

# Jaden Wang

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## EDUCATION

**University of Toronto Scarborough** - *Honours Bachelor of Science*  
(Computer Science Specialist - Software Engineering & Statistics Major)

cGPA: 3.44/4.0 | September 2017 - September 2021

**Relevant Coursework:** Software Design, Software Tools and Systems Programming, Design and Analysis of Data Structures  
Computer Organization, Databases and Web Programming, Theory of Computation

## EXPERIENCE

**University of Toronto Scarborough, ON** - *Undergraduate Teaching Assistant*

September 2018 - Present

- Led labs that taught computer science fundamentals and Python to over 700 students (Introduction to Computer Science I). Topics that were covered include sorting, file I/O, and Python internals.
- Taught the essentials of data structures and algorithms using C (Introduction to Computer Science II). Topics that were covered include complexity analysis, graph theory, and memory management.

**Codefusion Communications Inc, ON** - *Computer Analyst Intern*

March 2016 - June 2016

- Saved 2+ hours per day by implementing automatic solutions to tasks, including managing internal servers and workstations, via PowerShell and Bash scripting.
- Assisted company clients with troubleshooting technical problems involving servers and workstations.

## PROJECTS

**Carnet2** - [github.com/jadenyjw/carnet2-arduino](https://github.com/jadenyjw/carnet2-arduino)

- Engineered a **self-driving car** with a trainable neural network that can maneuver through arbitrary paths.
- Designed and trained a convolutional neural network with 70% accuracy on self-collected data.
- **Technologies Used:** *Software:* Python, Keras, OpenCV | *Hardware:* Arduino

**Tanks** - [github.com/jadenyjw/tanks-backend](https://github.com/jadenyjw/tanks-backend)

- Implemented a **real-time multi-client server** for a tank game accessible at <https://tanks.ml>, utilizing websockets for peer communication.
- **Technologies Used:** *Backend:* Node.js | *Frontend:* React.js, Pixi.js | *Systems:* NGINX, Google Cloud

**DrawPVP** - [github.com/jadenyjw/drawpvp](https://github.com/jadenyjw/drawpvp)

- Created a **multiplayer game** where players doodle against each other to have their drawings judged by a neural network with 85% test data accuracy.
- Implemented local area network transmission between multiple clients and a server.
- **Technologies Used:** JavaFX, DeepLearning4J, Kryonet

**Waveform Visualizer** - [github.com/jadenyjw/waveform-visualizer](https://github.com/jadenyjw/waveform-visualizer)

- Designed a **waveform visualizer** that displays various audio transformations received through a microphone input and plays it back in real-time with transformations applied.
- **Technologies Used:** Verilog, FPGA

## LANGUAGES & TECHNOLOGIES

Java | Python | C | Linux | Git | SVN | Javascript | HTML | CSS | SQL