





# Qingyuan Wu

Second Year Machine Intelligence Engineering Student

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## PROJECTS

### NASA IMAGE GALLERY | HTML, CSS, JAVASCRIPT

- **Built and deployed** a medium-scaled **fully responsive** website **from scratch** that displayed NASA's Astronomy Picture of the Day images in real time
- Other features include a **Three.js-powered background** and **accessible design**

### AUTOMATED GRADE CHECKER | PYTHON, SELENIUM

- Used **Selenium** and a **WebDriver** to log into a school website to check for newly released grades
- Gained experience with **Web scraping** and **parsing HTML data**

### SMARTLY CROPPING IMAGES | C, PYTHON

- A program that performed seamcarving – an **image resizing technique** that removed one vertical “seam” of pixels at a time while **preserving important parts of the image**
- Used **dynamic programming** to compute the “minimal energy path” of pixels to be removed

### LINEAR ALGEBRA CALCULATOR | HTML, CSS, JAVASCRIPT

- A **Chrome extension** that performed some common linear algebra computations, including determinants, inverses, and Gaussian Elimination

## EXPERIENCES

### U OF T ENGINEERING ACADEMY | CODING INSTRUCTOR

May 2021 – Aug 2021

- Taught over **150 students Python** and **C** programming over the course of the work term
- Designed **over 20** engaging problems

### MOVABLE FENCE | ENGINEER

Jan 2021 – Apr 2021

- Conceived and built a **fence on wheels** concept for a small-scale Ontarian farmer
- Allowed for easy fence relocation
- The design opportunity was selected as the **top 10 out of 80** opportunity proposals based on legitimacy and potential for impact

### U OF T FORMULA RACING | ENGINEER

Jan 2021 – present

- Introduced corner modules to store the vehicle's non-critical sensors, **reducing wire weight by 15g**
- **Built 5-10 carbon layups** for the vehicle's front and rear wings

## EDUCATION

### UNIVERSITY OF TORONTO

BASC IN ENGINEERING SCIENCE

MAJOR: MACHINE INTELLIGENCE

Sept 2020 - May 2024 (expected)

Cum. GPA: 3.95 / 4.00 | 91% average

## TECHNICAL SKILLS

### LANGUAGES

Python • JavaScript • HTML  
CSS • SQL (Postgres) • C  
bash • Assembly • MATLAB

### TOOLS/TECHNOLOGIES

React • Git • Linux commands  
L<sup>A</sup>T<sub>E</sub>X

### CONCEPTS

- Object Oriented Programming
- Code documentation
- Software testing
- REST APIs
- SQL queries
- Data structures and algorithms, including trees, Dijkstra's, and backtracking
- Neural Networks

## COURSEWORK

- Databases (PostgreSQL)
- Machine Learning (PyTorch)
- Data Structures & Algorithms (Python, C)
- Object Oriented Programming (Python)
- Linear Algebra (MATLAB)
- Engineering Design (CAD)
- Multivariable Calculus
- Digital & Computer Systems