Haris Rasul

Jersey City, New Jersey

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PROGRAMMING

Python | C | Pandas | NumPy | SQL | Node.js | MATLAB | MongoDB | Postman | Neural Networks and Machine Learning | Data Science and Reinforcement Learning | Data Structures and Algorithms | Space and Time Complexity Analysis | Object-Oriented Programming | Graph Theory | PyGame | ARM-7 Assembly | JavaScript | Java | Hadoop | Cloudera Impala | HDFS Architecture | Apache Spark | Apache Oozie | HiveQL | Threads | PySpark | Raspberry Pi | OS | kdb+ | Q

DESIGN THINKING

Design Thinking for Requirements | Framing and Modelling | Stakeholder Analysis | Optimization | Simulation | Objective Value Functions | Decision Tree Analysis | JIRA | MS Office | Tableau | Linear Programming | Markov Chains

BUSINESS AND FINANCE

Corporate Finance | Accounting | Operations Analytics | Capital Markets | Digital and Marketing Analytics | Startup Valuation | Wealth Management | Algorithmic Trading | Transaction Cost Analysis | Institutional Equity Trading

EDUCATION

BASc, Engineering Science – Specialization in Machine Intelligence
University of Toronto, Toronto, Canada — Expected Graduation Date: April 2024

- Top ranked engineering program in Canada
- Placed in Engineering Faculty Dean's List 2020,2021,2022
- Received University of Toronto Engineering Undergraduate Entrance Scholarship

ADDITIONAL EDUCATION/CERTIFICATIONS/TRAINING/RELEVANT COURSEWORK

- **The Wharton School**, Introduction to Corporate Finance; Financial Accounting; Operations Analytics
- **Yale University**, Financial Markets
- **Duke University**, Startup Valuation Methods
- **NYU Tandon School of Engineering**, Machine Learning in Finance
- **University of Illinois**, Digital Analytics for Marketing Professionals: Marketing Analytics in Theory
- **deeplearning.ai**, Improving Deep Neural Networks: Hyper Parameter-Tuning-Regularization-Optimization

EXPERIENCE

RBC Capital Markets, Global Electronic Trading — Jan 2022 – Aug 2023
Quantitative Trading Analyst, Equity Sales and Trading — Toronto, ON

- Developed VWAP, Liquidity Seeking, and Dark algo enhancements and analytics using kdb+ and Q for the largest buy-side clients in US and CA
- Led development of AI explainability analytics to clients utilizing AI Reinforcement Learning Trading algos and facilitated the global launch of new AI Arrival Price algos
- Conducted US Dark Pool Liquidity studies to enhance Smart Order Routing and trade signals
- Leveraged Python and kdb+ to produce Transaction Cost Analyses, Post-Trade Market Impact studies to improve trading strategies of the largest institutional clients in US and CA
- Researched EU Market Close-Auction volume trends for back-testing EU AI strategies
- Automated basket-trade reports to provide real-time trading analytics to US and CA sales trading teams

Toronto-Dominion Bank, Wealth Management — May – Aug 2021
Data Science and Advanced Analytics Intern — Toronto, ON

- Used Python and data science libraries to structure data used in Natural Language Process modelling and wealth chatbot applications
- Developed quantitative reports, insights, and dashboards to support clients and financial advisors in Private Wealth Management to build and understand correlations using Python, Hadoop, Spark, and Tableau

University of Toronto, Rotman School of Management: Financial Innovation Lab — Feb 2023 – Current
Generative AI Research in Option Pricing and Deep RL Hedging — Toronto, ON

- Funded research supervised by Professor John C. Hull, developing risk management tools for evolving implied volatility surfaces using Variational Auto-Encoders and option price models like SABR on 30-day contracts

Professional Association

- CFA Level 1 candidate, CFA Institute, USA