Fergus Gault

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Personal Summary

Third-year software engineering undergraduate with strong skills in Python, C++, Java, and C, with experience collaborating on programming projects. Highly motivated to extend skills outside of coursework, seeking opportunities to learn new technologies. Proven ability to excel in complex software assignments, achieving strong academic performance while developing personal projects. Thriving in team environments and keen to apply existing knowledge to real-world applications.

Education

BEng Software Engineering – University of Edinburgh   Sept 2022 - Present

- Experience with C, Java, MIPS, Python.
- Expected graduation May 2026.
- Relevant courses: Compiling Techniques, Operating Systems, Object Oriented Programming, Computer Systems, Introduction to Mobile Robotics, Computer Security.

Aberdeen Grammar School, Aberdeen   Aug 2016 – May 2022

Higher Grades: Mathematics, Computer Science, Physics, Engineering, Modern Studies: AAAAA
Advanced Higher Grades: Mathematics, Computer Science, Physics: BBB

Experience

Computer Vision Pool Table System (ongoing)

- Developed an OpenCV-based camera system for robotic pool game training system.
- Used Python, OpenCV, and NumPy for real-time object detection and colour filtering.
- Overcame challenges in camera calibration and perspective transform.
- Improved my ability to learn quickly and implement new computer vision techniques.

Virtual Memory Simulator

- Developed using C, working in a pair for coursework.
- Gained valuable insights into page tables and Translation Lookaside Buffers (TLB).
- Increased understanding of C structures.

C++ Games

- Created various games using the C++ SFML graphics library.
- Furthered knowledge about polymorphism, inheritance and encapsulation.
- Learned about optimisation techniques including grid systems.

Self-taught C++

- Followed online resources such as learncpp.com to gain strong foundational knowledge of the language, such as data structures and memory management.
- Improved documentation-reading skills by referencing cplusplus.com

Interests

Computer vision - Developing computer vision projects including object detection, tracking and image stitching.

Automating processes - Finding ways to allow programs to run and respond to changes with as little human interaction as possible.

Embedded Systems & Robotics - Enjoy designing and building small-scale systems using microcontrollers (Arduino, Raspberry Pi) with sensors, motors, and automation.

Applied AI - Interested in training and integrating AI models for real-world applications, including pattern recognition, decision-making and automation.