ALEXANDRU ZAHARIA

SOFTWARE DEVELOPER

CONTACT

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ABOUT ME

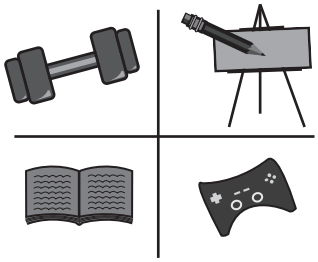
Creative and fast-learning BSc (Hons) Games Technology student with an eagerness to gain further knowledge and devoted to games development and programming. Experienced in diverse programming languages including C#, C++ and Python and willing to learn any fresh ability that can boost a project. Exceptional skills in design and software development, with a passion for AI and innovative problem solving.

SKILLS

Technical
- C++/C#
- OpenGL
- Unity
- UnrealEngine
- AI
- Machine Learning

Soft Skills
- Time Management
- Communication
- Team Work
- Problem Solving
- Stress Tolerance
- Adaptability
- Research
- Creativity

INTERESTS



WORK EXPERIENCE

2018 - 2019 **Software Engineer (Intern)**
KPIT Technologies

Developing AI solutions for Autonomous Driving cars
Testing and validating the algorithms
Code maintenance and refactoring
Simulating 3D environments for Autonomous Driving
Reflecting professional work ethics within a team
Making sure the work is delivered in time

EDUCATION

2016 - 2020 **BSc Games Technology**
Coventry University

During my studies I have learned C++, the principles of rendering and games development. The course was focused on rendering techniques using C++ and OpenGL, games development in Unity and assets creation. As part of the curriculum I have developt various projects, that I am proud of, such as a Game Engine, ray trace rendering procedural generation, multiplayer, mobile and VR games.

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PORTFOLIO

Pretty Engine
Cross-Platform Game Engine

Pretty Engine is a modularised game engine written in C++. The user is capable of building multiplayer games with ease. The main features of the engine are: Entity-Component system (the modularisation of the engine, it helps a great deal when writting an application), Layering system allows allows grouping entities and rendering them differently, 2D batch rendering (very performant, the future plan is to use this renderer for writting a particle system), multiple randering APIs (only supports OpenGL at the moment, however, the architecture allows to easily incorporate other APIs. DirectX and Vulkan are the next checkpoint), data-driven level management using xml and 3D asset importing using Assimp, Level Editor (GUI made with dear ImGUI), build system made with premake (lua language), physics, audio and networking systems.

Future milestones of the project: Make a procedural generation project and include some functionality needed in the engine, (GPU) raytraced rendering for quality renders, AI module that allows you to perform machine learning as well as traditional AI, switch to NVIDIA PhysX engine, better networking system and better resource management.

Battle of the Stars
Multiplayer Game

Part of the second year curriculum, this project is a competitive, multiplayer game made with Unity. As part of a team, you have to capture and deliver the flag to your base. I understood the concepts of client-server model and comunication between them; sending packets over a network; the difference between reliable and unreliable channels. Because it was an individual project, I had to manage my time and the workflow assigning deadlines to myself. The overall experience was great. I have learnt more about networking and how multiplayer games work and also designing a game concept.

Lunos
Educative Mobile Game

Winner of FACENS game jam in Sorocaba, Brazil this project is meant to improve digital literacy among Brazilian teachers. Our team, made of 2 Brazilian students and another 2 students from Coventry University, developed a quiz game based on self-learning and self-descovering of the electric devices and applications that people use daily. My main role in the team was programmer, where my responsabilities were: creating scripts that manage the quizes, game mechanics (for example: drag and drop system), player reward and user accounts managing systems. Beside this role I also came up with design ideas and dealt with time management.

Murder House
VR Interactive Story

A group project in which I was involved during the first academic year. The game concept is based on discovering a branch of the story while exploring a house where a murder took place. The main roles I had were project manager and programmer. As project manager, my responsability was to ensure the workflow of the project. I managed to complete this by: assigning tasks to all group members, redistributing the uncompleted tasks and the use of source control such as GitHub to keep track of all changes occured during the process. As programmer, I was in charge with creating the game logic and collision detection using C# scripts.The project itself has not been marked, however, each member received individual grades where mine was 81 percent for programming.