

Khalil Virji

🐙 github.com/khalilv **in** [linkedin.com/in/khalilvirji](https://www.linkedin.com/in/khalilvirji) ✉ khalil.virji1@gmail.com </> khalilv.github.io

EDUCATION

McGill University

Montreal, QC

M.Sc. in Computer Science - supervised by Dr. Gregory Dudek

09/2022 - 06/2024

- **Research:** Robotics, Reinforcement Learning, Computer Vision, Machine Learning, Planning and Navigation

B.Sc. Major Mathematics and Computer Science

09/2017 - 05/2022

- **Coursework:** Artificial Intelligence, Algorithms, Data Structures, Analysis, Probability, Statistics, Software Design

EXPERIENCE

University of California, Irvine | Assistant Specialist

Irvine, CA

Python, PyTorch

07/2024 - Present

- Developing deep learning models for climate and weather forecasting over subseasonal to seasonal horizons.
- Exploring novel methods to enhance learning of physical principles governing atmospheric processes.

McGill Mobile Robotics Lab | Graduate Researcher

Montreal, QC

ROS, Python, C#, C++, MATLAB

09/2022 - 06/2024

- Research on traditional and deep reinforcement learning methods for robust robotic control and navigation.
- Engineered and deployed a robotic system for scuba diver tracking and recovery using low-cost components.

Compost Montreal | Software Developer

Montreal, QC

Shopify, Liquid, Javascript, HTML, CSS

05/2022 - 06/2024

- Lead developer responsible for enhancing an e-commerce store to drive user engagement and sales growth.

ColorKarma | Software Developer

Westford, MA

Node.js, Express.js, MySQL, Angular

05/2022 - 09/2022

- Built a secure API and managed a front-end team to create a platform matching designers with manufacturers.

CloudOps | Cloud Developer

Montreal, QC

Java, Spring Boot, MySQL, Vue.js, Spock, Jest

05/2021 - 09/2021

- Implemented scalable features on a public facing API that integrates with AWS, Azure, and Google Cloud.

Sensequake | Web Developer

Montreal, QC

Node.js, Express.js, MongoDB, jQuery, HTML, CSS

5/2020 - 09/2020

- Developed commands to interface with Larzé sensors, generating real-time vibration plots and modal analyses.

PUBLICATIONS

Lotfi, F., **Virji, K.**, Faraji, F., Berry, L., Holliday, A., Meger, D., Dudek, G., *Uncertainty-aware hybrid paradigm of nonlinear MPC and model-based RL for offroad navigation* | ICRA 2024

Lotfi, F., **Virji, K.**, Dudek, G., *Robust Scuba Diver Tracking and Recovery in Open Water Using YOLOv7, SORT, and Spiral Search* | CRV 2023

PROJECTS

Save a Minute

2024

Javascript, HTML, CSS

khalilv.github.io/saveaminute.html

- Built an effective web tool to help users navigate optimal exit points in the Montreal metro system.

RFID Touchless Checkout System

2020

Java, Arduino, UHF RFID Technology, HC-SR04 ultrasonic sensor

khalilv.github.io/rfid.html

- Engineered a checkout system to accurately and simultaneously scan all items in grocery carts.

Legends of Andor

2020

Java, XML, Spring Boot, Android Studio

khalilv.github.io/legendsofandor.html

- Designed and implemented a multiplayer mobile board game for Android devices with an in-game chat room.