

# DANIEL MACCORMICK, Gameplay Programmer

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## Highlights of Qualifications

- Excellent understanding of C++ developed through creating games, modifying Unreal Engine's base source code, and writing a number of DLLs
  - Excellent understanding of C# and Unity developed by creating several award-winning games, tools, and projects
  - Strong knowledge of OpenGL through the creation of 'Bustle', a game built from the ground up in C++ and OpenGL
  - Strong interpersonal and leadership skills developed through managing many projects and working in teams of 4 to 7 members
  - Strong technical writing and presenting skills developed through authorship and presentation of several published scientific articles, as well as acting as a client liaison
  - Knowledge of Java, Python, JavaScript, HTML, CSS, SQL, and PHP, all developed through various projects and courses
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## Education

### Master's of Computer Science

May 2019 – April 2021

Ontario Tech University, Oshawa, ON

- Specialization in Digital Media
- Awarded Ontario Graduate Scholarship (OGS) in 2019 and 2020 (declined in 2019)
- Awarded Canada Graduate Scholarship (CGS-M) in 2019

September 2015 – April 2019

### Bachelor of Information Technology (Honours) – Game Development and Entrepreneurship

Ontario Tech University, Oshawa, ON

- Minor in Game Programming
  - Graduated summa cum laude with cGPA of 4.13 / 4.3
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## Projects

### Echo – Master's Thesis Project

May 2019 – Present

- Devised and built novel tool in C# with Unity to analyze and evaluate gameplay sessions
- Authored full paper discussing tool and related findings, resulting in a publication to top-tier conference, CHI PLAY 2020

### SuBViS – Undergraduate Research Fellowship Project

May 2018 – April 2019

- Implemented a custom C++ modification for the Unreal Engine's Blueprints system to allow for use and managing of alternative behaviours
- Composed full paper that was published and presented at FDG 2019

### iOS and Android App for Client – 4<sup>th</sup> Year Capstone Project

September 2018 – April 2019

- Liaised with clients and managed team of 7 to ensure mobile app was developed to specifications, resulting in the Best Capstone Project award
- Lead the programming team on the client side in Unity with C# to create a number of requested features and interfaces
- Spearheaded the creation of remote SQL server with PHP control scripts to house data for the application

**Roboat Racing – 3<sup>rd</sup> Year Term Project Game****September 2017 – April 2018**

- Organized team of 5 members through agile methodology to facilitate communication and collaboration between members
- Performed backend programming in C# with Unity to create platform for gameplay, achieving the Best 3<sup>rd</sup> Year Game Award
- Solely responsible for networking the game in C++ and WinSock via a DLL to allow for up to 4 synchronous players
- Showcased at EGLX 2018 and Level Up 2018 to connect with potential customers

**Bustle – 2<sup>nd</sup> Year Term Project Game****September 2016 – April 2017**

- Created and maintained C++ and OpenGL framework to facilitate efficient data pipelines
- Assisted with gameplay programming, resulting in a polished experience for players
- Collaborated and coordinated efficiently within a team of 6 members to ensure game was developed on schedule
- Exhibited at Level Up 2017 to garner feedback and insight from broad player-base

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**Experience****Teaching Assistant for Game Development Workshop I and II****September 2019 – Present**

- Utilize C++ and OpenGL knowledge to troubleshoot student issues
- Assist coordinator with grading of deliverables and management of students to ensure information is delivered to students in a timely manner
- Lead workshops on important game development concepts to guide undergraduate students with the creation and design of their term projects

**Undergraduate Research Fellowship****May 2018 – April 2019**

- Designed a modification to Unreal Engine that facilitated the use and management of alternatives in Blueprints
- Implemented the modification directly into the Unreal Engine C++ source code, resulting in an efficient and functional prototype
- Composed, published, and presented a full paper at FDG 2019

**Virtual Reality (VR) Game Developer and Technical Lab Writer****May 2017 – August 2017**

- Developed VR game in C# with Unity for faculty to present at open-house events
- Collaborated with 3 team members to deliver the highest quality project possible
- Devised technical lab manuals for first-year C++ programming classes to educate new students on best programming practices

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**Extracurriculars**

- Brackey's Game Jam (August 2020)
- GMTK Game Jam (July 2020)
- TOJam'20 (May 2020)
- Global Game Jams (January 2018, 2019, 2020)
- Ontario Tech Game Development Society Game Jams (October 2017, 2018, 2019), awarded 1<sup>st</sup> place in 2017
- Ontario Tech Rocket League Tespa E-Sports (September 2018)