Christopher Lang

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Education

University of Cambridge: Undergraduate Computer Science (G400) Course.
Expected graduation year 2026.

A-Levels: Top 50 Computer Science result in the country.
Computer Science A*, Further Mathematics A*, Mathematics A*.

GCSE: The Billericay School. Results include seven grade 9′s.

Relevant Projects

Linux (EPQ grade A*): Authored a guide to coss-compiling from source, a Linux-based Operating System for Raspberry Pi hardware.

GPU/Vulkan/C/C++: Wrote several experimental 3D renderers in C and Vulkan, with a focus on versatile code which can accommodate regular changes.

Microarchitecture: Designed a Turing-complete computer based on the 6502 microprocessor and constructed it using PCBs and breadboards. The output interface connects to an LCD character display. Built and programmed an EEPROM programmer to upload programs to the computer.

Linux/Shell/C: Wrote a shell script that extracts a table of x86_64 syscall types from the Linux kernel source.

Linux/Assembly: Developed the video game ‘Pong’ with x86_64 Assembly, using Linux device files for graphics and keyboard input.

Algorithms/Rust (EPQ grade A): Wrote a chess engine in Rust for my EPQ artifact, with an examined project report.

Cyber Security Course: Solved capture-the-flag challenges and passed the SANS foundations course with 96% in the final exam. One of only 500 students to progress to the final ‘Elite’ stage of GCHQ’s Cyber Discovery Course.

Algorithms/C: Implemented the PDF, TTF, and JPEG standards in C to build a versatile PDF library.

AWS/Web Applications/Linux: Maintains personal website using NGINX on a Debian AWS Lightsail instance.

AngularJS/JavaScript/Web Applications/Team Work: Led a team of three developers to build an AngularJS sample web application.

Work Experience

Mobile Applications/PHP/Flutter: Built a full-stack, cross-platform mobile app for a local food bank using Flutter and PHP, allowing staff to update the list of products in low stock. Actively used by over 300 devices over the past 3 years.

Penetration Testing/Cyber Security: Identified and fixed blind SQL injection and cross-site scripting vulnerabilities in a local business’ production website.

Mobile Applications/C#: Built a mobile app for a local Rotary charity event using C#, helped over 100 users locate stalls at the Christmas Market.

Extra Curricular

Sports: Trains at the Cambridge University Amateur Boxing Club six times a week.

Societies: An active member of the University of Cambridge Competitive Programming Society, Cybersecurity Society, and Algorithmic Trading Society.

Philosophy: Interested in the relationship between computers and human consciousness. Is the mind algorithmic? If not, what physical laws enable this? If so, this implies that any Turing machine can exhibit consciousness.