

Ozan Kardes

+44 7880019078 | ozan.kardes25@imperial.ac.uk | [linkedin.com/in/ozan-kardes-345302321/](https://www.linkedin.com/in/ozan-kardes-345302321/) | github.com/OzanKardes

EDUCATION

Imperial College London <i>MEng Design Engineering - Year 1 average: 69% (on track for a First)</i>	London, UK Sept. 2025 – June 2029
British School of Bucharest <i>A levels - Further Maths (A*), Maths (A*), DT (A), Physics (B)</i>	Bucharest, Romania Sept. 2020 – June 2025

EXPERIENCE

Design Engineering Intern <i>Beycelik Gestamp Automotive</i>	July 2026 – August 2026 Bursa, Türkiye
- Redesigned production tooling for the Ford V710 (Transit) front bumper reinforcement, incorporating an additional hole to accelerate component fastening and improve the assembly process. - Updated 4 upper and lower mould components in CATIA to implement manufacturing modifications while maintaining dimensional accuracy and interface requirements.	
Industrial Engineering Intern <i>RO-MEGA TRADE</i>	Apr. 2024 – May 2024 Bucharest, Romania
Sourced repair parts for DN Solutions CNC machines from manufacturer catalogues, managed inventory.	
Private Maths and Physics Tutor <i>Self-Employed</i>	2025 – Present London, UK
Tutor maths and physics, Year 7 to A-level (up to 6 students); A-level students improved 2 grades on average.	

PROJECTS

Limit Order Book Matching Engine <i>Java, JUnit 5, Maven, Docker [GitHub]</i>	September 2026 – October 2026
- Built a single-threaded price-time priority matching engine with limit and market orders, partial fills and $O(1)$ cancellation via lazy deletion, using TreeMap price levels over FIFO queues and integer pence arithmetic. - Verified with 43 tests including a 100,000-operation differential fuzz test against a naive reference implementation, asserting trade equality, book integrity, quantity conservation and FIFO priority after every operation. - Benchmarked at 10.2M ops/sec with 400ns p99 latency; profiled with Java Flight Recorder, identified price-level allocation as 29% of allocated bytes and cut p99 from 500–600ns by pooling level objects.	
Statistical Arbitrage Pair Trading Strategy <i>Python [GitHub]</i>	August 2026 – September 2026
- Screened 120 equity pairs using correlation and Engle–Granger cointegration tests with Bonferroni correction for multiple testing; the top candidate (Visa–Mastercard, $p = 0.010$) did not survive correction. - Built a market-neutral mean-reversion strategy (spread z-scores, $\pm 2\sigma$ entry, mean-reversion exit) with parameters estimated on 2021–24 data only; 2025 out-of-sample backtest before costs: Sharpe 0.04, 0.0% return, –5.07% max drawdown; threshold sensitivity (Sharpe –0.31 to 0.73) showed results were parameter-driven.	
Options Pricing & Greeks Engine <i>Python [GitHub]</i>	July 2026 – September 2026
- Implemented Black-Scholes pricing and Greeks (Delta, Gamma, Vega, Theta, Rho), plus Cox-Ross-Rubinstein binomial and Monte Carlo pricers validated against Black-Scholes to within 0.04% error. - Built a numerical implied-volatility calibration using root-finding, and visualised option-price sensitivity across volatility and underlying-price surfaces.	
Cooped-Up <i>TypeScript, React Native, Expo, Supabase (PostgreSQL)</i>	April 2026 – June 2026
- Led development of a campus social app in a 3-person team, authoring 95% of the codebase; students create and join plans, chat, and add friends across 7 screens. - Designed an 11-table PostgreSQL schema with 33 row-level security policies and built 11 real-time subscriptions for chat, friend requests and plan invites.	

TECHNICAL SKILLS, SOCIETIES & INTERESTS

Languages & Tools: Python, MATLAB, C/C++, Java, SQL, Git, Docker
Libraries: NumPy, pandas, SciPy, statsmodels, Matplotlib
Societies & Interests: Investment Society, Algorithmic Trading Society, Formula (Engine Team Engineer - Knock Sensing Project Lead), sailing, jazz piano, Fenerbahce SK.
Spoken Languages: English, Turkish (native), Romanian