

COREY PRITCHARD

Junior Quantitative Trader | M.Math (MMORSE) | Open to Relocation

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PROFESSIONAL PROFILE

Quantitative trader and MMORSE graduate specialising in market microstructure and systematic trading tools. At Exinity, develop Python analytics and automated pipelines supporting trading operations, liquidity provider routing, pricing stability, and inventory optimisation across FX flow. Background in limit-order-book modelling, volatility calibration, and systematic strategy backtesting.

PROFESSIONAL EXPERIENCE

Exinity | Junior Quantitative Trader

Nov 2025 - Present

- Develop Python analytics and automated pipelines used by the trading desk to monitor market conditions, liquidity provider performance, and execution quality across FX flow.
- Analyse liquidity provider routing and pricing stability to reduce hedging costs and improve client pricing and market depth.
- Build internal trading tools and monitoring systems supporting inventory management, risk monitoring, and trader decision-making.
- Design production data workflows and deploy analytical pipelines on Linux servers to support trading operations.

Clearing | Junior Product Developer

Jun 2024 - Jul 2025

- Developed Python automation tools to replace manual reporting workflows, reducing operational workload by 10+ hours per week and improving data reliability.
- Built Python web scrapers (BeautifulSoup, Selenium) to collect large-scale lead datasets and developed lead-scoring models to identify high-value client prospects.
- Designed risk-assessment and compliance monitoring tools in Excel, improving consistency and efficiency of reporting processes.
- Initially hired as a summer intern; role extended into a part-time role during university after automation tools proved valuable.

Selected Quantitative Research

Zero-Intelligence Limit Order Book Simulator | Python

- Implemented the Smith et al. (2003) zero-intelligence limit order book model for a continuous double auction, modelling limit orders, market orders, and cancellations as independent Poisson processes.
- Calibrated the simulator to Binance BTC/USDT and ETH/USDT Level 2 order book data to reproduce realistic market microstructure.
- Validated the model against theoretical results from Smith et al. (2003), reproducing spread dynamics, depth profiles, and mid-price variance behaviour.

Option Volatility Surface Calibration | Python

- Developed an arbitrage-free volatility surface calibration framework using Black-Scholes and Heston models.
- Implemented numerical calibration routines to fit model parameters to option market data.
- Generated analytical Greeks for derivatives risk analysis and Monte Carlo pricing experiments.

Algorithmic Trading Strategies | Python

- Developed a feature-driven systematic trading framework combining multiple weak, uncorrelated signals conditioned on market regimes.
- Modelled signal probabilities $P(\text{signal} | \text{features, regime})$ using logistic regression and gradient boosting machines.
- Implemented meta-labelling using the triple barrier method to improve signal quality and manage trade outcomes in backtesting.

Technical Skills

Programming: Python (NumPy, Pandas, scikit-learn, Statsmodels), C++, SQL, VBA

Quantitative Methods: Statistical modelling, time-series analysis, stochastic processes, optimisation, Monte Carlo simulation

Markets & Trading: Market microstructure, limit-order-book modelling, volatility surfaces, systematic trading

Tools: Git, Linux, Matplotlib, Seaborn

EDUCATION

University of Southampton | First Class Master of Mathematics, Operational Research, Statistics & Economics Sep 2021 - Jul 2025

- Dean's List Award for Outstanding Achievement (5x): four consecutive years of study and overall degree performance
- Relevant modules: Stochastic Processes, Machine Learning, Quantitative Finance, Optimisation, Microeconomics, Macroeconomics
- Dissertation (Year 4): Analysis of Volatility Models in Monte Carlo Simulations - integrated GARCH, Markov chains, and deep learning for derivative pricing
- Dissertation (Year 3): Blackjack-Inspired Portfolio Optimisation - linear/quadratic programming model for feature-based allocations and risk-aware construction

Bristol Grammar School - A Levels Sep 2019 - Jul 2021

- Mathematics (A*), Physics (A), Economics (A), Further Mathematics AS (A)