

# Mateusz Baesler

<https://mateuszbaesler.github.io/Portfolio/>

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## Profile

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I am a Games Technology student with a 2-1 Class Honours in Games Technology BSc at Coventry University. I have 3 years of University experience programming and producing 3D assets and prototypes. I am a dedicated team worker experienced in group projects using industry practices including version control and code documentation. I possess a wide range of knowledge and relevant technical experience.

I am currently searching for a full-time position in games or software development to expand my skillset and explore my interests.

## Technical Skills

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- C#
- C++
- Python
- Unity
- Unreal Engine
- Blender
- Substance Designer
- Substance Painter
- Photoshop
- Premiere Pro
- After Effects
- SQL, NoSQL

## Education

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### Coventry University

September 2018 - 2021

- Games Technology BSc – 2-1 with Hons
  - Advanced Games Programming
  - Games & AI
  - Content Design Tools and Techniques
  - Mathematics for Computer Graphics
  - Advanced 3D Graphics Programming
  - Physics for Computer Graphics
  - Concept Development for Games Design

### Archbishop Ilsey Catholic School and Sixth Form Centre

September 2016 – June 2018

- OCR Level 3 Cambridge Technical Introductory Diploma in IT
  - Fundamentals of IT (Distinction)
  - Global Information (Distinction)
- Applied Science - Medical Science (Distinction\*)

### Archbishop Ilsey Catholic School and Sixth Form Centre

September 2011 – June 2016

- 11 GCSES (Grade A\*-C) including Computing (A), English (B) and Mathematics (B).

# Projects

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## Project AI

A first-person shooter against 'dumb' assault drones commanded by a 'smart' commander drone. Work smart to wipe out the commander first or try to brute force through an army of drones.

- Created in the Unity game engine.
- Language: C#.
- Demonstrates use of artificial intelligence techniques, including finite state machines and fuzzy logic.
- Created a game prototype without use of external assets.

## C++ Ray caster

A ray casting program capable of rendering complex models and simple shapes with Phong shading for ambient, specular and diffuse intensities as well as hard shadows and light sources.

- Coded in Visual Studio.
- Language: C++.
- OpenGL for graphics rendering.

## Procedural Terrain Generator

A procedural terrain generation program, using Perlin noise and the Diamond-Step (Square-step) algorithm with runtime generation, dynamic texture blending based on height, animated water, and transparency.

- Coded in Visual Studio.
- Language: C++.
- OpenGL and SDL for rendering.

## Scrabble Project

I was tasked with recreating the 'scrabble' board game entirely in C++ as a windows application.

- Object-orientated programming.
- Data structures.
- File parsing.
- Algorithm efficiency.
- Computer-controlled opponents.

This project challenged me in many ways, making me consider how different functions will interact with each other, what sorts of sorting and searching algorithms to use in order to get the highest efficiency, and how computer-controlled opponents should behave in order to be fun to play against.

# Hobbies and Interests

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Video games are my passion, and I play a vast variety of game genres, from first-person shooters, to MOBAs and flight simulators. This has given me a wide perspective on the purposes of each one, and what design features exist inside them. I also enjoy modding and editing games to fit my vision of what they could be, remove tedious elements or to see the inner workings of how they were made. Recently my biggest interest is in virtual reality, as I love the immersion and sense of scale it achieves, as well as the physical interactions made possible through touch controllers.

I have always been interested in the technical aspects of videogames. Whenever I'm playing a game, I always think about how different features were implemented, what could have been done better and what is potentially missing. This has steered me towards seeking a career in video game development. During this pursuit, I found myself drawn more into programming than any other aspect of the developing process. However, my dream is to become a full-fledged developer, responsible for designing the core functionality and features of a video game.

Outside of games, I have an interest in art and video editing, creating small animations and editing different types of videos to find my personal style and develop extra. Furthermore, I am interested in the inner workings of computers on both the software and hardware aspects, having built my own computer and helped with others in the past.