Software Engineer, 5+ years of experience

Mikhail Zagoruiko

+61 426 959 123

Australia, NSW

zagoruiko.mikhail@gmail.com LinkedIn GitHub

ABOUT ME

An enthusiastic student deeply devoted to expanding knowledge in information technology, with a keen aptitude for research, active involvement in class discussions, and consistently producing high-quality assignments. Demonstrated track record of acquiring hands-on experience through internships, campus engagements, and volunteer work.

SKILLS

Rust

- Knowledge of design patterns, commonly used in Rust
- Developed applications utilizing popular crates such as Tokio (asynchronous programming), Axum (web framework), etc.

C++

- Experience of development of applications using C++17/20/23
- Development of graphical applications using OpenGL 4.6
- Knowledge and understanding of common libraries (STD, Boost ASIO, FFMPEG, etc.)

Graphics

- Knowledge of multiple graphics APIs (OpenGL 4.6, Vulkan, WGPU)
- Developed shaders using GLSL and WGSL shader languages
- Deep understanding of GPU operations and memory management for efficient real-time graphics

Network

- Practical knowledge of common architectural patterns for communications over a network (client-server, p2p)
- Practical knowledge of TCP, HTTP and RPC protocols via the development of multiplayer applications

Multithreading

- Developed multithreaded systems for real-time rendering, physics calculations, and data processing pipelines.
- Optimized user experience and performance by effectively utilizing concurrency and parallelism

EXPERIENCE

NORDAVIND: 06/2024 – 08/2024

- Worked on architecture and implementation of multimedia player for proprietary data formats
- Improved archiving library using best practices for C++17
- Improved visuals over shown content in the multimedia player using low-level features of the OpenGL

Technologies: C++17, FFMPEG, OpenGL, IMGUI

TERRALINK: 06/2023 – 08/2023

- Assisted senior SAP engineers with SAP HANA modules development

Technologies: ABAP, SQL

EDUCATION

DUBNA STATE UNIVERSITY, RUSSIA – BACHELOR, 2022 – 2024

Software Engineering

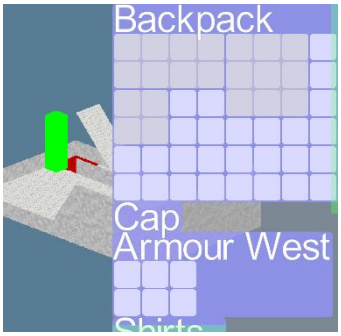
TORRENS UNIVERSITY, AUSTRALIA – BACHELOR, 2024 – 2027

Information Technology

PROJECTS

ORTHOGRAPHIC SANDBOX GAME USING RUST PROGRAMMING LANGUAGE

05/2024 – present

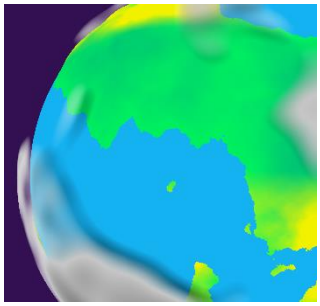


- significantly reduced time to add features via the introduction of the Rust Programming Language
- optimised rendering via the introduction of modern Graphics API and usage of best practices

Technologies: Rust, WGPU, WGSL, WINIT

PLANET GENERATOR IN C++

04/2023 – 10/2023

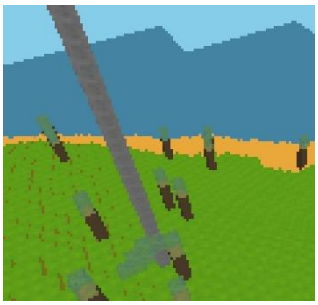


- reused the graphics module of the 3D sandbox game project in this project
- improved biome generation using multiple simplex noises of different settings
- introduced multithreading for the seamless rendering of the planet while generating new resources

Technologies: C++23, Boost ASIO, OpenGL, GLSL

3D SANDBOX GAME IN C++

10/2022 – 05/2023

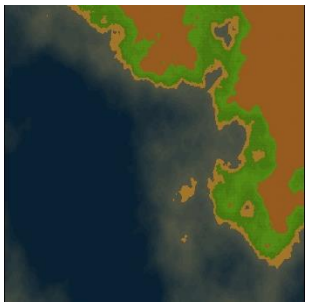


- without changing any part of the server of the previous project, the client side was completely reimplemented using GLFW for window creation and GLEW for OpenGL rendering
- made world rendering in 3D using OpenGL 4.6 and GLSL
- divided the project into the game itself and the graphics module for further reuse

Technologies: C++20, Boost ASIO, OpenGL, GLSL

2.5D SANDBOX GAME IN C++

09/2020 – 07/2022



- developed a very big procedurally generated world using simplex noise library and introducing combined coordinates
- added multiplayer by swapping game logic to the server and communications via TCP protocol
- developed rendering using the SFML library

Technologies: C++17, Boost ASIO, SFML