# **Dhruv Warrier**

Enthusiastic second year computer engineer excited about **creating things** and always looking to learn from them. I'm passionate about game development and entrepreneurship. I'm capable at front-end web design, and have experience with C# (Mono), JavaScript, C++ and C.

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To me, it's magical to see how something really simple can transform into something complex, and this is what excites me about writing code. I am looking for an internship that will help me grow with your company, and constantly push me to **create and learn new things**.

## experience

Research Assistant DEC 2017 - PRESENT

I'm a member of Dr. Tamer Diraby's research group, creating software tools for civil engineers using insights from Dr. Diraby's research. Our current focus is "city-builder", a tool that can help civil engineers design roads and cities. I'm part of a team of 2 designing and implementing the software in **C# (Mono, cross-platform)**.

- I designed a backend framework that allows the user to import and export ".city" files that are used to load 3D cities ready to be edited into the 3D view.
- I developed an API that communicates with the 3D renderer, to make possible instantiating roads/lanes and editing their properties, without worrying about how the renderer handles 3D objects.
- We present our work every 2-3 weeks to the research group.

#### **Founder of Broken Table Studio**

SEP 2017 - PRESENT

Ø brokentablestudios.com, 
 Ø github.com/dhruvwarrier/905

I founded BTS, a small indie game studio with members from Toronto, USA, and India. I direct and manage all the teams from the Creative and Development (Programming/3D modelling) teams to the Project Management and Executive teams. I also actively work on programming and 3D modelling design. We're working on our first game: **905**. 905 is a game about robots and the Zeroth Law, and is being developed on **UnityEngine in C#**.

- I developed the movement and animation systems for the enemy robots and the main robot character.
- I designed the objective manager system, a system that stores and keeps track of ingame objectives and actions.
- We have an early playable demo! <u>brokentablestudios.com/demo</u>. It showcases our 3D modelling design and an old, early version of the movement/animation systems.

#### **Co-founder at Pulse**

Ø mypulse.ca

I started and co-founded Pulse, a start-up sponsored by the Entrepreneurship Hatchery NEST, a startup incubator at University of Toronto (<u>uofthatchery.ca</u>). Pulse is currently exploring ways to improve the events experience for young professionals and organizations, with a focus on networking and career-related events. Pulse gave me insights into how ads/events are targeted to people, and the current landscape of privacy concerns over how data is used.

- I directed and pitched our product at biweekly pitch sessions in front of a panel of investors, and worked with our mentors to constantly increment our product.
- I worked with multiple on-campus student groups to campaign the use of Pulse within the student community, and to hear their grievances regarding the event organization and attendee experiences.
- I developed our current website at <u>mypulse.ca</u> using HTML, CSS, JS and jQuery.

### skills

<ul> <li>HTML5</li> <li>CSS3</li> <li>JavaScript</li> <li>jQuery</li> <li>Jade (Pug)</li> </ul>	<ul><li>C# (Mono)</li><li>Unity</li><li>Blender</li><li>Photoshop</li></ul>	<ul><li>C#</li><li>JavaScript</li><li>C++</li><li>C</li></ul>	<ul> <li>Git</li> <li>Visual Studio 2015</li> <li>MATLAB</li> <li>MS Office</li> </ul>

## projects

**905:** A game about the Zeroth Law. Being developed at Broken Table Studio on UnityEngine in C#.

**othello-ai:** An AI that plays the board game Othello. Features a command-line interface. Written in C.

**bending-moment-analysis:** Analyses the max bending moment of a train passing over a bridge. Features a 2D simulation. Written in C#.

**pi-mirror:** A smart mirror platform for the raspberry pi. In early development using electron.js and express.js.

- github.com/dhruvwarrier/905
- brokentablestudios.com/demo
- github.com/dhruvwarrier/othello-ai
- github.com/dhruvwarrier/bendingmoment-analysis
- github.com/dhruvwarrier/pi-mirror

### education

## University of Toronto St. George

BASc Computer Engineering (GPA 3.27) SEP 2017 – APRIL 2021 (expected)

Elected First Year CompEng class representative

- ECE212: Circuit Analysis
- ECE241: Digital Systems
- MAT291: Calculus III
- ECE244: Programming Fundamentals
- MAT290: Advanced Eng. Mathematics
- ECE201: Elec. & Comp. Engineering Seminar

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