Joel Dsouza

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EDUCATION

MEng in Financial Engineering | Aug 2021 - Dec 2022 **|** GPA: 3.99/4.00
Cornell University | Ithaca, NY
MS in Financial Engineering | Jan 2020 – Nov 2021 **|** Cumulative Average Score: 94%
WorldQuant University **|** New Orleans, LA
BTech in Computer Engineering | GPA: 8.14/10.00
College of Engineering Pune**,** Maharashtra**,** India
Relevant Coursework: Financial Markets, Econometrics, Computational Finance, Machine Learning in Finance, Portfolio Theory and Asset Pricing, Financial Engineering with Stochastic Calculus, Monte Carlo Simulation, Learning with Big Data

SKILLS

Python, C#, Java, C, C++, .Net Framework, SQL, FIX Protocol

EXPERIENCE

Software Developer | FinIQ Consulting India Pvt Ltd., Pune, India | Jul 2019 - Jul 2021
- Developed a new Order Management System (OMS) using .Net Framework and Java for order execution, order amendment, and post-trade actions for 5 Notes and 3 OTC products
- Onboarded 3 Investment Banks on OMS for orders of 8 products from 10+ Private Banks in Q1-2021
- Generated tools for backtesting and predictive analysis of path-dependent structured products
- Configured email pricing system for quotes, which reduced the client's work of scanning through emails by 90%; and extended functionality for use in parsing mails for order execution in OMS
- Developed modules for FinIQ's EQ Connect platform which is the market leader in multi-issuer platform space for price discovery and placing order of equity-based structured products; transaction volume in 2020 ~ $50 billion

Summer Intern | FinIQ Consulting India Pvt Ltd., Pune, India | May 2018 - Jul 2018
- Created a Data Analytics application for equities' portfolio creation to suggest a list of optimal stocks to buy given a set of configurable parameters relating to the base stock. The application also allows for anchored/non-anchored and focused/diverse predictions with respect to the base stock provided

PROJECTS

Quant Developer | Oil Price Prediction | Oct 2021 - Dec 2021
- Employed linear and non-linear machine learning techniques using financial and economic data to predict crude oil prices and price movements
- Proposed a modified ensemble method that performed better than the ARIMA model used as benchmark by MSE of 0.39

Quant Developer | Sensitivity based Neural Network Explanations for Portfolio Optimizations | Aug 2021 - Oct 2021
- Compared traditional portfolio optimization techniques with neural network implementation (LSTM)
- Used Local Interpretable Model-Agnostic Explanations (LIME) to interpret the output of LSTM based on its inputs

Quant Developer | Option Pricing & Algo Trading Strategy | Oct 2020 - Nov 2020
- Implemented Value at Risk (VaR) and Credit Valuation Adjustment (CVA) in Python and used Monte-Carlo simulations to price options
- Constructed econometrics models (ARIMA & GARCH) combined with technical indicators (MA, MACD, Bollinger bands) to generate trading signals

LEADERSHIP EXPERIENCE

Web Development Head - MindSpark '17 | College of Engineering, Pune, India | Jan 2017 - Sep 2017
- Led a team of 5 to develop a website with an integrated online payment portal for MindSpark '17 - Technical Festival of College of Engineering Pune
- Liaised with other core team members to organize a 3-day festival with 50+ technical events and vocational skills workshop for underprivileged women

ACTIVITIES/INTERESTS

Soccer, Cricket, Chess, Badminton, Table Tennis