
Summary

Former restaurant manager turned game programming master's candidate with over a decade of experience in problem solving, creative thinking, customer service, and leadership, with a lifelong passion for video games

Education

DePaul University | Chicago, IL

January 2025 — Current

Master's Candidate in Game Programming | **GPA: 4.0**

Relevant Coursework: Discrete Structures, Systems I & II, Data Structures I & II, Optimized C++, Applied 3D Geometry

Upcoming Coursework (Winter/Spring 2026): Rendering and Graphics Programming, Architecture of Real-Time Systems, Real-Time Software Development, Real-Time Multithreaded Architecture

Skills

Programming Languages: C++, Java, C, C#

Version Control: Perforce, GitHub

IDEs: Visual Studio Enterprise, VS Code, IntelliJ

Game Engines: Unreal, Unity

General: Game Design, Creative Writing, QA Testing

Projects

GameParticles Project | [Video Overview](#) | [Techniques & Results](#)

November 2025

Tech: C++, Visual Studio Enterprise, Perforce P4V Visual Client

- Refactored a middleware particle effect program using techniques learned during Optimized C++ course, including data restructuring, alignment, pass-by-reference, RVO, and SIMD intrinsics
- Achieved performance over 17 times faster than baseline

SIMD Intrinsic | [Overview & Results](#)

October 2025

Tech: C++, Visual Studio Enterprise, Perforce P4V Visual Client

- Employed SIMD intrinsic operations to hasten various calculations used frequently in game programming
- Improvements ranged from 2 to 9 times faster than standard arithmetic operations

Dynamic Memory Manager | [Overview & Results](#)

October 2025

Tech: C++, Visual Studio Enterprise, Perforce P4V Visual Client

- Implemented a user-built dynamic memory allocation system with proper coalescing
- Performed more than 3.5 times faster than standard library version during stress testing

Hot/Cold Cache Optimization | [Overview & Results](#)

September 2025

Tech: C++, Visual Studio Enterprise, Perforce P4V Visual Client

- Improved cache hit rate of linked list search by restructuring a single node object into multiple related node objects
- New data structure achieved search speeds around 40 times faster than original single-node structure

A* Term Project | [GitHub Repo](#) | [Presentation Slides](#)

June 2025

Tech: Java, IntelliJ, GitHub

- Built an A* pathfinding algorithm utilizing a Fibonacci heap as its minimum priority queue
- Includes a user-built adjustable GameBoard (graph) generator with visual output for testing and demonstration

AEOS | [Game Link](#) | [GitHub Repo](#)

May 2024

Tech: C#, Unity2D, VS Code, LibreSprite, GitHub

- Solo developed in five days for Pixel Jam 2024 (theme: "aqua")
- "A narrative drift through space" with an unconventional Zero G-mimicking control system, hit-stop effects, custom pixel art, and a secret "hard mode" reward for surviving to the end

Dan Never Leaves | [Game Link](#) | [Video Overview](#) | [GitHub Repo](#)

August 2023

Tech: C#, Unity3D, VS Code, GitHub

- Capstone game prototype for MIT, realistically simulating a shift as a restaurant server
- Playtested, iterated, and developed over one month

Additional Education

Massachusetts Institute of Technology | Remote
Professional Certificate in Game Design

April 2023 — September 2023

- Six month course through MIT Game Lab focusing on game design principles, iteration, and prototyping
- Developed capstone game prototype (*Dan Never Leaves*) simulating life as a restaurant server

Washington University in St. Louis

August 2007 — August 2011

B.A. Special Major in Irish Studies, Minor in English Composition

- Varsity Soccer 2007-09
- Varsity Football 2010
- Phi Delta Theta Leadership Council, Risk Manager 2010-11

Work Experience

American Legion Post 42 Bar — Evanston, IL

June 2024 — October 2025

General Manager

- Rehabilitated an underperforming bar facing closure, restoring profitability within two months
- Increased cash reserves by over 1400% within one year
- Responsible for staffing, scheduling, purchasing, event bookings, and much much (*much*) more

Farmhouse Evanston — Evanston, IL

September 2021 — December 2022

Assistant General Manager, Beverage & Bar Manager, Head Bartender

- Delivered an average monthly profit of over \$50k from LBW sales
- Collaborated with head chef on cocktail and kitchen ingredients to reduce food waste and costs
- Self-taught cutting-edge cocktail techniques (fat washing, chemical acids, emulsifiers, etc.)