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Cambridge, UK

JAMES ASHWOOD

SOFTWARE & AI ENGINEER

PROFILE

Computer Science undergraduate at Gonville & Caius, Cambridge, and a part-time software developer at Blueberry Consultants, building LLM-powered systems focused on cost, safety and measurable impact.

EDUCATION

University of Cambridge — BA (Hons) Computer Science

Oct 2026 – Jun 2029 (expected)

Gonville & Caius College

Part IA: Algorithms, Discrete Maths, OOP, Digital Electronics, Intro Graphics, Databases, Hardware.

Bishop Vesey's Grammar School

2019 – 2026

A Levels and GCSEs

A* in Mathematics, Further Mathematics and Computer Science; A in Economics. GCSEs: seven grade 9s, two 8s and a 7, plus an A in Additional Mathematics.

Senior Technical Writer (120 students, 30+ industry-reviewed articles); Technology Community Lead (AI programme; BBC Radio 4); Intern Lead; House Coordinator (ran the house system for 1,200 students).

EXPERIENCE

Software Developer — Blueberry Consultants

Jun 2025 – Present

Remote · Part-time

- Research emerging technology and work with developers to turn it into shipped projects and revenue.
- Cut the cost of LLM-based file analysis by **55%** across formats, models and tokenisation methods.
- Designed prompt pipelines for reviewing large projects and tooling for custom structures such as spreadsheets, minimising token use.
- Added validation layers around LLM-generated code, improving safety and robustness; worked with teams worldwide.

Junior Software Engineer — Blueberry Consultants

Jun 2023

Birmingham · Work experience

- Primary developer on the project that became **DeskBuddy**, later featured on Dragons' Den; took it from prototype to first test release.
- Handled bug reports and feature requests directly, and presented progress to technical stakeholders and the CEO.

SELECTED PROJECTS

NHS Throat Camera

Flutter app for legacy Android hardware with a UVC camera; custom Kotlin permissions, NHS-standard secure OTA updates and an on-device ML model for cancer detection.

ODE CATAM

Independent Cambridge computational project on ODEs: numerical methods from Euler onwards, error and stability analysis, and a formal mathematical report.

2D Racing AI

2D motorsport simulator with realistic physics and a genetic algorithm written from scratch, documented in a 350-page technical report.

DeskBuddy

Custom C++ firmware for an ESP32-S3 with Wi-Fi and ICS parsing, AWS-built binaries and OTA updates. 1,000+ units sold worldwide and supported for three years.

Speed Dreams

Open-source motorsport simulator with 100+ contributors worldwide: PHP features in a 25-year-old codebase, high-speed telemetry reporting and complex SQL.

Photo Organiser Pro

Windows application with a security-conscious installer, reliable transfers across local, external and network drives, and EXIF-based image access.

TECHNICAL SKILLS

Languages	Python, TypeScript/JavaScript, Java, C#, C++, PHP, SQL, HTML/CSS, Bash
AI & data	LLM tooling, prompt engineering, RAG, MCP servers, validation and evaluation; NumPy, pandas, Matplotlib, TensorFlow
Systems	Linux, Docker, AWS, GitLab CI/CD, Git
Hardware	ESP32-S3, Arduino, Raspberry Pi; Flutter, Kotlin

AWARDS & ACHIEVEMENTS

Caius Explore — Winner ×2 (Maths & Computer Science)
OUCC & Bebras UK — 1st ×2, Distinction ×4
UK Maths Challenge — Distinction ×7, Best in School ×2
British Informatics Olympiad — Best in School ×6
Perse Programming Challenge — 1st ×2
F1 in Schools — Fastest Designed Car in Region ×2