Arda Temel

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Experience

Software Engineer C#/C++

Osskin 05/2022 – Ongoing Montreal, QC

- Designed and implemented critical mesh manipulation features for a low latency real-time C++ application, reducing processing time by 40% and increasing accuracy by 50%
- Built automation procedures using Phyton and connecting to external APIs achieving a 75% reduction in human errors and improving overall time to product by a factor of 10
- Developed robust UIs using C++ and the QT framework, resulting in a 20% increase in user satisfaction and a 15% decrease in user error rates.
- Collaborated with cross-functional teams through SCRUM meetings to identify and address performance bottlenecks, resulting in a successful deployment of the application

AR/VR Developer

University of Twente BMS Labs 09/2020 –09/2021 Enschede. NL

- Engineered gameplay mechanics for five different VR/AR applications using Unity and C#, increasing immersion and user engagement by 50%, data gathered later published as research papers
- Created custom tools to encourage cross-functional teams to collaborate, leading to an improvement of 70% in the ease of development and testing processes
- Engineered custom shaders using HLSL and GLSL in Unity resulting in visually stunning effects and a 50% decrease in load times and project sizes
- Lead analysis of 3D applications, identified areas for optimization, and implemented strategies to increase the performance by 100%

Software Developer Intern

Ravico Analytics Inc. 05/2020 – 09/2020 Toronto, ON

- Implemented advanced serialization tactics using JavaScript to optimize data transfer speed by 60%, improving overall app responsiveness
- Created innovative serverless architecture using AWS that reduced app downtime by 70% and improved scalability by 50%
- Built optimized data models utilizing Python and JavaScript to improve the performance of a serverless web app, resulting in a 30% reduction in page load time

Education

Honors Bachelor of Science Computer Science

York University 05/2023 Toronto, ON

- Dean’s Honor Roll, Math and Stats Chair Honor Roll
- **Related Courses:** 3D Computer Graphics, Animation and simulation, Introduction to Virtual Reality, Computer Vision, Signals and Systems

Technical Skills

- C++
- C#
- Jira
- Object-Oriented Design
- Unity
- OpenGL and WebGL
- HLSL/GLSL
- 3D math / Linear algebra
- Git / GitHub/ GitLab

Projects

Virtual Reality House-Search Task to Measure Trust During Human-Agent Interaction

University of Twente, BMS Labs / Netherlands - https://tinyurl.com/44cf4htd

- Achieved custom behavior required for the application by designing an event system using OOD and SOLID principles, resulting in enhanced functionality
- Significantly increased immersion between the user and the environment by constructing an AI companion that adeptly follows the user and effectively avoids collisions in a dynamic setting

Virtual Reality to Improve Subjective Vitality

University of Twente, BMS Labs / Netherlands - https://essay.utwente.nl/89140/

- Devised VR interactions with the aim of enhancing the subjective vitality of users, leading to captivating and immersive experiences that were recorded and studied

Mirror Therapy in Virtual Reality by a Brain-Computer Interface

University of Twente, BMS Labs / Netherlands - https://essay.utwente.nl/87423/

- Developed an inclusive Virtual Reality (VR) system specifically designed for Mirror Therapy, catering to individuals grappling with Phantom Limb Pain post-amputation
- Introduced real-time data streaming between MATLAB and Unity using TCP/IP protocols, enabling 3D manipulations, and enhancing functionality of the system

Real Time Inverse Kinematics Solver – C++, OpenGL

York University Toronto, ON

- Real-time Inverse kinematics solver implemented using C++ and OpenGL, resulted in a final grade of 100
- Elevated the animation capabilities of the system by developing a spline and spline-timing solution in C++, empowering the end factor to fluidly animate and synchronize with the overall system

Real Time Spring-Mass Simulation – C++, OpenGL

York University Toronto, ON

- Constructed a interactive real-time physics simulation utilizing OpenGL, enabling mouse inputs for user interaction, and achieving simulation of over 10,000 particles