

Mackenzie Blackaby

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PROFILE

First-class Computer Science graduate from Lancaster University with strong expertise in low-level and front-end development. Skilled in creating C/C++ SDKs for microcontrollers and peripherals and experienced in C# and Java through Unity projects and collaborative applications. Currently developing a Nintendo Game Boy emulator in Java, integrating my knowledge of hardware-level systems and software design. My AI and machine learning experience includes PyTorch and MATLAB. I'm seeking opportunities with forward-thinking companies where I can apply my technical precision and creativity to impactful, design-led technology projects.

QUALIFICATIONS

University of Manchester: MSc in Advanced Computer Science 2026

Lancaster University: BSc in Computer Science: 1st (Hons) 2025

PROGRAMMING PROJECTS

GameDuck: Gameboy Emulator | Java | Open Source

Researched and developed a multi-platform emulator for the Nintendo Gameboy's Sharp SM83 processor, peripherals, and architecture with focus on hardware accuracy, performance, and user experience.

- Conducted research and analysis of the Sharp SM83 Processor, the Gameboy's peripherals, and IO systems.
- This project highlights the need for digital cultural preservation and Java-based emulation strategies for the platform, of which there are few.

Second Year Project: Less Powerful Point | Java | Lancaster University

Led a team-based research project focused on collaboration in software development, delivery methods and user-centred evaluation, with the aim to create a replica of Microsoft's PowerPoint.

- Managed a team of eight using an AGILE framework, focusing development on stakeholders.
- Delivered a final product that demonstrated the power of collaborative software development and scalable architecture.

CERTIFICATIONS

McKinsey Forward Program 2026

ADDITIONAL INFORMATION

I have three years of experience working as a children's sports coach, where I developed leadership skills by organizing, supervising, and creating engaging activities for children.

Languages – English (Native); German (Working Standard); Arabic (Elementary)