
OSTAP DZYOBA

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JOB OBJECTIVE

Work at a software/game company where I can use and improve my technical and collaborative skills in systems programming.

QUALIFICATION HIGHLIGHTS

- Created a scalable graphics API for DirectX from scratch
- Successfully programmed and optimized C++ game engine and game programming projects with 150+ files
- Demonstrated capacity to handle responsibilities under time pressure in both team and independent work environments

EDUCATION

DePaul University (Chicago, IL) - *9/2020 to 6/2025*

- **BA, Computer Science; Concentration in Game Systems**

RELATED DEVELOPMENT PROJECTS

Game Engine Programming (C++): 2024

- Developed a medium-scale 3D game engine using an OpenGL-based graphics engine
- Created a scene manager to save, load, clean up, and switch between scenes efficiently
- Created a centralized game object system to handle real-time collision testing, alarms, key input, updating, rendering, and scene registration
- Built asset managers to simplify model, shader, texture, and font loading
- Programmed debug tools like freeze frame and a visualizer to recognize errors faster
- Developed a sprite system to efficiently render 2D text and HUD elements

Graphics Programming (C++/DirectX): 2024

- Created a graphics API from scratch to simplify working with the DirectX 11 interface
- Developed a graphics object system to streamline binding shaders, models, textures, and shader data into one object
- Created a Phong lighting system to support directional, point, and spot lights
- Programmed a configurable terrain model to generate terrain using heightmap images
- Implemented structure packing in model vertex data to optimize memory alignment

Systems Optimization (C++):

2023

- Reworked data structures and programs to access memory faster with data caching (8x speed boost)
- Used intrinsics and SIMD instruction set to optimize calculations in a vector and matrix math library (4x speed boost)

Game Programming (C++):

2023

- Created a functioning version of *Centipede* game with minimal engine resources under a 10-week development cycle
- Used design patterns to optimize code efficiency and AI movement
- Developed a sound system to reuse objects for efficient sound implementation
- Implemented a resource manager to handle various game resources in one file
- Created a memory system from scratch to allocate and deallocate data

OTHER EXPERIENCE

Kohl's (Lake Zurich, IL) - Sales Associate

11/2021 - PRESENT

- Worked in a team environment to ensure correct processing of online orders
- Upheld division of responsibility among team members for efficient work
- Trained new staff to optimize work while under time pressure

DePaul Esports – Varsity Captain/Player

1/2022 - 9/2023

- Collaborated with a team to form strategies for success in a competitive environment
- Maintained effective communication strategies to strengthen cohesion between team members

TECHNICAL OVERVIEW

- **Programming Languages:** C, C++, HLSL, Java
- **Frameworks and libraries:** SFML, DirectX 11, Windows API
- **IDEs:** Visual Studio and Eclipse
- **Version Control:** Perforce and GitHub
- **Platforms:** Windows