

Adlai Bridson-Boyczuk

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EDUCATION

Queen's University

Kingston, ON

Bachelor of Computing (Honours), Specialization: Artificial Intelligence

Sept 2020 – April 2024

- **Relevant Coursework:** Neural and Genetic Computing, Reinforcement learning, Algorithms, Data Structures, Artificial Intelligence, Operating Systems, Software Quality Assurance, Software Architecture
- 3.7/4.3 GPA, Dean's Honour List (2021-2022, 2022-2023, 2023-2024)

SKILLS

Programming Languages: Python, Typescript, JavaScript, Java, C, Bash

Frameworks & Libraries: React, Node.js, Express.js, Flask, HTML, CSS, TailwindCSS

Machine Learning & AI: TensorFlow, Keras, PyTorch, YOLOv5, pandas, NumPy

Technologies & Tools: MongoDB, SQL, RESTful APIs, Pytest, Linux, Machine Learning, Git, Docker, VSCode, Agile, Waterfall, Scrum, OOP, Communication

EXPERIENCE

Software Developer

July 2024 – Sept 2024

Proxima Command

Toronto, ON

- Programmed a Python-based starship emulator using Pygame, creating a proof-of-concept for a physical game room where two teams could compete against each other.
- Collaborated with a mechanical engineer to integrate Raspberry Pis across stations, ensuring efficient data transfer and handling multithreading challenges like race conditions, which made the system more scalable and feasible for future development.

Front-end Developer

May 2023 – Jan 2024

The World of Yasu

Toronto, ON

- Developed a visually engaging main page with a custom animation intro using React and Tailwind CSS, resulting in a **10% decrease in bounce rate** and an **increase in average session duration by 30 seconds**
- Designed and integrated a newsletter component with SendGrid to **boost viewer retention**, using TypeScript, React, and Firebase for back-end services.
- Worked and communicated closely with the owner and graphic designers, translating business objectives into functional UI components, and optimized the user experience across various devices using Figma.

General Member/Developer

Sept 2022 – April 2023

QUANTT (Queen's University Algorithmic Network & Trading Team)

Kingston, ON

- Developed an automated trading strategy using Python, leveraging economic data from Tech and Real Estate sectors, utilizing SMA and RSI indicators for short sales.
- Achieved an 18% return over 3 years, demonstrating the effectiveness in capturing short-term market movements.

PROJECTS

UAV Detection Capstone Thesis | *Python, PyTorch, YOLOv5, OpenCV, MATLAB, NumPy, pandas*

- Developed a YOLOv5-based detection system with PyTorch, achieving 77% accuracy in detecting UAVs from other aerial objects, using OpenCV to visualize and normalize label data.
- Achieved 94.4% precision and 93.2% recall, showing robustness in real-world UAV surveillance.

Arcade-Rate | *Typescript, React.js, Express.js, Firebase, Firestore, HTML, CSS,*

- Built a full stack web application used to rank, compare, and track video games.
- Data from IGDB connected through an express.js backend hosted using Firebase cloud functions and Firestore.

Qbnb | *Python, Flask, MongoDB, Pytest, Linux, Docker, Github actions*

- Built on a Python-based CLI app for property rentals with a Flask backend, managing user data in MongoDB
- Implemented automated unit/integration tests using Pytest and GitHub actions, ensuring high-quality CI/CD pipelines while following an agile development cycle.

CNN for Tomato Disease Classification | *Python, Jupyter Notebooks, NumPy, TensorFlow, Keras*

- Created a Convolutional Neural Network for classifying tomato leaf diseases in 10 classes with 11,000+ images.
- Achieved a **validation accuracy of 75%** after implementing dropout layers to combat overfitting.