

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. Independent research spans options pricing and volatility surface calibration, limit order book microstructure, and systematic futures strategies tested under pre-registered protocols. 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.
- Built an MCP server integrating several internal data sources behind a single interface, so cross-system research questions can be answered directly rather than assembled by hand.

Junior Product Developer, Clearing | Jun 2024 to Jul 2025

- Built Python data pipelines and automation that replaced firm-wide manual reporting for non-technical users, cutting 10+ hours of operational work per week and improving data reliability.
- Owned a machine-learning lead-scoring model end to end, from data onboarding and cleaning through deployment to monitoring its live behaviour after release. 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.

Systematic Short-Only ES Futures Strategy | Python, QuantConnect, Interactive Brokers

- Short-only ES futures strategy designed as a tail-hedge complement to a long-gamma volatility book, with a backtest stack handling look-ahead bias and futures rollover explicitly, ATR-based entry filters and position sizing, and a volatility-collapse exit. Deployed to a paper account through Interactive Brokers.

Pre-Registered Signal Research on Futures | Python, QuantConnect

- Breakout and liquidity sweep studies run with hypotheses, sample and success criteria fixed before touching data, purged and embargoed cross-validation, and matched control events. Both returned null and were reported as null rather than re-specified until something passed.

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