Oskar Oramus

[city]
United Kingdom

Contact
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Education

University of Exeter **Sept 2019 - Jun 2023**
Bsc Computer Science

Modules include: Artificial Intelligence, C Family, Group Software Project, Differential Equations, Vector Calculus, Real Analysis, Data Structures and Algorithms.

Petroc College - A Levels **2017 - 2019**
Further Mathematics, Mathematics and Computer Science. *Grades A*-C.*

Skills

- ❏ Deep understanding of applied mathematics including but not limited to matrices, vectors and differential equations.
- ❏ 7+ years of experience programming, 5+ years of experience using Unity Engine and 3+ years of experience in Web Development.
- ❏ Knowledge of Rasterization, Ray Tracing, Ray Marching
- ❏ AI using BT, GOAP and Machine Learning
- ❏ English - Fluent, Polish - Native

Projects

Self driving cars with a self made Neural Network

- ❏ Used my knowledge of differential geometry to create a car collision system. The model utilizes a simple drifting mechanic, relying on pattern recognition and machine learning prediction algorithms.

KiRoX - Operating System

- ❏ Inspired by the Windows operating system I created my own OS with features like: various file support (audio, text, image, executable), calendar, custom web browser with sessions and cookies, file explorer and a file tree.

Infinite runner game with a global leaderboard made in Unity

- ❏ Used a procedural level generation algorithm to provide unique levels on each playthrough coupled with a remote server to create a global ranking system. Created in a team environment.

3D render using raymarching created using GLSL

- ❏ Supports: rendering 3D fractals like mandelbulb, infinite shapes, shadows, ambient occlusion, lighting (direction and point), glowing outlines, shape cutting and merging all in real time.

Perplex Experiment

- ❏ Transferred my 3D math university experience into a physics based puzzle game with parkour elements. Has many interesting mechanics such as wallrunning, laser beams, grappling hook, launchpads, grenade turrets which all introduce challenging puzzles in their own way.

Achievements

- ❏ Volunteered for 2 weeks helping people with psychiatric disabilities, it was with the National Citizen Service. (Recognised by Theresa May). In the process I have learned how to communicate and work as a team while also raising money for the organisation.
- ❏ Created a feature rich 2D game engine with heavy optimisation, runs at ~500 fps on a single core in a web browser. Features like: physics, fast collision detection, advanced inventory/equipment system, advanced camera system, auto generated colliders based on textures.
- ❏ Made a farming browser game that has been played over 160 thousand times.
- ❏ Won the UDC Jam and Exeter Jam.

Technical Skills

Java | Python | C# | C/C++ | HTML/CSS/JS | Haskell | GLSL | Prolog
Git | MySQL | Trello | Agile | Kanban | Scrum | Blender