CONNOR BELEZNAY

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EDUCATION

Bachelor of Computer Science, (Honours, Soft.Eng. stream, Co-Op), Carleton University Expected Fall 2024
GPA: 3.9 / 4.0; Dean's List 2021, 2022.

Bachelor of Arts, University of British Columbia 2014 - 2017
UBC T-Birds Varsity Baseball Alumni (NAIA Student Athletics)

SKILLS

Languages:	Python, C, C++, JavaScript, ES6, TypeScript, Java, CSS, Learning Go and Rust
Libraries/Frameworks:	React, OpenCV, NumPy, Node.js, Express, Django, no-SQL, DDS, ROS2
Tools:	Linux, Git/Github/Gitlab, REST-APIs, Shell Scripting JIRA, Valgrind, Docker, Machine Vision, CI-CD, Edge Computing, Google, Momentics, QNX, RTOS

EXPERIENCE

TA - COMP2406: Web Applications January 2023 - Present
Carleton University *Ottawa, ON*

- Run labs and tutorials based on principles of full-stack development. Including concepts such as **REST API** development, **asynchronous programming**, **Client and Server side coding**, basic **Front-End** development and **Functional Programming and Closures**
- Hold office hours to help students with the aforementioned high level concepts as well as technologies and languages such as **JavaScript**, **HTML**, **CSS**, **Node.js**, **Express.js**, **NPM**, and **MongoDB**

Software Engineer (Co-op) - Embedded Edge AI Team Sept 2022 - Dec 2022
Blackberry QNX *Kanata, ON*

- Developed and debugged in a cross compiled environment with a **Linux** host and a safety certified **RTOS** target, working in **C/C++**, **Python**, **bash**.
- Participated in **Agile** enviornment, weekly stand-up meetings, code reviews and tracked issues with **JIRAs**, to advance a high visibility, "mission critical" project.
- Helped port **Edge AI** robotics software from **Linux** to **QNX**. Identified and solved a major memory leak in a products **ROS2** implementation using Momentics system profiler.
- Developed a **ROS2** Node and middleware using a **publisher-subscriber** framework in **C** and **Python** to enable communication between the OS's HID management service and the **ROS2** node to add support for a wireless input device that could be used for remote manual over ride of processes on an embedded Edge system.
- **Developed test plans** and wrote **test reports** used to validate weekly releases.

Application Engineer (Co-op) - Autonomous Vehicles April 2022 - Sept 2022
Blackberry QNX *Kanata, ON*

- **Led a team of 3** coop engineers to advance **ADAS** capabilities of an Autonomous Vehicle demo app.
- Designed and implemented a street sign detection and classification system with a digit OCR implemented with the **K-NN supervised learning algorithm** in a **real time environment** using **OpenCV** with a $> 95\%$ accuracy.
- Designed and implemented a low-weight **ADAS** lane keeping system utilizing **OpenCV**, to apply matrix transformations to warp an image and apply a sliding window algorithm to identify painted lanes.
- Leveraged a proprietary sensor frame-work to combine **LiDAR** and **Camera data** to make navigation decisions in real time.

PROJECTS

Personal Website https://cbeleznay.com - Discord inspired **React** app built with **JavaScript**, **Node.js**, **React**, **Tailwind-CSS**, hosted on **AWS**

NLP for Email - Chrome Extension Built a chrome extension which integrates into Gmail and outlook to generate contextual replies based on a received email. Built using **JavaScript**, **Node.js**, **Express**, **Webpack 3**.

Virtual Assistant/Tutor Embedded project utilizing **RPI4**, camera, microphone, Machine Vision with **OpenCv** and Tesseract OCR, ASR with Mozilla DeepSpeech, **UNIX FIFO pipes** for **IPC**, multithreading and NLP with GPT3 to help answer technical questions, provide feedback on written work, help with math problems etc. Built with **Node.js**, **JavaScript**, **Python**, **C++**