Xiaodong Yang, CQF, FRM

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EDUCATION

PhD Banking and Finance – UCD Michael Smurfit Graduate Business School   **Sep 2023 –**
- **Research Interests:** Option implied tail risk measure, derivatives pricing using numerical methods

MSc Quantitative Finance – UCD Michael Smurfit Graduate Business School   **Aug 2021 – Aug 2022**
- Graduation Result: **Second Class Honours, Grade 1 (2:1)**
- **Relevant Coursework:** Derivative, Financial Econometrics, Advanced Derivative Securities, Advanced Statistical Computing Methods for Finance, Numerical Methods, Portfolio & Risk Management
- **Projects:** Worked as a part of a group to devise an optimal stacked ensembling machine learning model to predict the SPY directions and price the exotic options using Monte Carlo Simulation, finite methods

BSc Accounting – Inner Mongolia University of Science & Technology   **Sep 2013 – Jul 2017**
- Graduation Result: **Second Class Honours, Grade 1 (2:1)**
- **Highlights: 88 Points** in Advanced Mathematics, **92 Points** in Economics, **85 Points** in Financial Management

PROJECTS

Deep Learning For Financial Time Series | **December 2022 – January 2023**
- Implemented feature engineering, selected significant features using Boruta, K-Means Clustering, and Self Organising Maps, after exploratory data analysis, three models are created, simple, stacked LSTM with more neurones and hidden layers, and LSTM with hyperparameter optimisation respectively.
- Evaluated the performance of various models by contracting Long-Only and Long-Short strategies.

Exotic Option Pricing Using Numerical Methods | **March 2022 – May 2022**
- Gained experience in solving partial differential equations, stochastic process modelling and numerical methods implementation, while engaged in a review of option pricing and option trading strategies, working extensively with Python.
- Implemented Euler-Maruyama scheme, Milstein scheme and closed-form solution for simulating the underlying price and employed Monte Carlo Simulation to price the Bermudan, Barrier, and Asian options.

Stacked Ensembling & Algorithmic Trading | **March 2022 – May 2022**
- Demonstrated ability to learn a new programming language (Julia) in a short period and a deep understanding of the predictability of machine learning for the financial market.
- Implemented advanced statistical methods and machine learning to model the financial historical data, and predicted the SPY trend direction. The stacked ensembling model cooperates with logistic regression, support vector machine, decision tree, etc.
- Evaluated the performance of various stacked models by constructing Long-Short and Proportional strategies.

EXPERIENCE

Financial Settlement Specialist - Aspiegel (HUAWEI, Ireland)   **April 2023 – August 2023**
- Be responsible for the payment and settlement of cloud services, games, music services, and AppGallery services to support Huawei's business development in Europe.

Research Assistant & Tutor - UCD Smurfit Business School   **January 2023 – May 2023**
- Assisted in my professor's research programme working on extracting and pre-processing option historical data from OptionMetrics by SQL, while engaged in a review of OptionMetrics.
- Gave the tutorial of "Numerical Methods for Finance" involving in option pricing using Monte Carlo, finite difference methods.

Financial Accountant - Shanshan Holding Co., Ltd   **July 2017 – January 2020**
- Promoted to a role in structure finance programmes with amounts more than € 200 million (Equity Pledge Financing).
- Managed 8 companies within the financial investment & fashion industries with revenues € 2.86 million per month.
- Produced financial statements and financial analysis reports monthly.

SKILLS, ACTIVITIES & INTERESTS

Technical Skills: Python, Julia (Programming), MATLAB, SQL, Bloomberg, OptionMetrics
Certifications: Certificate in Quantitative Finance (CQF), Financial Risk Manager (FRM), Certified Management Accountant (CMA)
Module: Chosen to attend a joint module of UCD Smurfit and Yale School of Management - Security Analysis & Valuation in September 2021 and produced four research reports in the Perfume & Cosmetic industry.
Languages: Mandarin (Native), English (Fluent)