

Adlai Bridson-Boyczuk

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EDUCATION

Queen's University

Kingston, ON

Bachelor of Computing (Honours) in Computer Science

Sept 2020 – April 2024

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

EXPERIENCE

Junior Developer

May 2023 – present

Yasu Energy

Toronto, ON (Remote)

- 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.
- Collaborated closely with the owner and graphic designers, translating business objectives into functional web design, and optimized the user experience across various devices using Figma.

Software Developer

Sept 2022 – April 2023

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

Kingston, ON

- Created an automated algorithmic trading strategy using Python on QuantConnect platform, backtested against the S&P index
- Leveraged economic data from Tech and Real Estate sectors, analyzed using Pandas library, to filter securities and trigger short sales using Simple Moving Average (SMA) and Relative Strength Index (RSI) technical indicators.
- Achieved a profitable outcome with an 18% return over a 3-year period, demonstrating the effectiveness of the strategy in capturing short-term price movements in the financial markets.

Back end Web Developer

Jan 2023 – May 2023

Queen's Web Development Club

Kingston, ON

- Developed a Node.js server, HTML/CSS/React/Bootstrap web platform for "A Great Start to Families" community outreach program. (Family focused community center giving families access to different services and programs.
- Created a user-friendly content management system (CMS), providing a seamless experience for administrators

PROJECTS

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

- Built on a Python-based CLI app for property rentals and booking using a back end Flask server, managing user data in MongoDB
- Followed an agile development cycle and utilized Pytest for unit and integration testing to ensure product quality

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.
- Using data from IGDB connected through an express.js backend with firebase cloud functions.

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

- Created a Convolutional Neural Network for classifying various diseases in tomato leaves with greyscale data.
- Achieved a validation accuracy of 75% after simplifying the architecture and implementing dropout layers to combat overfitting.

Securities Trading Algorithm | *Python, Jupyter Notebooks, NumPy, pandas, QuantConnect, Scikit-learn*

- Developed a Python securities trading algorithm that achieved 18% profit in 3-year backtest against S&P 500

myLibrary | *C++, MySQL, Sqlite3, Qt*

- Designed and developed a cross-platform GUI desktop application to track and manage my reading habits

SKILLS

Languages: Python, Java, JavaScript, Typescript, C, Bash, x86 Assembly

Libraries & Frameworks: Node.js, Express.js, React, TensorFlow, PyTorch, Flask, HTML/CSS, jQuery, Unity

Technologies: MongoDB, MySQL, REST APIs, pandas, NumPy, Pytest, Linux, Arduino, Excel, Git, Docker, VS Code