

# Fergus White

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## EDUCATION

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**University of Edinburgh** June 2026  
*Bachelor of Science in Artificial Intelligence and Computer Science*  
**Ross High School** June 2022

## RELEVANT COURSEWORK

**Grades:** A's in mandatory classes, including 100% in Functional Programming and Computational Logic  
**Courses:** Functional Programming and Computational Logic, Object Orientated Programming, Intro to Linear Algebra, Calculus and its Application, Proofs and Problem Solving, Discrete Maths and Probability, Computer Systems, Data Science, Intro to Algorithms and Data Structures

## EXPERIENCE

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**4J Studios** | *Intern* May 2023 – September 2023  
I wrote internal tools in C# and .NET working with platform specific SDKs. I then worked on Manic Mechanics, a Nintendo Direct game built using the Unreal Engine in C++. I worked on priority 1 bugs and implemented new features, and am credited in the games credits

**Professional Tutoring** | *Tutor* 2021 – Present  
Ranging from teaching groups of kids in high school to private tutoring and now am a tutor and marker on the Functional Programming and Computational Logic course at the university

## EXTRACURRICULAR

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**xDSL** | *MLIR, LLVM, Python* April 2023 – Present

- Working in a research team to help develop a python compiler framework to further lower the barrier for entry when learning about compilers
- Wrote the preliminary implementations of the LLVM commands, including GEP an infamously difficult command to understand, and code refactors
- Published to GitHub: <https://github.com/xdslproject/xdsl>

**Lean IEEE-754 Floating Point Implementation** | *Lean* September 2023 - Present

- Working with researchers at the university to implement the floating point standard IEEE-754 in the theorem prover Lean based on the implementation in another theorem prover, Coq
- Proving complicated theorems for rounding, ensuring uniformity across the language

**CompSoc** | *President* April 2023 - Present

- President of the Computer Science society, one of the largest in the UK, holding talks, hackathons (HackTheBurgh) and much more. Personal responsibilities include working with sponsors, the university and making sure everything runs smoothly when running events for over 1000 people over the year

**TypeSig** | *Secretary* September 2023 – Present

- Newly created special interest of CompSoc for those interested in PL theory, Type theory and anything theoretical related. I help run Lean workshops, introducing maths and CS students to the world of theorem provers

**SIGINT** | *Secretary* September 2023 – Present

- Special interest group for cyber security. Ran a UK wide conference and help out with workshops about different aspects of cyber security

## SKILLS

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**Languages:** Lean, C/C++, Haskell, Java, Python, JavaScript/TypeScript, MIPS, LaTeX, .NET  
**Tools:** Git/GitHub, Unix Shell, Node.js, VS Code, IntelliJ IDEA, Unreal Engine