

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

Programming Languages	C/C++, C#, Python, HTML/CSS, JavaScript, MATLAB, Verilog, Nios II
Other Technologies	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.

EXTRACURRICULAR INVOLVEMENT

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

- 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.

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

- 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

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

- 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.