

COREY PRITCHARD

Junior Quantitative Trader | First Class MMath (MMORSE), University of Southampton
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PROFILE

Junior quantitative trader at a retail FX, CFD and crypto broker, working daily on execution quality and liquidity provider analysis, revenue and hedging cost investigation, and support for pricing and hedging configuration. I also lead AI adoption at the firm, having made the initial case for it and now building the data governance framework that lets it scale. Independent research spans options pricing and volatility surface calibration, limit order book microstructure, and systematic futures and hedging overlay strategies run under written pre-registration. First Class MMath in probability, stochastic processes, linear algebra, optimisation and machine learning, writing Python and SQL every day with object-oriented C++ foundations. British citizen based in London, open to relocation.

PROFESSIONAL EXPERIENCE

Junior Quantitative Trader, Exinity | Nov 2025 to Present

- Work across large tick, order-flow and execution datasets in Python and SQL, framing and answering front-desk questions on revenue, hedging cost and inventory risk under same-day turnarounds.
- Build and maintain the analysis ranking liquidity provider spread performance over time, turning execution quality data into routing and provider-selection decisions on the desk.
- Support pricing and hedging configuration across instruments, quantifying the trade-off between revenue per million notional and client behaviour before settings change.
- Lead AI adoption firm-wide. The culture was resistant to AI when I arrived; I made the case internally, secured access to Claude Code, and it has gone from contested to widely used across the business. Built an MCP server integrating several internal data sources behind one interface so cross-system research questions can be answered directly.
- Currently building a firm-wide data cleaning and masking framework so internal data can be used with external model providers within information security constraints, turning ad-hoc approvals into a standard the firm can work to.

Junior Product Developer, Clearing | Jun 2024 to Jul 2025

- Automated manual operational processes firm-wide with Python browser and Excel automation (Selenium, BeautifulSoup), replacing reporting and data-entry workflows non-technical teams had run by hand and cutting 10+ hours of operational work per week. Received a return offer and declined it to move toward quantitative research and trading.

SELECTED QUANTITATIVE PROJECTS

Volatility Surface Calibration and Derivative Pricing Library | Python

- Arbitrage-free implied volatility surface calibration under Black-Scholes and Heston, enforcing no-arbitrage constraints across strike and tenor, with analytical Greeks (delta, gamma, vega, rho) and a Monte Carlo engine for vanilla and path-dependent payoffs.

Short-Side Futures Strategy and Hedging Overlay Research | Python, QuantConnect, Interactive Brokers

- Designed a short-only ES futures strategy as a tail-hedge complement to a long-gamma volatility book, with a backtest stack addressing look-ahead bias, ATR-based entry filters and sizing, and a volatility-collapse exit, deployed to a paper account. Related breakout and liquidity sweep studies were run with success criteria fixed in advance and purged, embargoed cross-validation; both returned null and were reported as null. Extended the programme into an ongoing study of a covered short overlay, quantifying the cost thresholds and strike selection that determine whether the structure adds value at portfolio level.

Zero-Intelligence Limit Order Book Simulator | Python

- Smith et al. (2003) continuous double auction, calibrated to Binance BTC/USDT and ETH/USDT Level 2 order-flow data and validated against theoretical predictions for spread, depth and mid-price variance.

EDUCATION AND AWARDS

University of Southampton | Sep 2021 to Jul 2025

MMath (MMORSE), Operational Research, Statistics and Economics, First Class Honours

- Year 4 dissertation: stochastic volatility models in Monte Carlo simulation for derivative pricing, benchmarking deep learning against GARCH and Markov chain approaches. Year 3 dissertation: portfolio optimisation via linear and quadratic programming.
- Dean's List Award for Outstanding Achievement, awarded 5 times. Modules: Probability and Stochastic Processes, Linear Algebra, Multivariable Calculus, Optimisation, Machine Learning, Quantitative Finance.
- First place, AmplifyMe Quantitative Statistical Arbitrage challenge in partnership with Morgan Stanley (Oct 2025).

TECHNICAL SKILLS

Programming: Python (NumPy, SciPy, Pandas, scikit-learn, Statsmodels, Matplotlib), C++ (object-oriented), SQL, shell scripting, VBA; Linux, Git, Jupyter, QuantConnect, Interactive Brokers, MCP and agentic coding tools

Quantitative: Probability, statistics and hypothesis testing, stochastic processes, linear algebra, multivariable calculus, optimisation (linear and quadratic programming), Monte Carlo simulation, machine learning, time-series analysis

Markets: Derivative pricing (Black-Scholes, Heston, Greeks), limit order book dynamics and market microstructure, execution quality and liquidity provider analysis, pricing and hedging configuration, systematic strategy design and backtesting, multi-asset research across FX, futures, options and crypto