Nikos Koukis

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London - United Kingdom

I am a passionate Robotics/SLAM Engineer based in London. I love writing code and especially when that code comes into life in actual robots and real-life applications.

Professional Experience

05/2019 - **Robotics Product Engineer - SLAMcore**

01/2019 - 05/2019 **Robotics Engineer - SLAMcore**

09/2017 - 01/2019 **Junior Robotics Engineer - SLAMcore**

I work as a robotics product engineer at SLAMcore. We strive to provide robust and accurate SLAM solutions in Robotics. During my time there I have lead the integration and deployment of our software on multiple robotic platforms, and I have also worked in areas like sensor calibration, autonomous navigation, SLAM algorithms development, continuous integration as well as overall product development and deployment

02/2021 - 07/2021 **Software Developer - Hellenic Army (KEPYES)**

As part of my mandatory military service I maintained and implemented new features in large-scale Java and OracleSQL-based server applications. I also was the primary maintainer of legacy Linux-based servers essential for production apps. Create documentation and usage instructions for core components and tools including SVN, Git and Linux.

2017, 2018 Mentor at **Google Summer of Code (GSoC)** with MRPT

2016 Student at Google Summer of Code (GSoC) with MRPT

Developed an open source implementation of the pose-graphSLAM algorithm with loop closure capabilities (**Project link**)

Technical Experience

MRPT 2016 - **Core contributor at Mobile Robot Programming Toolkit (MRPT)**

MRPT is a open source robotics framework specialized in SLAM and mobile robot applications with over 300+ cites in Google Scholar, 40k+ downloads.

I am the author and maintainer of the single and multi-robot implementations of mrpt-graphslam:

- **mrpt-graphslam**

- **mrpt_graphslam_2d**

Languages

C++ Very experienced using modern C++ (11, 14, 17 standards) and in working with popular mathematical / computer vision and robotics libraries such as OpenCV, Eigen, MRPT, OpenGV. I have also extensively developed applications in **ROS**, **ROS2** and have used the **Gazebo** and **V-REP** robotic simulators.

Sample projects: **MRPT**, **mrpt_slam**, **robot-concepts**

Python Expert in using either Python2 or Python3 and with using standard modules such as `Numpy`, `Scipy`, `Pandas`. Good knowledge of module such as `argparse`, `click`, `pyyaml`, `mechanize`. Decent knowledge of `scikit-learn`, `Tensorflow`.

Sample projects: ***taskw_gcal_sync, awesome_albert_plugins, mendeley2calibre, Pump3000***

Vim/Vimscript Implemented the **vim-debugstring plugin** for printf-like debugging in a variety of programming languages.

Rust I have been experimenting with **Robotics/SLAM-related projects** in the Rust programming language.

Excellent: **Docker/Docker-compose**, **Make**, **Bash**, **Modern CMake**, **Git**, **Sed/Grep/Awk**

Good: **C**, **Fortran**, **Matlab**

Basic: **Haskell**, **Awk**, **Java**, **Ansible**, **Django**, **Grafana**

Software: **MRPT**, **ROS**, **ROS2**, **Gazebo**, **V-REP**, **Matlab**, **Fusion360**, **Solidworks**, **Grafana**

Education

2011 - 2017 **5yr Diploma in Mechanical Engineering**
National Technical University of Athens (Athens, Greece)

Master Thesis: ***Design and Development of Single and Multi-Robot Simultaneous Localization and Mapping (SLAM) Algorithms***

8.4/10.0

2015 **ERASMUS Studies**
KTH Royal Institute of Technology (Stockholm, Sweden)

I studied for a semester in the department of *Engineering Science* where I undertook projects in advanced control theory, digital control, optimal control, and embedded systems for applications in robotics and aircraft control systems

2013 - **Coursera/Udacity/EdX courses**
I have successfully completed more than 10 courses in various MOOC platforms

including **Udacity - Artificial Intelligence for Robotics**, **Udacity - Control of Mobile Robots**, **Coursera - Computer Networks**.

Supplementary

- Penetration Testing Enthusiast
- Languages:
  - Greek (native speaker)
  - English
  - German (basic)
  - Spanish (basic)
- **2014:** 4th place in **EBEC** competition final round
- **2004:** Avlonarion chess tournament champion