



## SKILLS

**Languages:** Python, C++, Javascript, HTML, CSS

**Frameworks:** React, JSON, Node.js, Express, MongoDB, HTTP, Firebase, OpenCV, NumPy, Pandas, Tensorflow

**Tools:** Altium, Git, Arduino, SolidWorks, AutoCAD, GitHub, Jira, Confluence, SSH, Linux

## PROJECTS

**SNM TechSolutions** – *Full-stack MERN Web app (January 2021 - Present)* – Javascript, Bootstrap, MongoDB, Node, Express

- Constructed an interactive multipage frontend with React, and React-Bootstrap libraries
- Used Axios library to construct HTTP requests to a cloud-based NoSQL MongoDB database.
- Established database communication channels through ExpressJS and NodeJS.

**JobOverflow** – *Job Application Chrome Extension (January 2021)* – React, Javascript, Bootstrap

- Developed a web scraper using Javascript to find any keywords on a job application page and autocomplete any corresponding inputs.
- Created an aesthetic extension design using Bootstrap, HTML, and CSS elements.
- Implemented dynamic user interfaces to toggle and alter extension settings using React.
- Inserted an event listener with React to re-execute the program on page update.

**Unmasked** – *COVID Smart Assistant App for Android (August 2020)* – Python, Firebase

- Architected a Google Firebase database to store information on individuals entering and leaving a building.
- Constructed a locally hosted SMTP SSL server with Python and SMTPlib which enabled automatic mailing.
- Transferred information to and from a Google Firebase backend with HTTP requests.

**BikePath** – *Environmentally Friendly Route Planner (August 2020)* – Bootstrap, Javascript, Firebase, Express

- Developed a data pipeline to transfer user information to and from a Google Firebase backend using Javascript.
- Implemented a real-time updating leaderboard and point system utilizing an Express REST API in Javascript.
- Designed a visually appealing & dynamically updating user interface using Bootstrap, HTML, CSS, and Javascript.

## EXPERIENCE

**Fullstack Software Developer** – *Polar (May 2021-September 2021)*

- Constructed a full-stack chrome extension using an HTML frontend, JS DOM manipulation, with an IndexedDB backend.
- Developed an image, text, & video webscraper using JS which worked effectively on over 95% of tested websites
- Implemented REST API's using HTTP & intercepted/modified incoming and outgoing network traffic requests & headers
- Established user authentication using cookies, while indexing user information using IndexedDB
- Practiced agile development procedures to rapidly prototype, test, assess and verify new implementation ideas
- Used SSH to connect to a remote Linux desktop for production with git for version control.

**Computer Vision Developer** – *University of Waterloo Aerial Robotics Group (October 2020 – May 2021)*

- Developed camera video stream and responsive frame grabbing systems using OpenCV and Python
- Implemented KCF real time object tracking for detected objects in Python.
- Architected the drone's autonomous geolocation & positioning models.

## EDUCATION

**University of Waterloo** - Candidate for BAsC, Mechatronics Engineering (09/2020 – 08/2025)

- Relevant courses include: Data Structures & Algorithms (C++), Circuits, Microprocessors
- Cumulative GPA: 4.0