Szymon Wyrozumski

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Education

Durham University — United Kingdom
BSc, Computer Science and Mathematics — *Sep. 2026 – Jun. 2030*

Taunton School — United Kingdom
*A-Levels: Mathematics, Further Mathematics, Economics, Latin + EPQ (A*AAA, A*)* — *Sep. 2023 – Jun. 2025*

Experience

Test Engineering / Systems Engineering (Insight) — Sep. 2025 (1 week)
Honeywell Aerospace — *Yeovil, UK*

- Engaged with full-stack software engineering for a branch-wide dashboard (SQL, JavaScript, HTML, React), for monitoring employee attendance, open projects, and open tickets.
- Shadowed component design investigating engine bleed air for cabin environmental control systems.

Corporate Finance — Jul. 2024 – Aug. 2024
Albert Goodman — *Taunton, UK*

- Researched 10+ businesses in local timber industry to valuate look-back share prices for a client (calculating covariances and betas across these assets).
- Conducted valuations in an exercise using EBITDA, EBITDA multiples, and revenue.
- Automated purchase orders generation leading to 200+ orders for groundwork contractors in excel using PowerPivot, PowerBi, Excel

Projects

Avellaneda-Stoikov Market Making Research | *Python, C++* — May. 2026 – Present

- Refined my Trading Simulator with independent research on market making and inventory control problems
- Investigated applications of Almgren-Chriss execution strategies outlined in the paper
- Built working implementations in C++ and Python of closed-form AS market making

C++ Trading Simulator | *C++, CMake, Python, Git* — Mar. 2026 – Present

- Developed a price simulation engine using a jump-diffusion model
- Incorporated macro shocks and earnings beat / miss for an arbitrary asset
- Modelled volatility with lasting regimes with Ornstein-Uhlenbeck. Successive news impacts result in a cumulative impact volatility and how long regimes persist
- Simulated trading agents with different strategies including: random traders, mean-reversion, Avellaneda-Stoikov Market makers. All with relevant performance metrics (PnL, sharpe ratio, max drawdown, winrate)
- Implementing an order book and matching engine to create realistic order fill probabilities and transaction costs

Rolling Window Strategy Backtester | *Python, FastAPI, TypeScript, Next.js, Git* — Sep. 2025 – Jan. 2026

- Implemented a rolling window strategy backtester for FX pairs (USD/JPY/GBP)
- Trained a TensorFlow ML model on price action data of 10 years (arbitrary, random strategy)
- Exported data through FastAPI to build an interactive React and Next.js front-end

Technical Skills

Languages: Python, C/C++, HTML/CSS, SQL (Limited)
Frameworks: React, Next.js, FastAPI
Developer Tools: Git, VS Code
Libraries: pandas, NumPy, Matplotlib, TensorFlow