

Dan Clarke

Software Engineer and Game Designer

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SUMMARY

Accomplished senior software engineer with over 10 years of experience implementing full-stack technical solutions. Possesses skills in software architecture, user experience design, and team leadership. Seeking a position that requires creative solutions to help technology solve real issues for humans.

EXPERIENCE

Technical Lead

June 2026 – Present

AXL, Toronto, ON

- Designed UX for novel apps across different disciplines such as law and logistics.
- Deployed full stack applications in tight timeframes for new companies, helping founders secure initial series A funding.
- Directly managed teams of engineers and led software architecture creation.
- Implemented early stage engineering best practices both internally and for client companies.

Senior Software Engineer

September 2020 – January 2026

Meta – Reality Labs Research, Toronto, ON

- Designed and developed prototypes for research scientists and designers to explore novel UX patterns.
- Architected and engineered research engines for Unity and React to accelerate research studies. These engines were used in more than 30 user research studies.
- Led teams of designers and engineers to develop flagship demos for senior leadership. Helped showcase impact of team's research for product integration.
- Worked on several research technologies that ended up in featured product releases such as hand writing models for Ray Ban Display glasses, object detection for Quest 3, and AI agents for Horizon Worlds.

Cofounder and Prototyping Lead

January 2019 – September 2020

Chatham Labs, Toronto, ON

- Developed prototypes and demonstrations of novel research technologies.
- Developed a game engine and demo to illustrate the Trillium aim assistance model at several research conferences, resulting in multiple client engagements.
- Implemented several internal engines for faster and more accurate data collection.
- Developed novel hardware prototypes to rapidly test new user input paradigms and gestures for VR and AR systems.

President and Lead Engineer

August 2018 – Present

Bear Cloud Games, Kingston, ON

- Design and develop games and simulations for researchers and professors.
- Produce games for a variety of platforms such as VR, AR, and mobile.
- Work directly with clients to create games that achieve research goals.

EDUCATION

M.Sc. Computer Science

Queen's University — EQUIS Lab

2016 – 2018

B.CMPH. Game Design

Queen's University

2011 – 2016

SKILLS

- User experience design and visual identity implementation for software.
- Proficient in a variety of game engines (Unity, Unreal Engine, Godot).
- Comfortable with a variety of app development frameworks such as SwiftUI, Jetpack Compose, and React Native.
- Full stack web development in Hugo, Astro, and React with a variety of PostGRE systems.
- Strong communication skills. Can edit and produce video content for projects.
- Managed teams with diverse backgrounds. Worked with stakeholders from a variety of academic backgrounds.
- Familiar with a variety of project management tools and practices.

SELECTED PROJECTS

Cyberball 2

- VR game to research how people react to situations of bullying.
- Developed for researchers at Queen's University's Department of Psychology.
- Players pass a virtual ball to computer controlled players. Participants are told that players are human controlled remotely. These virtual players can be scripted to exclude specific individuals.
- Developed novel C# application to read data from a bluetooth heart rate monitor.

Liberi

- Suite of online multiplayer exergames designed for children with cerebral palsy.
- Players must pedal a stationary bicycle in order to move their avatars.
- Worked on network code and new game features for multiple studies.
- Developed novel C++ and C# code to allow Bluetooth Cadence sensors to communicate with Unity Games.

Holographic Trauma Bay Simulation

- A dynamic training simulation for Queen's University's School of Medicine.
- Difficulty of scenario scales based on participant's perceived skill level.
- Simulation is controlled using a machine learning algorithm that assesses skill level.
- Using the HoloLens, a medical training dummy is augmented to show changes in breathing, pupil dilation, and physical trauma.

VR Engineering Discipline Selection Games

- A pair of virtual reality tours to highlight interesting features of two disciplines of engineering: mining and engineering chemistry.
- Players perform a variety of quick activities such as drive a mining vehicle, mix explosives, and charge fuel cells.