

# Edvardas Vysniauskas

ROBOTICS ENGINEER

Warsaw, Poland

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## Summary

I am a robotics and software engineer interested in various robotics applications both in industry and research. My experience includes extensive work with various sensors, including lidars, radars, IMUs, and GPS. Currently, I am working as Autonomous Navigation Engineer in indoor robotics industry. As my future career, I am looking to work in space industry, UAVs, or mobile robotics industry such as agriculture.

## Skills

<b>Programming/Frameworks</b>	C++, C, C#, Dart/Flutter, Python, ROS, Bash, LaTeX, GNU Octave
<b>Protocols</b>	CAN, Mavlink, UART, SPI
<b>Software</b>	KiCad, FreeCAD, Ardupilot
<b>Software Development</b>	Git, SVN, Jenkins

## Work Experience

### United Robots

Warsaw, Poland

AUTONOMOUS NAVIGATION ENGINEER

August 2023 - Present

- Served as team lead for SLAM team.
- Integrated Aruco marker detection for landmark based SLAM algorithms.
- Developed new features for Google cartographer SLAM algorithm for indoor robotics solutions.
- Led the development and execution of extensive testing methodologies for new software features and sensor integrations.
- Integrated unit tests on the robot software suite.
- Performed live testing of robots at customer's facilities.

### Wärtsilä Voyage

Leicester, UK

SOFTWARE ENGINEER

August 2021 - July 2023

- Improved quay detection with radar performance in vessel docking operations by 20%.
- Developed radar based SLAM for inland waterway vessel operations for GNSS redundancy.
- Led DevOps migration to Git via development of automation tools and training.
- Supported customers with troubleshooting.

### Dynium

Oxford, UK

AUTONOMOUS ROBOTICS SOFTWARE ENGINEER

December 2018 - August 2021

- Developed software for different sensor modules, such as lidars, ultrasound, IMU, that are used for path planning and obstacle avoidance such as ultrasonics, IMU.
- Designed and tested ultrasound sensor module software and PCBs.
- Developed custom CAN and handshake protocol for team's requirements.
- Designed robot hardware and software test rig for local testing of software.

## Education

### Udacity

UK

SENSOR FUSION ENGINEER NANODEGREE

2022

- Modules: Lidar, Cameras, Radar and Kalman Filter.

### Univesity of Southampton

Southampton, UK

MSc IN UNMANNED AIRCRAFT SYSTEM (UAS) DESIGN

2017-2018

- MSc thesis 'Optimisation of crossflow fan-wing aerofoil'.

### Aalborg University

Aalborg, Denmark

BSc IN ROBOTICS

2014-2017

- BSc Project 'Autonomous robot for object retrieval'. Robot competed in 'Robot's Intellect 2017'.

## Honors & Awards

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2018    **2nd Place**, IMechE UAS Challenge 2018

UK

## Projects

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### MULTICONFIGURATION DRONE PLATFORM

January 2022 - Present

- Project goal is to design platform to be able to use different drone configurations.
- Developing software for autonomous drone operations using Jetson Nano with Docker and ROS2.
- Investigating usage of visual odometry and SLAM with Intel Realsense camera for obstacle avoidance.
- Developing software for Aruco grid target detection using Rapberry HQ camera and Jetson.

### F1 RESULT GUESSING ANDROID APP

January 2021 - Present

- Develop F1 race result guessing app for Android using Dart and Flutter.
- Develop Web version of the same application to be used on any device regardless of OS.