

# DAVID FELDT

MECHATRONICS ENGINEERING

## PROJECTS

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### Air Hogs Racer | Custom IR Remote Control Car

September 2020 - Present

- Integrated IR sensor to read signals from old helicopter remote using C++ and Arduino to control vehicle
- Designed chassis using Fusion 360 to secure all electronics components with a sleek design

### Mini Smart Home | IoT House Prototype

February 2020

- Configured a miniature IoT smart home using WIFI chip Arduino and MQTT event broker to control home
- Integrated mini OLED display, LEDs, Servo and DC motor using circuit design techniques for proper power allocation

### BIN | IoT Mailbox

February 2020

- Built a mailbox with custom locking mechanism using Arduino to protect against package theft
- Conceptualized front-end application using Figma to demonstrate usage capabilities

### Delta Storage | AI Inventory Rover

January 2020

- Built robot capable of updating inventory using Arduino and SolidWorks to locate items
- Integrated Google Cloud Vision API to update live inventory

## WORK EXPERIENCE

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### Thompson Flow Investigations | Technical Assistant

June 2020 – August 2020 | Mississauga, ON

- Developed torontosmokestesting.ca website, using HTML/CSS, JavaScript with contact form and interactive map, to notify residents of sanitary sewer testing being conducted
- Streamlined flow sensor database using excel programming to create a more effective spreadsheet
- Formulated flow sensors field data using command line scripts to prepare results for clients

### UW Alternate Fuels Team | Mechanical Team Member

January 2020 - June 2020 | Waterloo, ON

- Devised testing procedure for custom fuel tank through researching design specifications to ensure no leaks
- Progressed construction of hybrid electric vehicle by fastening components in appropriate manner

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## SKILLS

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### SOFTWARE

C/C++, Python, HTML/ CSS, JavaScript

### TOOLS

Arduino, Bootstrap, jQuery, GIT

### OTHER

AutoCAD, SolidWorks, Fusion 360, Microsoft Office, Adobe Suite

## OTHER EXPERIENCE

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### EDUCATION

#### UNIVERSITY OF WATERLOO

BASc Honours Mechatronics Engineering

Expected May 2024

#### UDEMY

Complete 2020 Web Development Bootcamp

Expected November 2020

Complete Data Science & ML Bootcamp

Expected November 2020

### AWARDS

#### Best Productivity Hack

Deltahacks6 | 2020

#### Euclid Certificate Recipient

Euclid Math Contest | 2019

#### School Medal and Certificate Recipient

Waterloo Senior Math Contest | 2018

#### Senior Athletics Letter Award | 2018

Secondary School | 2018

### CERTIFICATIONS

G2 License, Standard First Aid

## INTERESTS

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### ATHELETIC

Hockey, Badminton, Ultimate Frisbee, Baseball, Tennis

### HOBBIES

Skateboarding, Digital Art, Journaling, Arduino, Photography, Film