William Duckett

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EDUCATION

The University of Chicago — **Chicago, IL**
Master of Science in Financial Mathematics — **Expected December 2025**

- Awarded the FinMath Alpha Scholarship
- Courses: Option Pricing, Probability & Stochastic Processes, Python, Portfolio Theory & Risk Management

The University of Warwick — **Coventry, UK**
Bachelor of Science in Discrete Mathematics (1st class) — **July 2024**

- Achieved high 1st class honours in all three years
- Courses: Machine Learning, Neural Computing, Algorithms, Advanced Linear Algebra, Measure Theory, Combinatorics, Mathematical Analysis

SKILLS

Computing: Python, Jupyter, Java, TensorFlow, Pandas, API Integration, Monte Carlo Methods
Knowledge: Machine Learning, Deep Learning, Data Analytics, Time-Series Analysis, Financial Markets
Trading Products: Options, Foreign Exchange, Cryptocurrencies, Fixed Income, Equities

EXPERIENCE

Millennium Global Investments Limited — **London, UK**
Quantitative Trading Intern — **July – September 2022, March 2023, July – August 2023**

- Interned three times with Millennium Global over first two years of university
- Investigated sentiment data and assessed its value for potential purchase; met regularly with external data provider, analysed quantitative and qualitative data, and presented findings to systematic investment team
- Created a quantitative trading strategy using the sentiment data with an emphasis on risk management; conducted data collection via API, data cleaning, back-testing, sensitivity testing, and presented results
- Constructed and implemented an add-on to a momentum-based strategy involving dynamic selection of look-back windows based on market volatility; presented and wrote report on results
- Collaborated in small teams across both FX and digital assets markets

RESEARCH

The University of Warwick — **Coventry, UK**
Semi-Convolutional LSTMs: a new approach to traffic forecasting — **September 2023 - April 2024**

- Currently writing a section for a follow-on paper being written by researchers at the University of Warwick and the Alan-Turing Institute, intended to be submitted to the Journal of Environmental Modeling and Software for peer review in September
- Traffic forecasting for Greater London intended to aid the Alan Turing Institute's London Air Quality Project
- Transformed time-series analysis task into computer vision task by exploiting the spatial embedding of sensors
- Created and implemented a novelle deep learning computer vision architecture, "Semi-Convolutional LSTM", achieved over a 5% improvement on Convolutional LSTMs on dataset
- Collaborated with members of the Alan Turing Institute to ensure project compatibility and seamless integration
- Gained practical experience both in applying Machine Learning to a large and noisy dataset and in project management

ADDITIONAL INFORMATION

Coxed the University of Warwick boat club first eight providing leadership experience
Enjoy a variety of team sports, particularly rugby and cricket
Keen Skier and recreational climber
Achieved 770 on the GMAT