
- Partnered with Microsoft to integrate Siemens DesigoCC into OpenAI's North American data center infrastructure, collaborating on data architecture, storage, and AI compliance frameworks.

PROJECTS

Cross-Sectional Equity Alpha Research - Deep Learning & Graph Neural Networks

Apr 2026 - May 2026

- Researched cross-sectional return prediction across 120 US large caps, benchmarking MLP, LSTM, and graph neural network (GIN) architectures with sector + correlation-kNN graphs achieving out-of-sample rank IC of 0.02 and a 1.34 Sharpe net of transaction costs (5bps/side) under walk-forward yearly retraining. Adopted as reference material for Algorithmic Trading course.
- Built the evaluation framework emphasizing honest performance measurement: transaction-cost sensitivity analysis (2–10bps), statistically corrected Sharpe estimates for overlapping returns, and out-of-sample validation.

Cross-Asset ML Trading and Signal Generation System

Nov 2025 - Dec 2025

- Built an end-to-end multi-asset trading platform (FX, equities, commodities, crypto) with live price feeds and walk-forward backtesting including transaction-cost and slippage modeling achieving a 1.55 out-of-sample Sharpe.
- Developed an ML signal module using volatility, and sentiment features with SHAP explainability, cutting noise by 30%.

POSITION OF RESPONSIBILITY & AWARDS

Columbia University - Algorithmic Trading, Applied Data Science, Databases, Modern Data Structures

New York, NY

HEAD - TEACHING ASSISTANT

Sep 2025 - Present

- Created problem sets and led instruction on backtesting, execution strategy construction, and market microstructure for a graduate-level Algorithmic Trading and Applied Data Science course, supporting 100+ students across a 5-TA team.
- Managed grading workflows and mentored junior TAs, enhancing teaching consistency across 100+ students.

First Place, AI Adoption Strategy Case Competition

Columbia University, NY

Constructed a 24-month, multi-million dollar AI roadmap and ROI model for a B2C e-commerce client

Apr 2026

SKILLS

Python, SQL, C++, C#, MATLAB, Machine Learning, Deep Learning, Data Structures and Algorithms, NLP, Reinforcement Learning, LLMs, Retrieval-Augmented Generation, Time Series Analysis, Econometrics, Feature Engineering, R, Model Validation, Stress Testing, Scenario Analysis, PDEs, Hadoop, Factor Modeling, PnL Attribution, Valuation Strategies, Market Making, Options Pricing, Stochastic Calculus, Concept Drift Detection, Portfolio Optimization, Probability of Default (PD), Loss Given Default (LGD), Exposure at Default, Credit Default Swaps, Fixed Income Analytics, Financial Engineering, Market Microstructure, Transaction Cost Analysis, Derivatives Pricing, ETL Pipelines, MLOps, Docker, AWS, Azure Databricks, Tableau, Excel