

ADLAI BRIDSON-BOYCZUK

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EXPERIENCE

Software Developer

July 2024 – Oct 2024

Proxima Command

Toronto, ON

- Developed software in Python for an 8-player, 2-team physical arcade-style [starship simulator](#) using Pygame.
- Integrated physical controls working with a mechanical engineer, using PySerial to connect to Arduino unos ensuring reliability and real-time communication.
- Optimized data handling to minimize latency, reducing input delay by 30ms and improving responsiveness.
- Implemented a multithreading system using Python's threading and asyncio, allowing for concurrent player actions across stations. Used mutex locks to prevent race conditions improving system stability by 40%.
- Completed the project with a functional in-person demo, which we presented to the company owner.

Junior Developer

May 2023 – Jan 2024

The World of Yasu

Toronto, ON

- Created a [web app](#) with a custom animation intro for a healthy energy drink startup company using TypeScript, React and TailwindCSS reducing the previous bounce rate by 30%.
- Improved animation performance by hosting assets on a CDN, increasing page load speed by 100%.
- Addressed mobile compatibility issues by using Tailwind CSS and testing across diverse screen sizes, maintaining functionality on all devices with CI/CD following software development life cycle methodologies.
- Proposed and delivered UI/UX adjustments beyond the Figma mockups, incorporating client feedback to create a more intuitive and visually appealing GUI.
- Deployed on Firebase with Cloud Functions and presented at the Collision Conference in Toronto.

PROJECTS

[Tangle](#) | Go, JavaScript, React, Gin, PostgreSQL, AWS, HTML, CSS, Docker

- Built a full-stack real-time messaging application, using React and JavaScript for the frontend.
- Designed a RESTful API in Go using Gin for authentication, WebSockets, and PostgreSQL database interactions.
- Implemented session-based authentication by storing session tokens in HTTP cookies for better security.
- Launched and hosted on AWS EC2 using Docker for containerization.

[Arcade-Rate](#) | Typescript, React, Node.js, Express.js, Firebase, Firestore, HTML, CSS

- Created a dynamic web app using React and TypeScript to search, rank, compare, and track video games.
- Connected website to [IGDB \(Internet Game Database\)](#) to gather game data using Node.js.
- Deployed on Firebase using Cloud Functions and Firestore.

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

- Developed a YOLOv5 computer vision detection system using open-source datasets in collaboration with Dr. Steven Ding at the L1NNA research lab, Queen's University.
- Trained on an NVIDIA A6000 GPU in the lab's GPU cluster for model training and optimization.
- Detected drones with 77% accuracy, 94.4% precision and 93.2% recall scores. Earned **A+ grade**.

SKILLS

Languages: Python, Java, TypeScript, Go, JavaScript, C++, C, C#

Frameworks: React, Gin, Node.js, Express.js, Flask, TensorFlow, PyTorch

Databases: PostgreSQL, MongoDB, MySQL, SQLite

Tools & DevOps: Docker, Git, AWS EC2, Firebase, Linux, RESTful APIs, Scrum

EDUCATION

Queen's University

Sept 2020 – April 2024

Bachelor of Computing (Honours) - Computer Science

Kingston, ON

- 3.7 GPA, Dean's Honour List (2022, 2023, 2024)
- **Relevant Coursework:** Data Structures, Algorithms, Object-Oriented Programming, Software Quality Assurance, Operating Systems, Computer Architecture, Database Management Systems