SIMAR OBEROI

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EDUCATION

Expected 12/24 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- ***Expected Coursework:*** object-oriented programming (Java), numerical methods in financial modeling, data-driven modeling, time series, Monte Carlo methods, Fama-French, Black Scholes

09/18 - 08/22 **UNIVERSITY OF WATERLOO** Waterloo, Canada
B.Math in Mathematical Finance & Statistics
- ***Coursework:*** ODE/PDE/SDE, measure theory, CAPM, DCF analysis, portfolio optimization, Ito's lemma, VaR, EVT, stochastic processes, Markov chains, GLMs, time series analysis
- ***Honors:*** Graduated with Distinction, President's Scholarship

EXPERIENCE

01/20 - 03/20 **TYNOR ORTHOTICS PVT LTD** Chandigarh, India
(Largest Indian orthotic manufacturer)
Summer Intern, Finance and Accounting
- Contributed to 2x faster production speed by assessing and performing weekly checks on inventories and reporting machinery and raw material requirements to respective managers
- Collaborated with tax valuation and accounting teams to streamline flow of information by entering 100+ supplier invoices every day as first step in constructing income statement

PROJECTS

04/23 - 07/23 **BARUCH COLLEGE, CUNY** New York, NY
Options Pricing Course (C++)
- Applied OOP techniques in conjunction with C++ Boost and STL libraries to construct well-designed class structure for pricing European and American perpetual options
- Incorporated methods to calculate prices and Greeks for 1K+ European options with different parameter values simultaneously
- Used exact pricing methods (e.g., Black Scholes and Monte Carlo) as well as Explicit Euler and other finite difference methods

01/22 - 04/22 **UNIVERSITY OF WATERLOO** Waterloo, Canada
Trading Simulation and Analysis (Capital IQ, Excel)
- Simulated $100K portfolio over 4-month period, achieving annualized return of 21.9%
- Executed value based trading strategy that factored in market capitalization, return on capital and earnings yield; allocated 90% of funds to equity and 10% to fixed income

01/22 - 04/22 **Equity Research and DCF Analysis for MNST (Capital IQ, Excel)** Waterloo, Canada
- Conducted comprehensive equity research for Monster Beverages Corp. (MNST) stock, including industry analysis and competitive positioning to evaluate investment risks
- Built DCF model projecting cash flow for next 5 years; estimated terminal value and WACC
- Performed sensitivity analysis as well as evaluated comparables; arrived at buy rating

01/21 - 04/21 **Monte Carlo Methods and Gamma Hedging (Python)** Waterloo, Canada
- Implemented Monte Carlo simulations based on stochastic differential equation model to price multiple options using 250K+ paths
- Constructed gamma hedged portfolio by short selling options, buying shares of underlying securities, and investing in risk-free asset (i.e., cash) by rebalancing 10K times

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, C++, R, MATLAB
Languages: English (fluent), Hindi (native), Punjabi (fluent)
Certification: C++ Programming for Financial Engineering (Baruch College, CUNY)