BRAYDEN O'NEIL

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EDUCATION

Western University   **September 2021 - April 2025**
Bachelor's of Science, Major in Computer Science

PROFESSIONAL EXPERIENCE

Toggle   **Berkeley, CA, USA**
Full-Stack Software Engineer Intern   *December 2022 - July 2023, October 2023 - Present*

- User's submitted PDFs, which were converted to text by Google's Tesseract API, and given to GPT-4 through Open Ai's API to answer user's questions (before GPT-4 image analysis).
- Built a database to store this information using SQL with Node.js and Express for REST API engineering.
- Developed the front-ends of: A web app using React with JavaScript, HTML, and CSS, and a desktop app using Flutter with Dart. Both included a full calendar with the ability to import events from various productivity platforms.
- Mastered collaborating with a team through GitHub, and came up with original UI/UX design ideas with the design team.

Port Credit Yacht Club   **Mississauga, ON, Canada**
Administrative Assistant   *April 2023 - September 2023*

- Utilized databases for storing and accessing member information, gaining a deep understanding of how data structures are applied to the backend of a company.
- Frequently used Microsoft Excel for manual data entry, gaining a complete understanding of spreadsheet programs function.
- Dealt with disgruntled customers with the utmost respect, resolving conflicts among club members and fellow staff alike.

PROJECTS & ACHIEVEMENTS

WesternAI Case Competition 2023 | Top 3 Finalist, Cash Prize Winner

- Was tasked with creating an innovative concept which employed AI as the main building block of the technology.
- Came up with a solution for the lack of human connection felt during video calls when the connection drops.
- Strategy involved sharpening the frame using Fast Super-Resolution Neural Networks (FSCNN), recognizing facial structure with Computer Vision, combining user's 3D face model with computer vision's construction, and reconstructing the user's face with a General Adversarial Network (GAN) in higher quality.

Alarm Car | *Python, C, C++* **| GitHub**

- Alarm clock on wheels that sets off an alarm at a user-defined time, and drives around the room until the user disables it.
- Built the car from scratch, including the addition of a Raspberry Pi to allow for custom functionality.
- Wrote a python script to modify the car's actions, which involved randomized movement when the alarm time is reached.
- Customized the functionality of the servo motors, motors, alarm buzzer, LEDs, and ultrasonic module.

NBA Player Statistic Comparison | *JavaScript, HTML, CSS, React* **| GitHub**

- Looked to compare NBA players' overall ability using an algorithm that assigns different weights to each statistic.
- Used a public third-party NBA API to fetch stats for players from seasons ranging from the beginning of the NBA to present.
- Developed the entire front-end of this web app, gaining indispensable experience and knowledge in front-end technologies.

The X-Plus Game | Java

- Users play against a computer opponent to form an X or a plus of minimum user specified length on a dynamic tile board.
- The computer decides what move to make based on how many levels of depth are in its game tree, user specified amount.
- Gained a deep understanding of basic artificial intelligence models; Applied this understanding in developing algorithms that the computer opponent's behaviour is built upon.

Study Helper Chrome Extension | *Javascript, HTML, CSS, JSON* **| GitHub**

- The chrome web store lacked an app to plan a study session in a simplified manner, which is imperative for good studying.
- Allows users to set timers and break times to list and plan their study session in a straightforward, effortless manner.

SKILLS

Languages & Frameworks: Node.js, AWS, JavaScript, Python, HTML/CSS, Java, C/C++, JSON, React.js, React Native, SQL, Express.js, Tensorflow, Pandas, Django, AngularJS, Flask.