

# Alberto Rescigno

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## Education

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### Durham University

*MSci in Computer Science and Mathematics*

Durham, UK

*Sep 2025 — Present*

- Relevant Coursework: Computational Thinking, Algorithms & Data Structures, Calculus, Linear Algebra, Probability, Statistics, Programming

### Ellesmere College

*A Levels*

Ellesmere, UK

*Sep 2023 — Aug 2025*

- Mathematics (**A**), Further Mathematics (**A**), Computer Science (**A**)
- EPQ (**50/50**): Developed EarthGuardian, an iOS app using TypeScript, React Native, and machine learning to calculate personal carbon footprints from daily activities, with user testing and expert validation

## Experience

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### Panoraxis

*Co-Founder*

Jan 2025 — Present

*Ellesmere, UK*

- Co-founded an AI agency delivering custom chatbots, virtual assistants, and automation solutions to SMEs, focusing on cost-cutting and operational streamlining
- Built a complete Next.js SaaS platform with marketing website, gated dashboard, and comprehensive client portal including analytics, team management, and document collaboration features, with a focus on scalability and user experience
- Developed advanced lead generation scraper extracting 50,000+ leads from Google Maps, LinkedIn, and YellowPages with multi-threading, proxy rotation, and MX record validation
- Pitched Panoraxis products and services to an international SEO agency through a compelling pitch deck, demonstrating global market potential; created comprehensive business infrastructure including NDA drafting and market research

## Projects

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### One A Day | [React Native](#), [Firebase](#), [OpenAI API](#), [Expo](#), [Typescript](#)

July 2025 — Present

- Designed and developed a cross-platform mobile app delivering one deep, AI-analyzed question daily to reflect user values, ethics, and political lead-generation
- Integrated OpenAI's GPT model to process and evaluate user responses, generating unique ideological profiles with trend tracking
- Implemented real-time syncing and storage of answers and analytics using Firebase Firestore and Auth
- Built a social comparison layer allowing users to compare moral/political positioning with friends through visual graphs

### Maze Generation & Pathfinding Visualiser | [Python](#), [Pygame](#), [Matplotlib](#), [Unittest](#), [Git](#) Sep 2024 — June 2025

- Engineered a Python application for my A Level CS NEA (achieved 75/75) to procedurally generate mazes and visualise DFS, BFS, and A\* pathfinding in real time
- Designed and documented system architecture with detailed flowcharts and pseudocode to satisfy AQA NEA requirements
- Developed a modular GUI using Pygame and Matplotlib, and wrote a unittest suite covering 95% of core functionality
- Performed empirical benchmarking across 500+ maze instances, analysing algorithm runtimes and authoring a comprehensive technical report (approx. 30,000 words)

## Additional

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**Technical Languages:** Python, Javascript, SQL, Lua, R, C++,  $\text{\LaTeX}$

**Frameworks:** React, React Native, Node.js, Flask, JUnit, Material-UI, FastAPI

**Tools:** Git, Docker, Google Cloud Platform, Vim, Excel, Docker, n8n

**Languages:** Native: Italian, English, Romanian; Conversational: German

**Awards & Honors:** Ranked Top 70 in European Swimming, Bebras Computational Challenge — Distinction (top 1%), UKMT Maths Challenge — Gold (top 1%), ABRSM Piano Grade 8 (pass), Chess (national ranked)