


William Halling

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About Me

As a devoted and dynamic student of software engineering at Murdoch University, I am keen on developing engaging, interactive, and enjoyable gaming experiences that foster global connections. My vision is rooted in my belief that games, whether community-driven, cooperative, or player versus player can offer individuals from diverse backgrounds a platform for interaction, free from bias or prejudice. This stems from my conviction that gaming can help break down barriers and promote inclusivity.

Technical Skills

Programming Languages:

- C++, C#, C,
- Java
- Java Script
- HTML

Game Development:

- Unity

Graphics Library:

- OpenGL

Database:

- SQL

Version Control:

- GIT / GitHub

Testing:

- Unit Testing
- Functional Testing

Projects

Food Delivery Game (2021) Software Engineer

Platform: Windows PC;

Technologies: C++, OpenGL

Brief:

Contributed to the development of "The Food Delivery Game," a fast-paced game implemented using C++ and OpenGL. The game challenges players to accurately collect and promptly deliver food items to a Finite State Machine (FSM), scoring based on order correctness and delivery speed.

Challenges:

- Successfully navigated through project management hurdles and maintained effective team communication during Covid-19 constraints.
- Provided assistance to team members struggling with code-related and personal issues, ensuring a cohesive and supportive work environment.

Technical Proficiencies & Achievements

- Gained a deeper understanding of C++ and game logic implementation by enhancing and refactoring existing legacy code.
- utilized data structures like linked lists for game objects
- Applied physics principles to implement bounding boxes and spheres for collision detection within 3D environments.
- Developed and managed Finite State Machines for controlling NPCs, incorporating mechanisms like basic Z, X plane movement, spawning, and colour change.
- Implemented game timers to regulate the pace and challenge of the game.
- Designed an intuitive user interface with pause/play functionality, significantly enhancing user experience.

Soft Skills:

Strong communication skills

Proficient in time management and planning work

Open to constructive feedback

Ability to work effectively in teams and independently

Adaptability and continuous learning

Education

Murdoch University

BSc Games Technology
(2019 - 11/2024)

- Computer Graphics Principles
 - C++ and OpenGL
- Games Design and Programming
 - C++ and OpenGL
- Game Development
 - C# and Unity Engine

BSc Computer Science
(2019 - 11/2024)

- Data structures and abstractions
 - C++
- Software Architectures
 - Java
- Discrete Mathematics
 - Linear Algebra

Eco Warriors Battle For The Climate (2022)
Software Engineer

Platforms: Android Mobile OS, Windows PC, PlayStation;
Technologies: C#, Unity Engine

Brief:

Co-developed an educational game "Eco Warriors," utilizing C# and Unity Engine. The game was designed to create awareness about the harmful effects of microplastics on marine life and the environment, requiring a balance between engaging gameplay and educational content delivery

Challenges:

- Created an effective balance between for delivering easy, interesting gameplay and meaningful educational content.
- Successfully monitored and analyzed essential player metrics such as playtime, average scores, and level completion rates, to determine effective game improvement strategies.

Technical Proficiencies & Achievements:

- Developed comprehensive understanding of Unity Engine, leading to proficiency in:
 - Implementing robust collision detection to create and dynamic gameplay experiences.
 - Organized and efficient data handling within the game using various data structures.
 - Implementing event triggers to enhance player engagement and drive the game narrative.
 - Capturing and interpreting player metrics and behaviours using data analytics.
 - Crafting and managing player characters effectively with the development of 3D object controllers.
 - Crafting immersive game environments using 3D modelling techniques.
 - Expertly crafted engaging dialogues and integrated game timers, significantly contributing to player engagement and game progression.
 - Implemented event triggers skilfully to enhance player interaction and enrich the game narrative.
- Engineered versatile input mapping to cater to PC, Android, and PlayStation, ensuring cross-platform compatibility.
- Successfully integrated game timers, contributing to player engagement and game progression.
- Displayed proficiency in tracking and analyzing vital player metrics (playtime, average scores, level completion rates) to drive game improvements

Interests

- Enthusiastic about tabletop role-playing games (TTRPGs). I greatly appreciate the collaborative storytelling and creative problem-solving opportunities that they provide.
- An avid reader of fantasy fan fiction. The creativity and diversity of fan-generated content never cease to amaze me, and often serve as a source of inspiration for my own game development projects.
- I am passionate about helping people travel through difficult times in their lives. Providing emotional support and guidance to those in need gives me immense satisfaction. My passion for helping others also reflects in my leadership style where I strive to foster an inclusive and supportive environment.
- Actively participate in online multiplayer sessions with Diablo II, Diablo III, Retail WoW, and Classic WoW. Regular interactions with the Murdoch E-Sports Discord group and Valhalla Guild form a key part of my gaming experience.

Clubs

Murdoch E-Sports (2021 - Present) - Active Member

Engaged in various e-sports events, contributing to a lively gaming community and promoting competitive gaming at a collegiate level

Valhalla World Warcraft Guild (2021 - Present) - Guild Member

As an active member of the Valhalla WoW guild for over two years, I have participated in organizing and attending open raid nights. Our guild has successfully supported each other through Mythic Dragons playthroughs, fostering camaraderie and teamwork.