

Jenny Xia | Systems Design Engineering

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Experience

Software Developer

Miovision | Sept - Dec 2018 | Kitchener

- Developed features for Miovision's data collection and analysis web application, utilizing **Ruby on Rails**, **React/Redux**, **MySQL**, and **AWS S3**.
- Implemented performance testing with **Gatling** and **Datadog** that resulted in tuning and reduction of application server costs by half.

Deep Learning Research Assistant

Vision and Image Processing Lab | Jan 2019 - Present | Waterloo

- Implementing Google Brain's **struct2depth** to generate depth mapping of an indoor space through unsupervised learning with monocular video, using **Tensorflow** and **Python**. Supervised by Dr. John Zelek.

VR Developer

Canadian National Institute for the Blind | Jan - Apr 2018 | Toronto

- Developed a subway platform simulation for orientation and mobility rehabilitation usage for CAVE VR and HTC Vive, using **Unity3D** and **C#**.
- Created a camera rig prefab using **C#** for CNIB's non-cluster based CAVE setup, allowing future scenes to be developed for \$5,000-\$10,000 less.

Electrical Engineering Team Member

Midnight Sun Solar Race Car Team | May 2018 - Present | Waterloo

- Designed schematics and PCB using **Altium Designer** for the driver control steering interface, utilizing RC low pass filters and Schmitt triggers for noise reduction along analog and digital inputs.

Crisis Responder

Kids Help Phone | Mar 2018 - ongoing volunteer position

- Utilized active listening, empathy, and collaborative problem solving skills to provide prompt, effective emotional support to youth in crisis.

Skills

Dev: C/C++, C#, Ruby, Python, HTML, CSS, React.js, Unity3D

CAD/3D: AutoCAD, Solidworks, Altium Designer, SketchUp, Rhinoceros 3D, Blender, V-Ray

Design: InDesign, Illustrator, Photoshop, hand drafting

Build: 3D printing, laser cutting, CNC, model making

Education

Systems Design Engineering

University of Waterloo

2017 - 2022 (expected)

Dean's Honours List

89.71% / 3.95 GPA

Architectural Studies

University of Waterloo

2014 - 2016

Dean's Honours List (2A)

International Experience Award (2016)

Interests

I paint, read, run, play piano & erhu, and tattoo in my spare time. Currently designing a board game about software development.

Projects

Money money money

Developed a raining money VR application using **C#**, **Unity3D** and the **LeapMotion API** for Oculus Rift that allows you to swim in cash.

Shottle

Lead the product design for a two chambered bottle with a spring loaded lid that encourages hydration and responsible alcohol consumption, modelled in **Solidworks** and prototyped using **3D printing**.

Spinny Binny

Developed a game using **C++**, **SFML**, and Ubisoft's **NEST API** that educates the player about common misconceptions about what can and cannot be thrown in your recycling bin.