

Myron Velton Rodrigues

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Skills (years)

- OpenCV (7)
- ROS2/ROS (6)
- Machine V. Cameras (6)
- Deep Learning (6)
- Pytorch (4)
- ONNX (3)
- C++ (8)
- Python (7)
- C (5)
- Linux (6)
- Docker (4)
- Microcontrollers (7)

Interests

- Music
- Freediving
- Astrophysics
- Reading
- Photography
- Cycling

Robotics engineer with experience in computer vision and deep learning, under the autonomous driving and agritech industries

Work Experience

Open source contributions (Dec 2024 - Present)

- High performance object detection inference [C++ library](#) for YOLO NAS.
- Contributed to OpenCV deep neural networks module: [Intel NPU inference support](#)
- [OpenCV build](#) with ONNX and OpenVINO support.
- ROS2 focus peaking [package](#).
- ROS2 tools: [development containers](#), [lifecycle package creator](#).

Perception Engineer, Dexory (Aug 2024 - Nov 2024)

- Developed and deployed ROS2 object detection system on an edge device on the robot.
- Implemented hardware in the loop (HIL) systems for collecting and annotating datasets to train detection models.
- Contributed to open source ROS2 drivers for OAK-D depth camera and ROS2 stereo camera calibration.

Senior Robotics Engineer, StreetDrone (Nov 2021 - Jul 2024)

- Led a team of robotics engineers to successfully develop and deploy teleoperation stack, enabling remote control capabilities for the fleet of robots.
- Implemented highly performant (100fps) 3D object detection and tracking models using Pytorch/[ONNX](#) in ROS2/C++ on Point Clouds.
- Developed generic 2D detection inference engine for ROS2 using Pytorch/Torchscript in C++ with compatibility for any darknet and Torchscript object detection models.
- Developed [GenlCam](#) compliant zero copy, image messaging and control drivers in C++ for machine vision cameras with compatibility for ROS2.
- Developed video streamer using the zero copy camera drivers for teleoperation, simultaneously tested supporting 7 cameras at 1080p live streams.
- Conducted a deep learning personnel training in Pytorch.

Perception Engineer, Dynium (Oct 2018 - Oct 2021)

- Developed a LIDAR based farm row robot aligning software.
- Improved control range of online photo-metric calibration algorithms by 30x, by designing a new highly convex metric for image quality based on exposure value.
- Implemented object detection and tracking using existing deep learning architectures like Fast(er) RCNN, Retinanet, YOLO and SSD along with Kalman filter.
- Improved software stack reliability by developing a recursive ROS package launcher with system health diagnostics, dependency initialisation and safe shut down.

Education

MSc. Robotics, University of Bristol (Sept 2017 - July 2018)

- Thesis: Developing UAV navigation algorithms using computer vision and deep learning.

B.E Electronics and Telecommunications, Don Bosco College of Engineering (July 2012 - June 2016)

- Project: Joint movement data acquisition, processing and control of robotic arm.

Projects

ROS2 object detection on Jetson using vision transformers (Aug 2025 - now)

- Developed DETR based object detection achieving 30fps on Jetson AGX Xavier.
- Developed ROS2 package for the detector.