

PROFESSIONAL PROFILE

Programmer and Digital Artist with experience as a Front-End Developer at the marketing technology company Optimove and as a Junior Programmer at the indie game studio Pocket Sized Hands. Currently volunteering at the Cyber in Schools Outreach to help them create an educational cybersecurity game and doing freelance art and design work.

PROFESSIONAL EXPERIENCE

September 2024 – Present **Associate Software Developer**, Optimove – Marketing Technology Company

- Worked alongside a team creating the front-end of websites keeping in mind UX
- Worked with the product development team and team leads to figure out how to structure the applications based on the needs of users for marketing tools

May 2023 – October 2023 **Junior Programmer**, Pocket Sized Hands – Indie Game Studio

- Worked alongside the team on an NDA project using Unity.
- Managed my time in the office to complete tasks set on Jira using documentation from the company's Confluence page.

January 2023 – May 2023 **Programming and Social Media Intern**, Pocket Sized Hands – Indie Game Studio

- Created social media branding for the company alongside the company's Lead Artist
- Created content such as illustrations and posts to share on the company's accounts.
- Researched marketing and online social media strategies from other games companies to build and manage the company's social media plan.

September 2020 – Present **Freelance Game Developer and Artist**, Creative n' Chaotic

- Ran my own online business distributing merchandise from illustrations under the alias Creative n' Chaotic.
- Created branding, logos, and images for independent clients.
- Collaborating with the Cyber in Schools Outreach to create an educational cybersecurity game

EDUCATION

2020 – 2024 **BSc (Hons) Computer Games Technology**, Abertay University – Second Class, Upper Division (2:1)

VOLUNTEERING

October 2023 – Present **Ambassador for Game Development and Digital Technologies**, Cyber in Schools Outreach – Programme aiming to raise awareness in cybersecurity and careers in technology

- Participated in volunteering activities and workshops to teach young people about cybersecurity and technology

May 2022 – May 2023 **Vice President**, Abertay Games Development Society – Abertay University

- Worked with the committee to host talks from professionals in the games industry and activities for members

SKILLS

- **Programming Languages and libraries:** C++, C#, Python, .NET, SFML, Typescript, NextJS, JavaScript, React, ChakraUI
- **Graphics Programming:** 3D graphics pipeline, DirectX11, compute shaders, OpenGL, PBR lighting using materials and BRDF, Phong/Blinn-Phong reflection models, HDR Tone mapping, Gamma Correction, Render Textures, Tessellation.
- **3D Mathematics and Physics**
- **Unity and Unreal Engine 5**
- **Augmented Reality and Mobile Development**
- **GitHub, Jira, Azure Dev Ops (ADO) and Confluence**
- **Knowledge of the CI/CD pipeline**
- **Software design using Gantt charts and UML diagrams**

PROJECTS

Procedural Landscape Generation Project, Abertay University

- Created a procedurally generated landscape using DirectX11 within a framework given to me by the university.
- Used techniques such as Perlin noise and Worley noise, sum of waves equations and Voronoi diagrams.
- Displayed different heightmaps produced by the algorithm so the user could see the changes being made to the terrain and added toggle-able help information to the UI.

Dvergatal, Abertay University – Professional Project (Worked as part of a team of 7)

- Worked on the project as the producer and as a programmer to deliver a vertical slice using Unreal Engine 5.
- Used an Agile development approach with daily standups and weekly meetings to ensure a smooth development.
- Managed the team's tasks and documentation using Jira and Confluence and set up GitHub for the game's source control to make sure the team would be able to work remotely due to different availability.
- Worked on the game's UI functionality and introduction sequences using Widgets and Animation Timelines based on the decisions made by our designers and artists.
- Implemented scene transitions and camera fades to add polish at the final stages of development.

Landscape Generation and Lighting with Shaders using DirectX11 Project, Abertay University

- Created shaders using C++ in a DirectX11 framework given to me by the University using the Direct3D 11 graphics pipeline.
- Implemented techniques such as PBR lighting that could be manipulated in real-time, vertex manipulation with displacement mapping through heightmaps, sum of sines to create water simulations, changed the materials in the terrain based on height and slope, and changed the colour of the water based on depth.
- Created post-processing techniques such as Chromatic Aberration through Render Textures and implemented colour correction techniques such as HDR Tone-mapping and Gamma correction.

INTERESTS AND ACTIVITIES

- Baking
- Painting and Illustration
- Video games
- Playing piano

LANGUAGES

- English
- Spanish