Dylan MacDonald

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Education

University of British Columbia, Vancouver, B.C. **May 2024**
Bachelor of Science in Computer Science – GPA: 80%
Relevant coursework – Data Structures, Algorithm Design & Analysis, ML, AI, Relational Databases

Work Experience

Archmage, New Westminster, B.C. **October 2025 – Present**
Software Engineer (Contract)

- Building gameplay systems in C++ for real-time simulation software using Unreal Engine
- Implemented character downed state system with revival mechanics
- Built persistent area-of-effect system for managing active ability effects
- Fixed bugs in movement controller and debugging UI tools

Offworld Defence Simulations, Vancouver, B.C. **May 2021 – June 2022**
Junior Software Engineer

- Promoted from co-op to Junior Engineer after 8 months creating UE4 military defense simulations
- Built networked C++ systems that replicated game state in under 1ms, supporting 100+ simultaneous players with minimal bandwidth
- Converted Blueprint prototypes to networked C++ code, collaborating with UI team on integration
- Mentored a UI Blueprint developer in C++, helping them transition to a C++ developer role

Intel Corporation, Vancouver, B.C. **Sept 2020 – Apr 2021**
Software Engineer Co-op Student

- Built C++ performance models for Optane SSD embedded CPUs that informed architecture decisions on size and power trade offs
- Automated benchmark workflows with Python and Bash scripts, cutting manual processing time by 80%
- Wrote C++ benchmarking tests to validate and improve simulation accuracy

Projects

Bakery Battles | github.com/dmaccs/BakeryBattles

- Developing a 2D roguelike auto battler in Godot/C# where players build kitchens and battle enemies through combat, shops, and random events
- Built a CSV-to-JSON data pipeline for codeless game balance tweaking and adding new content

Skills: C#, Godot, Git, JSON, Game Design, Pixel Art

Word Hunt Tile Game | github.com/dmaccs/WordHunt

- Created a 4x4 word-finding game with a clean UI in Godot/C#
- Implemented Trie data structure with DFS to efficiently find and validate all possible words

Skills: C#, Godot, UI, Algorithms, Data Structures

Skills

Languages: C++, C#, Python, SQL, Bash
Tools & Technologies: Git, Unreal Engine, Godot, Visual Studio, JetBrains
Other: Object-Oriented Programming, Agile Development, CI/CD, Multiplayer/Networking, Benchmarking