Brian Zhang

✉ b433zhan@uwaterloo.ca   📞 604-338-8538   ➤ bbrianzzhang.github.io   in bbrianzzhang   ○ bbrianzzhang

Skills

Coding Languages (Python, Java, JavaScript, HTML, CSS, SQL, C#, C++, C, Racket, R),
Frameworks/Tools (Node.js, React, MongoDB, Firebase, TensorFlow, Keras, Django, OpenCV, Git/Github)

Experience

Software Engineer Project Lead, *Health and Rehab Research Inc.*   01/2023 – 04/2023 │ Toronto, ON
- Led a team of machine learning engineers and researchers to **develop real-time emotion and pose recognition systems** for a physical therapy app
- **Developed and implemented deep learning models** using Python and TensorFlow for accurate emotion and pose detection, **improving the previous models from 70% to 80% accuracy**
- Collaborated with UX designers and product managers to **develop a new user interface** for clarity and integration with emotion and pose recognition systems

Software Engineer, *Cynorix Inc.*   05/2022 – 08/2022 │ Waterloo, ON
- Developed online **file encryption and payment systems** using **Node.js** and **React**
- **Enhanced encryption website** to **handle files of unlimited size** using **File System API**
- **Created a new backend** that encrypts and stores files/user information using **MongoDB** and **Firebase**

Online Cybersecurity Camp Instructor, *Air Cadets Canada*   06/2020 – 08/2021 │ Remote
- Taught online summer course on **cybersecurity** to over 300 youth aged 14-17
- Introduced new users to **Ubuntu** and the terminal

Projects

Humanana ☐   09/2022
- Developed an **image classification** app using a **Tensorflow** machine learning model with 94% accuracy
- Cleaned and used data sets with 10k+ images to train model from scratch using **Keras**

LazyNote ☐   02/2021
- Built an automatic note taking app in **Python** using **tkinter** that transcribes and summarizes audio lectures
- Used the **sounddevice** Python module to take audio input, **AssemblyAI** to transcribe audio into text, and the **BERT Extractive Summarizer** to condense the transcript into notes

Betta Chrome Extension ☐   08/2020
- Created a **Chrome extension** using **JavaScript**, **CSS**, **HTML** and the **Google Chrome API** that helps users monitor their distractions while on the internet
- Won **Wolfram Award for Top 30 Hacks** at MHacks 13 Beta Hackathon

TrackIt ☐   08/2020
- Made a website using **JavaScript, CSS and HTML** that helps users track daily activities and health
- Employed **Flask** to handle the backend and **SQLite** to handle user login and authentication

Education

Bachelor of Computer Science, *University of Waterloo*   09/2021 – 04/2026 │ Waterloo, ON
GPA - 3.60/4.00
Scholarships: $6000 NSERC Undergraduate Student Research Award, $2000 President's Scholarship of Distinction