

# PAIGE MCDOUGALL

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## EDUCATION

**Bachelor of Applied Science in Computer Engineering**, University of Toronto Expected May 2027

**Relevant Courses:** Data Structures and Algorithms, Fundamentals of Deep Learning, Software Communication and Design

## SKILLS

<b>Programming Languages</b>	C/C++, C#, Python, HTML/CSS, JavaScript, MATLAB, Verilog, Nios II
<b>Other Technologies</b>	FPGA, AutoCAD, ModelSim, LT Spice, PyTorch, TensorFlow, Git, React, Linux/Windows

## PROJECTS

**Eeveelutions Object Detection Model** August 2024

- Developed a **deep learning CNN model** in **PyTorch** using transfer learning on **Densenet** to classify and detect Eeveelutions in Pokémon Go images.
- Implemented a custom dataset with 120 labeled images and created bounding box annotations using **CVAT**.
- Achieved 89% classification accuracy using **Adam optimizer**, and **cross-entropy loss**, enhancing newer users' experience.
- Enhanced model efficiency by fine-tuning hyperparameters, reducing inference time by 30%.

**Donkey Kong FPGA Game** March 2024

- Designed and implemented game architecture on an FPGA system, achieving seamless VGA output with zero frame loss using **C** and **NIOS II**.
- Demonstrated proficiency in real-time signal processing, embedded systems, and a passion for innovation.

**Graphical Information System Tool** July 2023

- Developed route-finding map application using **C++**, **OpenStreetMaps API**, **EZGL**, (**DELETE RANDOM LIBRARIES**) and **libcurl** to display dynamic map details as well as **Python** for algorithm testing.
- Processed data, implemented search algorithms such as **Dijkstra**, **A\***, and **Greedy algorithm** with 3-/4-OPT and ensured equity and accessibility by applying visual design heuristics. (INCLUDE ACC AND EFF %)

## EXTRACURRICULAR INVOLVEMENT

<b>Orientation Leader</b>	September 2022, 2023, 2024
University of Toronto	Toronto, ON

- Organized and led events for over 200 incoming engineering students, fostering community and inclusivity.
- Developed leadership and teamwork skills by coordinating with fellow leaders to ensure a smooth orientation week.
- Engaged in mentorship by providing guidance and support to first-year students.

<b>Co-Founder, Electric Motorcycle Design Team</b>	July 2024 - Present
University of Toronto	Toronto, ON

- Spearheaded the creation of the first electric motorcycle design team at the University of Toronto.
- Collaborated with team members to establish team foundations, project timelines, and allocate responsibilities.
- Organized outreach efforts to promote the team's work, securing resources and sponsorships from external partners.

## EXPERIENCE

<b>Barista</b>	May 2022 - Nov 2024
Starbucks	Toronto, ON

- Utilized point-of-sale systems and inventory management software to track and manage stock levels and orders.
- Demonstrated adaptability by quickly learning and implementing new routines, recipes, and seasonal promotions.
- Leveraged strong time management skills to handle a high volume of orders efficiently during peak hours.