MICHAEL ANG

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EDUCATION

NEW YORK UNIVERSITY (CIMS) New York, NY
MS in Mathematics in Finance (Sep 2017 – Jan 2019) (GPA: 3.88) *Spring 2018 Director's List*

UNIVERSITY OF CAMBRIDGE Cambridge, UK
BA in Mathematics (Oct 2014 – Jun 2017) (First Class Honors) 2017 *Georges Lemaître Prize*

EXPERIENCE

BLOOMBERG L.P. New York, NY
Quantitative Researcher (Jan 2019 – Present)

- Developed trading strategy from Bloomberg news sentiment data: cleaned dataset of ~25M stories; aligned price data; first to apply ICA methods to news and create stable tradeable low turnover factors unattainable by PCA, presented results to clients who purchased the data
- Created algorithms for identifying and classifying errors in analyst earnings reports; used a mix of rules-based and systematic heuristics in an environment with few ground-truth samples
- Predicted prices of illiquid bonds from liquid bonds using Gaussian Process kernel regression
- Stress-tested SABR model approximations used in pricing interest rate swaptions: compared density approximation schemes both theoretically and through numerical simulation
- Wrote data tools in Python: multi-dimensional PDE solvers, Cython functions, data query packages
- Built data visualization tools in Python: option volatility surface GUI, interactive graphs via bqplot

AQR CAPITAL MANAGEMENT Greenwich, CT
Research Intern (Jun 2018 – Aug 2018)

- Improved existing algorithms for converting raw signal data into factors: removed or modified the portfolio scaling, regression and combination steps; compared relevant metrics after back-testing
- Constructed factor from 2IQ insider trading data set: implemented ideas from academic paper; replicated results; created factor eventually added to AQR execution factor database

UNIVERSITY OF CAMBRIDGE Cambridge, UK
Research Assistant (Jun 2017 – Aug 2017)

- Used neural networks to classify network traffic data; reviewed developments in network traffic management over the last decade; designed experiments to optimize neural network and find rate of convergence; compared accuracy, spatial and temporal stability to other classification techniques

PROJECTS

Functional Attribution (SSRN paper) (Oct 2019)

- Investigated how changes in multivariable functions can be explained via the underlying parameters
- Created a foundation for this field of math and established links to current schemes (e.g. Shapley)

Conditional Hypothesis Testing (SSRN paper) (Jun 2019)

- Developed a technique for controlling test size during multiple hypothesis testing
- Created efficient numerical algorithm for fast implementation of the technique

Aiding NYC Sanitation through Spatial and Temporal Analysis (Citadel Datathon) (Sep 2018)

- Proposed research questions from limited NYC health and sanitary data
- Cleaned data and applied data visualization techniques, fitted Poisson regression model to determine uncleanliness growth rate via modified link function

SKILLS/OTHER

Software: Python, SQL, Java, MATLAB, Bloomberg Terminal, LaTeX,
Skills*:* Data science for financial data, Time-series analysis, Numerical methods, Statistical modelling, Linear and nonlinear programming, Probability theory, Factor investing, Portfolio optimization, Developing and back-testing trading strategies, Data visualization in Python
Publications*:* '*Network Traffic Classification via Neural Networks'* (Technical Report)