

# 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 Metherringham 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).
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## 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 volatility.
    - **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*
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## 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.