

RYAN (YUHUAN) DENG

1B Software Engineering

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SKILLS

Languages: Python, C, C++, C#, Java, HTML/CSS, JavaScript

Technologies: Flask, PyGame, VPython, Bootstrap, Unity, Unix, Git, Bash

PROJECTS

[3D Pong](#) 🐍 | Python, VPython

Feb.2019 – Mar.2019

- Developed a **3D** version of the classic game Pong using **Python** with the **VPython** Library which implemented an AI opponent and multiplayer support
- Implemented logic for handling collision of ball with irregular shapes to support unexpected motion of the ball.

[Top Down Zombie Shooter](#) 🐍 | Python, PyGame

Apr.2019 – Jul.2019

- Developed a **tile-based** game in **top-down** style using **Python** with the **PyGame** library which implemented various game design elements such as music, animation, player inventory, and a level up system
- Implemented an algorithm that enables zombies to chase the player while keeping a distance between themselves
- Utilized **OOP** techniques to manage classes of game characters as well as their **sprites**

[Impossible Platformer](#) 🐍 | C#, Unity

Jan.2018 – Feb.2018

- Developed a **2D platformer** game using **Unity** with **C#** which implemented moving enemies and traps
- Implemented realistic physics of the player using the built-in physics engine in **Unity**

[ShopSmart](#) 🐍 | HTML/CSS, JavaScript

Jan.2020 – Jan.2020

- Developed a **Chrome Extension** with **HTML**, **CSS**, and **JavaScript** that allows the users to set a budget and gently reminds them to stop impulse purchases on Amazon
- Utilized **Alert Box** and **HTML injection** to give users the option to view price statistics of a selected item

[Stock Scraper](#) 🐍 | Python, Requests, BS4, Selenium

Feb.2019 – Mar.2019

- Developed a **Web Crawler** on a stock website that returns relevant information based on a given keyword using **Python** with **Requests**, **BeautifulSoup4**, and **Selenium** libraries
- Applied **FileIO** techniques and **spreadsheets** manipulation to store the result of the crawler into a **CSV** file
- Developed an algorithm for generating expected URL for the target website

ACTIVITIES & INTERESTS

Programming Lead of the FIRST robotics team 7022

Sep.2017 – Jun.2019

- Developed a line tracking algorithm in Java that adjust the robot's movement based on a camera feed
- The robot finished with a result of **top 25%** in the Ontario District in 2018

Core Member of the Math Contest Team

Sep.2015 – Jun.2019

- Participated in school board (WCDSB)'s math competitions and acquired **three times champion**.

Active Member of the Programming Club

Sep.2017 – Jun.2019

- Achieved **top 2%** on the Junior Canadian Computing Competition 2019

Hobbies: Music (Guitar & Piano), Solving puzzles (Speed Cubing), Fitness (Personal Trainer), Reading literatures

EDUCATION

University of Waterloo

Candidate for Bachelor of Software Engineering, 1B Software Engineering

Waterloo, ON

Sep.2019 – Present