MICHALIS IAKOVIDES

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EDUCATION

University of Manchester - Master of Science, Robotics **Sep 2023 - Present**
Relevant Classes - Foundations of Machine Learning, Software for Robotics, Cognitive Robotics and Computer Vision, Autonomous Mobile Robots

University of Manchester - Bachelor of Engineering, Mechatronic Engineering **Sep 2020 - Jun 2023**
Relevant Classes - C Programming, Microcontroller Engineering, Data Networking , Embedded Systems Project, Numerical Analysis, Concurrent Systems, Mobile Robots & Autonomous Systems, Sensors & Instrumentation

TECHNICAL SKILLS

Languages | Python, C, C++, MATLAB, VHDL, Assembly
Frameworks / Libraries | ROS, ROS2, OpenCV, Tensorflow, PyTorch
Developer Tools | VSCode, PyCharm, Git, Jupyter Notebook, CodeBlocks, Arduino IDE
Project Management Tools | Trello

PROJECTS

Self-Driving Car navigation in a Mini Town with a Web Application

Python | ROS | Tensorflow | OpenCV | Flask | HTML | CSS

- Trained a traffic sign recognition CNN model with 98% accuracy
- Implemented a lane and traffic light detection algorithm to navigate the vehicle in a mini town
- Experience with ROS and computer vision techniques
- Tested and tuned the algorithms on a simulated vehicle in Gazebo simulator
- Designed and built a web application GUI to visualize real-time vehicle data
- Assembled the hardware components for a mini vehicle running on Nvidia Jetson Nano with a Raspberry Pi camera

Lidar Simulation for Simultaneous Localisation and Mapping (SLAM)

C++ | SFML

- Developed a Lidar simulation software to emulate a robotic mapping and navigation system
- Implemented Lidar sensor modeling, including angle resolution and range settings
- Designed a dynamic graphical interface for real-time visualisation of Lidar scans
- Employed collision detection algorithms to identify obstacles in a simulated environment

CERTIFICATES

- Learn Python 3 | Codecademy
- Learn C++ | Codecademy
- Simulink Onramp | MathWorks

COMPETITIONS

- UoM Robotics Society Hack-A-Bot2023 (Best Engineered Award) | Communications Software **Mar 2023**
- UniCS Great Uni Hack 2022 | Backend Team - API **Nov 2022**
- American Astronautical Society (AAS) CanSat | Sensor Subsystem Team **Jun 2022**
- American Astronautical Society (AAS) CanSat | Sensor Subsystem Team **Jun 2021**
- Robotex Cyprus Enhanced Line Following Challenge | Software/Hardware Team Lead **Jul 2019**
- Robotex Cyprus Maze Solving Challenge (2nd Place) | Software Team - PID algorithm **Jul 2019**
- FIRST Lego League Hydrodynamics Estonian Open International | Software Team **Jun 2018**
- FIRST Lego League Hydrodynamics Cyprus (1st Place) | Software Team **Mar 2018**

HOBBIES/INTERESTS

- FPV Drone Pilot
- Machine Learning / AI Generated Art
- 3D Printing

LANGUAGES

- English
- Greek