

Ari Alexander Tannahill Thomson

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Profile

Upcoming Abertay University graduate in Computer Game Applications Development, with a strong focus on programming, applying for graduate and junior games programming positions. Winner of DARE Academy 2025, Abertay University's premier games development competition, as a programmer on the student-led team, Riverboat Games.

Experienced and skilled in C++ with an object-oriented view and experience in DX11, OpenGL, as well as engine and framework experience with Unreal, an in-house PS5 engine, Skateboard, SFML, and Raylib.

Particularly interested in furthering my knowledge of back-end systems and how they integrate with video games.

Selected Projects

Galactic Postal Servitude - *Riverboat Games (Student Team), 2025*

Galactic Postal Servitude is a point and click puzzle game where a player must approve or deny parcels being sent by aliens. I worked as one of two programmers on this project in a group of eight students, largely focusing on the back end systems such as the parcel generation, day system, save system, and player decision tracking and validation.

The project was made as part of the DES315 professional project module where I received an A, and later as part of DARE Academy. During DARE my team and I massively overhauled the game and won both the overall winner's prize as well as audience choice prize.

Relevant Skills - *Unreal Engine 5, UE5 Blueprints, Perforce Source Control, Teamworking, Communication*

Procedural Lightning Generator - 2026

Honours project built during my fourth year of university.

The project explores use of a physics model (the dielectric breakdown model) to generate lightning shapes, rather than more conventional systems, to allow for more natural branching patterns. The project was built in the Raylib games framework for greater focus on the core generation parameters and avoid the overhead of more traditional games engines.

Core Skills

- C++
- Unreal Engine 5
- SFML
- Direct X11
- OpenGL
- Source Control
- Perforce and Git
- Object Oriented Design

Soft Skills

- Teamworking
- Communication
- Leadership
- Microsoft Office

Languages

- English
- Finnish

Achievements

- 2025 DARE Academy Winner
- 2018 BAFTA YGD Finalist
- Gold DoFE recipient

Interests and Hobbies

- Field Hockey
- Volleyball
- esports

A large portion of the project involved optimisation of the model and included use of the GPU-based parallel computing to improve the calculation of the required electrical potential field.

Relevant Skills - *Low-Level Engines, C++, Git Source Control, GPU Multithreading*

Direct X11 River Scene - 2024

River scene built using the DirectX11 graphics library.

The scene features simulated water using Gerstner waves and procedurally generated terrain that contains the wave. Other features include a loaded model, shadows, tessellation (both dynamic and static), bloom with the compute shader, and multiple lighting types.

I worked on this project during the CMP301 module where I received an A+.

Relevant Skills - *Direct X11, C++, Git Source Control*

Other Experience

Research Assistant - Abertay University, June 2025 - October 2025

Worked on a preexisting codebase to modify a Streamlit webapp using Python. The webapp is used to perform thematic analysis on transcribed interviews using LLMs.

Education

BSc (Hons) - Computer Games Application Development Abertay University, 2022 - 2026 (Expected Completion)

Relevant Modules and Grades

DES315 - Professional Project - A
CMP301 - Graphics Programming with Shaders - A+
CMP302 - Gameplay Mechanics Development - B+
CMP208 - Game Programming and System Architectures - A
CMP203 - Graphics Programming - A
CMP105 - Games Programming - A+
CMP104 - Programming with C++ - A+

Shawlands Academy, Glasgow, 2016-2022

-6 Highers at A level, including Computing Science and Mathematics