

Krish Vasia

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EDUCATION

University of Birmingham <i>BSc Artificial Intelligence and Computer Science</i>	Birmingham, UK Aug. 2024 – Present
<ul style="list-style-type: none">• Current Modules: Databases and Web Programming (SQL), Functional Programming (Haskell), Artificial Intelligence 2, Operating Systems and Systems Programming, Security and Networks, Software Engineering.• First Year Modules: Data Structures and Algorithms, Theories of Computation, Object-Oriented Programming (Java), Computer Systems and Professional Practice, Mathematics and Logic, Artificial Intelligence 1.	
Queen Mary's Grammar School <i>A Levels: Computer Science (A), Maths (A), Physics (A).</i>	Walsall, UK Aug. 2017 - May 2024

EXPERIENCE

Technology Discovery Day <i>Susquehanna</i>	April 2025 Virtual
<ul style="list-style-type: none">• Explored low-latency infrastructure and data management systems crucial for Systematic Trading.• Analysed key financial products, including Equities and Derivatives (Futures/Options), to understand instrument functionality and complex market structure.• Modelled market reactions to large-scale events (e.g., US Tariffs) to evaluate volatility and the principles of risk assessment across asset classes (Equities and Currencies).	
Python and GCSE Computer Science Tutor <i>School of Coding</i>	Sep. 2023 – Aug. 2024 Wolverhampton, UK
<ul style="list-style-type: none">• Delivered one-to-one and group Python lessons, specializing in advanced concepts such as Object-Oriented Programming (OOP), to prepare students for higher-level computer science.	
Technology and Data Work Experience <i>British Medical Journal</i>	Aug. 2023 Virtual
<ul style="list-style-type: none">• Explored core Business Intelligence (BI) and Data Engineering concepts, analysing content pipelines and CRM/marketing analytics that inform strategic decision-making.• Analysed real-world site performance data, interpreting key metrics (Users) across dimensions (Channel Group, Country, Page Title) and presenting a data-driven overview to senior employees to demonstrate strategic insights.	

PROJECTS

Market Anomaly Detection (Isolation Forest) <i>Python, Scikit-Learn, Pandas</i>	Jan. 2025 - Present
<ul style="list-style-type: none">• Developed an unsupervised anomaly detection system using an Isolation Forest algorithm to identify structural market breaks and high-volatility "Flash Crash" regimes.• Engineered a multidimensional feature set—integrating rolling Z-scores of log-returns, volume surges, and realized volatility—to isolate market outliers and enhance risk mitigation strategies.	
Terraform Automation <i>Terraform</i>	Nov. 2025 - Present
<ul style="list-style-type: none">• Built an Infrastructure-as-Code (IaC) solution using Terraform to automate the end-to-end deployment of a website on Microsoft Azure.• Designed and implemented a modular structure for Azure provisioning, reducing configuration complexity and streamlining deployment cycles.	
Algorithmic Pairs Trading (Kalman Filter) <i>Python, NumPy, Pandas</i>	Dec. 2025
<ul style="list-style-type: none">• Programmed a market-neutral pairs trading strategy using a Kalman Filter to recursively estimate time-varying hedge ratios, achieving a 1.67 Sharpe Ratio over a 10-year backtest.• Architected a comprehensive backtesting pipeline in Python to manage data cleaning, rolling Z-score signal generation, and risk-adjusted performance tracking.	

Grid-Based Roguelite Engine <i>Python</i>	Jan. 2024
<ul style="list-style-type: none">• Constructed a matrix-based world constructor to manage spatial boundaries and coordinate-mapped entities.• Implemented a persistent state management system to handle local user authentication and game-state recovery via file-system I/O.	

ACTIVITIES & ACHIEVEMENTS

UKMT Math Challenge	Sep. 2018 – Sep. 2023
<ul style="list-style-type: none">• Recognized for superior performance in mathematical analysis and problem-solving, achieving Kangaroo qualification (Top 5%) in 2023 and securing 3x Gold (Top 8%), 2x Silver (Top 24%), and 1x Bronze (Top 40%).	
100 Days of Code	Dec. 2025 – Present
<ul style="list-style-type: none">• Engaged in the "100 Days of Code" challenge, demonstrating commitment to continuous learning and deepening proficiency in Python and advanced programming concepts.	