Izaac Mammadov

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EDUCATION

- **Corpus Christi College, University of Cambridge** — **Cambridge, UK**
  B.A. (Hons) Mathematical Tripos [Mathematics] — *October 2019–June 2022*
  - High 1st Class, scoring 84% and ranked 18th out of approximately 250 students.
  - Courses examined include Applied Probability, Mathematics of Machine Learning, Principles of Statistics, Statistical Modelling and Stochastic Financial Models.
  - Computational projects include implementing binomial tree models for pricing American Options and training generalised linear models (GLMs) to beat the tennis betting markets.
  - Awarded two scholarships for academic excellence, including the Richard Metheringham prize by the Worshipful Company of Cutlers.

- **The Latymer School** — **London, UK**
  A Levels in Mathematics, Further Mathematics, Physics and Chemistry — *September 2012–June 2019*
  - A*, A*, A*, A* in A Levels and S, S, S in STEP Mathematics examinations.
  - Awarded Silver Medal in the British Mathematics Olympiad (awarded to the top 50 students in the country).

WORK EXPERIENCE

- **The Quarry LP** — **Remote**
  Quantitative Researcher — *January 2024–Current*
  - **Strategy Creation**: Created and improved on quantitative strategies based on Bayesian machine-learning techniques, with a focus on trading equity volatililty.
  - **Strategy Backtesting**: Backtested medium-frequency quantitative strategies and created reports outlining their profit metrics and analysis on their hyperparameters.
  - **Portfolio Optimisation**: Created interactive pages to display results surrounding optimal portfolio allocation and calculating mean-variance efficient portfolios, as well as sandboxes for visualising different portfolio weightings.
  - **Derivatives Pricing**: Developed systems for pricing a variety of vanilla and exotic derivatives and calculating their respective greeks for the purposes of backtesting and execution.

- **Wintermute Trading** — **London, UK**
  Algorithmic Trader — *July 2022–December 2023*
  - **Market-Making**: Refined high-frequency market-making strategies which traded dozens of cryptocurrencies across multiple exchanges, as well as automated the setting of parameters for those strategies using A-B testing.
  - **Exchange Integration**: Integrated centralised cryptocurrency exchanges' endpoints (Order Entry, Order Feed etc.) using WebSockets, REST and FIX protocols.
  - **RFQ**: Received, priced, and settled Voice OTC and TWAP requests over chat. Configured risk-limits and parameters for RFQ API trading.
  - **Analytics**: Developed safety and P&L analysis tools and integrated them into existing GUIs. Utilised the tools to adjust the inputs of various market making strategies.

- **Flow Traders** — **Amsterdam, The Netherlands**
  Trading Intern — *June 2021–August 2021*

INTERESTS, SKILLS AND OTHER ROLES

- **Computer Skills**: Proficient in `Python`, including common libraries such as `aiohttp`, `matplotlib`, `numpy`, `pandas`, `scikit-learn` and `scipy`. Some personal experience in `Java`, `C++`, `MATLAB` and `R`. Experienced in managing `SQL` and `MongoDB` databases. Currently learning the `Hoon` programming language.

- **Projects**: Currently run my own self-hosted website, build with static site generator `Hugo` and served by `NGINX`, as well as my own email server and mailbox using `Dovecot` and `Postfix`. I also run my own self-hosted `Urbit` planet.

- **Foreign Languages**: Raised in a bilingual household speaking English and Russian as well as Azerbaijani.

- **Interests**: Promoting Free and Open-Source software use and helping people maintain their privacy when online or using technology in general.