

Charlie Horn

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CAREER OBJECTIVE

Autonomous Vehicles represents one of the most significant engineering challenges with potential to affect real change. This alone is enough to make me interested, but beyond that I think it would be incredibly cool to be driven around by a robot chauffeur. My goal is to help make this a reality

EDUCATION

UNIVERSITY OF TORONTO

Master of Engineering in Aerospace Science and Robotics (2020-2021)

3.93 GPA

- Perception, Computer Vision, and State Estimation
- Machine Learning, Algorithms, and Data Structures

QUEEN'S UNIVERSITY

BASc Mathematics and Engineering – Systems and Robotics (2013-2018)

3.45 GPA

- Mechatronics and Robotics
- Statistics, Linear Algebra, and Control Systems

PERSONAL PROJECTS

Bayesian Optimization for Monocular VSLAM under Varied Conditions

- Machine Learning to optimize visual SLAM
- Implemented with Python and C++

Automated Drill Core Analysis

- Computer vision to extract geological information from core samples
- Implemented with Python

PROFESSIONAL EXPERIENCE

MUNVO SOLUTIONS

Software Consultant (2018-2020)

- Developed a prediction module for enterprise marketing, leading to increased engagement and customer retention
- Implemented distributed application architecture in a Linux environment
- Developed APIs to integrate CRM solutions

ROCKMASS TECHNOLOGIES

Software Developer (2017-2018)

- Developed optimization framework and improved accuracy by 15.6%
- Developed core algorithm in C++, Python, and Julia
- Configured wireless networks to enable remote access to processing servers

ADVANCED MICRO DEVICES

Software Developer (2016-2017)

- Developed and maintained Python programs to package modular test cases
- Developed software to analyze chip performance metrics