

# Gabriel Bridger

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## EDUCATION

- University of Nottingham** Sep. 2024 - Jun. 2027  
*BSc (Hons) Computer Science with AI*  
Nottingham, UK
- Grade: **First-Class Honours**
  - Relevant modules: Advanced Functional Programming (taught by Graham Hutton), Algorithms, Data Structures and Efficiency, Linear Algebra
- Calder High School/Burnley College** Sep. 2017 - Jun. 2024  
*A-Levels & GCSEs*  
Mytholmroyd/Burnley, UK
- A-Levels: Computer Science (A), Mathematics (A), Economics (B)
  - 9 GCSEs: All grades 9-6 including Mathematics (8), Computer Science (8) and Science (9-8)

## RELEVANT EXPERIENCE

- NEFS Quant | Trading Analyst** Oct. 2025 - Present  
*Sponsored by WorldQuant*  
Nottingham, UK
- Selected as **1 of 14 from 200+** applicants, developing strong conceptual understanding of quantitative finance.
  - Competing in market-making games while developing skills in probabilistic thinking, game theory and quick mental maths.
- NHS | Group Team Lead** Sep. 2025 - Present  
*2nd Year Group Project*  
Nottingham, UK
- Reduced data loading latency by **93%** (from 4 minutes to 17s) by implementing a data caching layer.
  - Prototyping a network graph model for hospital device movement, utilising combinatorial optimisation to benchmark actual routes against mathematically optimal ones.
- Kinetic Software | AI Workflow Developer** Apr. 2025  
*Spring Insight*  
Milton Keynes, UK
- Developed an AI solution to automate and process high volume email traffic, increasing efficiency and reducing operational overheads.
- Valley Pizza | Kitchen Assistant** Jun. 2022 - Sep. 2024  
*Part Time*  
Mytholmroyd, UK
- Prepared and delivered pizzas, ensuring high-quality customer service by consistently delivering on time, maintaining a 5-star rating over 2 years of employment.

## EXTRACURRICULAR AND PROJECTS

- Statistical Arbitrage for Equities | Python** Oct. 2025 - Present
- Developed a PCA-based statistical arbitrage strategy on 100 SP500 equities, achieving a back-tested **Sharpe of 1.8** including transaction costs and slippage.
  - Implemented a hyper-parameter optimisation engine across a **~900,000** candidate solution space, identifying 30-day periodicity in optimal look-back windows attributed to institutional monthly re-balancing cycles.
- Ai Game Engine | Haskell** Feb. 2026 - Present
- Optimised a Connect 4 engine using Alpha-Beta Pruning and Lazy Evaluation in Haskell, achieving a **66%** reduction in decision time (11.4s to 3.9s).
- Formula Student AI | C++ Developer** Sep. 2025 - Present
- Engineering multi-variate optimisation for racing line generation in C++, and implementing real-time ROS2 sensor data processing to minimise latency in pure pursuit control.

## CERTIFICATES

**Goldman Sachs Risk Job Simulation**  
**JPMorgan Chase & Co. Quantitative Research Job Simulation**  
**Akuna Capital Options 101**  
**Gold Duke of Edinburgh**

## ACTIVITIES & INTERESTS

**Technical Skills:** Haskell (Advanced), Python (Advanced - NumPy, Scikit-Learn, Pandas), C++ (Intermediate), Java (Intermediate), SQL

**Interests:** Poker (2nd Place, Quant Division Tournament), Climbing (v9/10, 7b), Mountain Biking, Current Affairs