

JAMIE BUTTENSRAW

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Portfolio - <https://jambuttenshaw.github.io/devportfolio/>

EDUCATION

2020 - 2024

ABERTAY UNIVERSITY – COMPUTER GAMES TECHNOLOGY

- ❖ **Alexander D G Kydd Prize** – Best 2nd year student overall in School of Design and Informatics in 2021/2022.
- ❖ **David Potter Memorial Prize** – Best 1st year student overall in Computer Games Technology in 2020/2021.
- ❖ **A D D McKay Senior Prize** – High level of performance in maths in 2021/2022.
- ❖ **Hannah Maclure Prize** – High level of performance in maths in 2020/2021.
- ❖ **Grade A or higher** in every module completed.
- ❖ I'm currently working on my honours project, which is all about the **Real-Time Rendering and Modification of Signed Distance Fields**.

2014 - 2020

GREENFAULDS HIGH SCHOOL

- ❖ 4x Grade A at Advanced Higher
- ❖ 5x Grade A at Higher

EXPERIENCE

September 2023 – December 2023

ABERTAY UNIVERSITY – TEACHING ASSISTANT

- I taught graphics programming with DirectX 11 to 3rd year students.
- This is their first time working with programmable graphics pipelines and shader programming. I explained complicated concepts in simple and understandable terms from the ground up to not only assist students with their current task but to also soundly build their knowledge for their future.

June 2023 – September 2023

ABERTAY UNIVERSITY – RESEARCH ASSISTANT

- I worked with others to develop an immersive multiplayer XR sandbox experience using emerging VR technology over the course of 4 months.
- This involved working with Unreal Engine 5, OpenXR, and Meta Quest Pro headsets.
- I built plugins for Unreal Engine 5 to add hand gesture input systems and additional eye tracking support and functionality.
- I developed multiplayer VR game mechanics to research how VR can be used as an immersive learning and training tool.

June 2021 – June 2022

TRIXEL CREATIVE – GAMEPLAY AND TOOLS PROGRAMMER

- I was a developer and programmer for Trixel Creative's upcoming game 'Restitched'.
- This was an unpaid, voluntary role that I assumed alongside my studies.
- I worked primarily on physics, game mechanics, and tools development.
- I had to quickly adapt to a large and unfamiliar codebase. Previously having mostly experience with C++, I put significant effort into advancing my C# and Unity skills to make great contributions to the project.
- I worked with a team of up to 20 other developers, and this was a great experience to learn how to work with others on a large project and refine my proficiency with version control software.

October 2019 – November 2021

SAINSBURY'S – FOOD SERVICES ASSISTANT

- This was a great opportunity to develop people skills, working with colleagues and helping customers in a cheerful and friendly manner.
- I took my role seriously and I was always on time and prepared for work.

SKILLS

- I have excellent and deep knowledge in C++. I have been programming with C++ for over 5 years now, and I have an incessant curiosity for learning about how C++ works underneath, and why it works that way. I have a wealth of experience working with modern C++ features.
- I have worked with multiple graphics APIs, and I am particularly knowledgeable in DirectX 11, and I am currently working with DirectX 12 and DirectX Raytracing.
- I have experience working with large code bases, including developing *Restitched*, and developing plugins for Unreal Engine 5. I am also very well versed in Git and can confidently collaborate with others on a single project.
- I have always been particularly adept at mathematics, so much so that I sat my Advanced Higher Mathematics course a year early. This has assisted me greatly as I focused on graphics programming, and I have a very strong understanding of the linear algebra core to 3D graphics.
- From early on I have had lots of practice teaching and mentoring others. From running the code club through most of my high school career, to later being employed as a teaching assistant at Abertay University teaching graphics programming to 3rd year students, I am adept at explaining complicated concepts to students unfamiliar with the subject.
- Throughout my life I have had many chances to practice excellent communication, teamwork, and leadership. In many years of participating in Scouting I have had opportunities to work with others, and very often took on leadership roles. This has proven very useful since, and I performed exceptionally in the 'Professional Project' module; I am organised, assertive, and great at working with others.

ACHIEVEMENTS

- I have twice been a finalist in the BAFTA Young Games Designers competition, first in the 10–14-year-old category in 2017 and I was then the youngest finalist in the 15–18-year-old category in 2018.
- I have received 4 prestigious prizes during my time at Abertay University for excellence at my studies, most notably being deemed the best 2nd year student in the entire School of Design and Informatics.
- In June 2017, I was fortunate to be partake in work experience at the excellent studio Blazing Griffin, where I enjoyed my first taste of the working environment by performing quality assurance and programming tasks.
- I ran a code club at my high school for 4 years, and that massively helped develop my communication skills, as I introduced 11–13-year-olds to the concepts of computer programming and game development.
- From 2008-2020, I was a member of the Scouting Organisation, which was a fantastic opportunity for developing my communication and teamwork. In 2017 I received the Chief Scout Gold award. In 2016 I was the leader of a team participating in the national camping competition and placed 4th in Scotland. I was also selected to participate in the World Scout Jamboree in 2019. I was appointed as one of the 4 patrol leaders for showing excellent leadership and handling responsibility confidently. The Jamboree was a global collection of 45,000 scouts from over 150 countries, and it was a fantastic experience for developing as a person and learning how to make friends with people from any culture and background.
- I have achieved both my bronze and silver Duke of Edinburgh's awards, and I am now working towards achieving my gold award.
- I was awarded the Junior Dux award in 2017 for academic excellence. In the 2018 Senior Awards, I received an award for 6 out of the 7 classes I studied, and then in 2019 received an award for 5 out of 5 of the classes I studied that year.
- I participated in the UKMT Senior Mathematics Challenge in 2018 and won a Silver Award. I also took part in the West of Scotland Physics Education Group annual physics competition in 2018 where my team placed second.