Diganta Bhattacharya

Mumbai, India — officialbhattacharya@gmail.com — 838895477 — LinkedIn — Portfolio

EDUCATION

M.Sc. Statistics (Distinction)
2020-2022

Indian Statistical Institute, 82.8%
- *Major in Probability*
- *Minor in Quant Finance*

B.Sc. Statistics (Honors)
2017-2020

Indian Statistical Institute, 71.2%
- *Fest Sponsorship Committee*
- *ISI Football Team*
- *Trek Committee*
- *Nemesis & MMQ Committee*
- *Mess Committee*

TECH STACK

- **Languages:** *Python, R ,kdb/Q*
- **MLOps:** *FastAPI, S3, Lambda*
- **BigData:** *Athena, Redshift*
- **Libraries:** *TensorFlow, Keras*
- **DevOps:** *Docker, Git, AWS*
- **AI:** *Cursor, ClickHouse*

ACHIEVEMENTS

- *3× RMO Qualifier (2014-16)*
- *KVPY Scholar (2016)*
- *JBNSTS Scholar (2017)*
- *Top Quartile (Simon Marais 2018)*
- *Top 27 Asia-Pacific (Simon Marais 2019)*
- *RC Bose Intern (Microsoft India 2020-2021)*
- *PPO Morgan Stanley (2022)*
- *FRM Level 1 (2025)*

EXPERIENCE

Morgan Stanley — Quant Strategist — 2022–Present
- Developer @ ResiDash analytics (Python/Dash) for WholeLoan Desk.
- Developer @ GlendA analytics (x42/react) for Private Side SPG.
- Maintainer of MSA-Ranker and HPI-Forecasts for SecuredLending Desk.
- Maintainer of In-House Repeat Sales Transaction Index for USA Homes.

Morgan Stanley — Summer Associate — 2021–2022
- Developed a ANN model as an AVM for USA Home Prices and improved on the existent linear model.

Microsoft Research — Cryptography Intern — 2020–2021
- Created & Implemented O(n^2) algorithm for Hidden Subgroups Problem
- Built Zero Knowledge Authentication-proof prototype (Python)

PROJECTS

Non-QM Delinquency Analytics — Morgan Stanley — 2023
- Developed survival analysis model for non-qualified mortgage portfolios using Cox PH regression, improving 90-day delinquency prediction AUC by 0.15 vs. legacy models

TradeDash for Indian Stock Market — Personal — 2025
- Real-time trading analytics platform with ML-driven analytics, integrated with yahoo finance API. GitHub

Repeat-Sales Transaction Index — Morgan Stanley — 2024
- Engineered automated index builder for 25M+ property transactions using Case-Shiller methodology (Python/Rust), reducing rebalancing latency from 6h to 47min

Trade Blotter for Trading Desk — Morgan Stanley — 2024
- Created low-latency blotter system (KDB) processing 25k+ trades/sec with Bloomberg TOMS integration, reducing reconciliation errors by 72%

Rates Using Transition Models — Morgan Stanley — 2023
- Designed Markov chain-based rate transition framework for MBS prepayment modeling, improving risk assessment accuracy by 33% vs. LIBOR transition

MSA Ranker on HPI Projections — Morgan Stanley — 2023
- Built metro-area ranking system using ARIMA/XGBoost hybrid model, driving allocation decisions in RMBS/CMBS portfolio.