# Trevor Sherrard

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## Professional Summary

Computer vision and robotics thought leader seeking new full-time opportunities in the development of advanced perception systems, autonomous systems, and advanced IoT platforms.

## Work Experience

March 2022 - July 2022

TurbineOne

### *Robotics Software Engineer*

Developed an autonomous, GPS+RTK based foreign object debris (FOD) detection robotic system for military air bases. Developed an advanced GPS based coverage path planning algorithm based on Boustrophedon decomposition and RRT. Prototyped and deployed several classical and machine learning based image processing algorithms for FOD detection.

August 2020 – March 2022

Bryx, Inc

### *Director of R&D*

Worked on developing perception and mapping technologies for advanced autonomous aerial systems to provide increased situational awareness to first responders. Designed custom hardware and firmware for devices used in data collection and building automation applications. Managing engineers working to move R&D to production systems.

May 2019 – March 2020

Calvary Robotics

### *Controls Software Co-Op*

Developed OpenCV based vision inspection applications for collaborative robotics material handling systems. Fortified existing vision applications for use in various lighting conditions. Implemented Ignition Designer SCADA applications.

January 2018 – February 2019

R.I.T

### *ROS Software Architect*

Responsible for creating a distributed software architecture using Robot Operating System for a multi-agent intelligent material handling system. Participated in gated reviews of implemented software.

May 2018 – August 2018

Calvary Robotics

### *Controls Software Co-Op*

Architected, implemented, and tested an embedded, OPC UA based, industrial internet of things (IIoT) performance tracking software platform for industrial manufacturing machines.

## Education

2022 – 2024 **Georgia Institute of Technology**
M.S Computer Science

2020 – 2022 **Worcester Polytechnic Institute**
M.S Robotics Engineering
*GPA: 4.00*

2015 – 2020 **Rochester Institute of Technology**
B.S Electrical Engineering
*GPA: 3.25*

## Robotics Projects

2021 **Pandemic Telenursing Robot Platform (bit.ly/PandemicBot)**
*A telenursing platform designed for deployment in African hospitals for use in pandemic scenarios.*

## Computer Vision Projects

2021 **Modular Wireless Haptic Robot Controller (bit.ly/modPose)**
*A wireless, hand-held, audio-haptic 6-DOF pose capture system serving as a modular human-robot interface.*

## Technical Skills

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|---|---|
| Languages | Python, C, C++, MATLAB |
| Software Frameworks | ROS, OpenCV, Tensorflow, FreeRTOS, NumPy, scikit-learn, PCL, moveIt! |
| Hardware Platforms | AVR, STM32, Raspberry Pi, NVIDIA Jetson |
| Technical Concepts | LiDAR, mmWave Radar, Depth Imaging, Robot Perception, Path Planning, State Estimation, Control Systems, Embedded Systems, Point Cloud Processing |