JINGHAO CHEN

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SKILLS AND CREDENTIALS

- Programming: R, Python, Javascript and C++
- Courses: PhD level Stochastic Calculus, Stochastic Jump Processes, Machine Learning and Deep Learning in TensorFlow, Investment Management with Python and Machine Learning
- Passed Actuarial SOA Exam P, Exam FM, Exam MFE, Exam C
- Portfolio Management with Python and Machine Learning

EDUCATION

Boston University, Questrom School of Business — Boston, MA
M.S. Mathematical Finance — December 2018

- Coursework: Econometrics, Programming, Stochastic Methods of Asset Pricing, Computational Methods in Math Finance, Fixed Income Pricing, Exotic Derivative Pricing, Credit Risk, Optimal Control, Portfolio Theory

City College of New York — New York, NY
B.S. Applied Mathematics — February 2016

- Coursework: Numerical Analysis, Differential Equations, Linear and Integer Programming, Multivariable Calculus, Probability & Statistics, ODE, Linear Algebra

PROJECTS

Trading Bot — Jul 2021 - present

- Personal trading bot via QuantConnect

Chooser Option Pricing: Heston Model with Jump Diffusion Process, Boston University — May 2018

- Developed a model that integrates a jump-diffusion process with the Heston model
- Priced chooser options with real data that is replicated by European call and put options

Leading Indicator on HPI New York, Coast Capital Savings — August 2018

- Implemented machine learning method to regress on HPI within New York City area
- Used lasso method to choose the desired variables so that overfitting issue would not occur
- Employed polynomial fit and lag with the lowest MSE to find the best model
- Found out disposable income, federal fund rate and unemployment rate explained the best indicators

WORKING EXPERIENCE

Acadia Inc. — Boston, MA
Consultant — Dec 2020 - present

- Performed initial margin calculation for non-central clearing OTC derivatives based on ISDA SIMM
- Built adapters for clients via Python and Javascript
- Assisted Open Source Risk Engine (ORE) development
- Coordinated with various teams to improve the backtest and margin calculation more efficiently

Refinitiv — New York, NY
Derivative Pricing Evaluator — May 2019 – Dec 2020

- Performed quantitative analysis and pricing for a range of OTC Derivative Products such as Structure Notes, Equity Options, Total Return Swaps, Interest Rate Swaps and FX Options for hedge funds and investment banks
- Implement various analytical tools and packages, such as EIKON ADFIN functions, to obtain modeled pricing
- Interacted with clients by managing client price challenges and answering complex client queries, prepared reports that communicate our procedure and methodology to the clients concisely and effectively
- Provide high-quality customer service to explain Refinitiv's pricing methodologies and models, such as Black Scholes and Binomial Trees etc.
- Set up derivative pricers for different underlyings such as equity, index, FX and bond, via client's request
- Employed various techniques and models including portfolio correlation analysis, Monte Carlo simulation, PDE, BS and Dupire Models to ensure efficient, accurate and unbiased evaluations of large volumes complex derivatives
- Developed in-house derivative pricing system to price various types of Structured Notes, including Steepener notes, Worst Performance Equity Callable Notes etc.
- Used Python to improve automation processes and help with some ad-hoc tasks

Blue Diamond Advisory — New York, NY
Quantitative Research Analyst Intern — March 2016 – May 2016

- Developed and employed a discounted cash flow model to conduct a comparison of two different companies
- Compared the performance of Red Robin to competitors by analyzing financial statements and SEC filings, demonstrating that Red Robin is undervalued relative to competitors

ADDITIONAL INFORMATION

Languages: Cantonese, Mandarin and English