Celine Phuong Pham

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Education

Duke University, Durham, NC   *December 2024*

Master of Engineering, Financial Technology | **Scholarship**: Pratt School of Engineering Merit Scholarship

Augustana College, Rock Island, IL   *May 2023*

Bachelor of Art in Finance, Double Major in Accounting, minor in Data Analytics. | **Scholarship**: International Founder Merit Scholarship.

Research & Projects

Exotic Options Pricing Model with Numerical Method

• Designed a Python-based solution for pricing complex exotic options, implementing Crank-Nicolson PDE solvers with time steps and space steps, achieving precise valuation of Asian, Barrier, and Asian-Barrier spread options. Integrated back testing with historical simulation and delta hedging, ensuring minimal error against theoretical benchmarks.

Stochastic Convertible Bond Pricing with Option Payoffs and Default Risk Modeling

• Constructed a convertible bond pricing model using binomial tree and finite difference methods, incorporating Wiener jump processes for default events and custom payoffs with dynamic strike price adjustments for American-style put/call options and coupon payments; implemented comprehensive unit tests to ensure model accuracy.

Efficient Frontier in C++

• Developed a portfolio optimization program using the efficient frontier concept, employing the Eigen Package to calculate optimal asset allocations for a range of expected returns and implemented a constraint against short sales and systematically addressed negative weights for enhanced portfolio stability.

Work Experiences

Research Assistant   *June – August 2024*

Duke University Pratt School of Engineering, Durham, NC

• Utilized data framework to manage and analyze datasets, created interactive dashboards to enhance data visibility, automated data processing and developed comprehensive reports to track key performance metrics and placement rates.

Student Consultant   *January – May 2024*

Very Good Ventures LLC, New York, NY

• Performed vertical and horizontal market research in the Flutter app development sector, uncovered insights to guide strategic initiatives and crafted go-to-market plans for positioning Flutter applications for maximum market impact and growth in Healthcare, FinTech and Media.

Financial Planning and Analysis Intern   *June – August 2021*

Hyatt Hotel Corporation, Hanoi, Vietnam

• Managed and reconciled daily financial transactions of 500+ clients, including accounts receivable and accounts payable, ensuring accuracy and compliance with company's policies. Facilitated the annual budgeting, supporting data collection, analysis and enhancing data accuracy for the strategic allocation process of $4 million expansion and development plan.

Awards and Competitions

Finalist, CFA Research Competition 2023   *September 2022 – March 2023*

CFA Society Chicago, Chicago, Illinois

• Conducted comprehensive equity analysis, including in-depth financial statements examination, industry trend analysis, financial modeling techniques, such as DCF, relative valuation, sensitivity analysis, and Monte Carlo simulation, to formulate a 12-month target price and investment recommendation for SCS. Presented findings to a panel of industry experts from Northern Trust and William Blair, and executives from Steelcase Inc., successfully ranked top 3 in presentation and top 5 in report.

Technical Skills

Programming skills: Python, C/C++, MATLAB, R, SQL, JavaScript, HTML, CSS.

Data Analysis and Visualization: PowerBI, Tableau. | Microsoft Office