Alexandros Filotheou

Thessaloniki, Greece | alexandros.filotheou@gmail.com | (+30) 693 8787 677 | linkedin.com/in/alexandros-filotheou github.com/li9i | scholar.google.com/alexandros-filotheou Portfolio

Robotics engineer with 9+ years of experience in system integration, state estimation, SLAM, localisation, autonomous navigation, control, perception, and computer vision. Skilled in deploying solutions from simulation to real-world robots across EU-funded R&D projects and volunteer initiatives. Proficient in ROS/ROS 2, git, Docker, and MATLAB/Octave on Linux, with strong coding expertise in C++ and Python. Recognised for bridging research and practical deployment to deliver reliable autonomous systems.

Skills

Languages C/C++, Python, shell, MATLAB/Octave

Robotics/OS Linux, ROS/ROS 2

Tools/Frameworks git, Docker, Eigen, Behavior Trees, Gazebo, CI/CD, Qt/Tkinter, OpenCV

Control Techniques MPC, PID, LQR

Experience

Robotics Engineer · ITI-CERTH, Thessaloniki GR

Sep 2023 – Present

- Owner of software integration and sole git repository maintainer in EU-funded R&D project RoBétArmé
- Designed organisation and deployed 50+ Dockerised ROS/ROS 2 packages, use case orchestration via Behaviour Trees, and supporting software across multiple real and simulated mobile robotic platforms
- Achieved robust ROS-ROS 2 interoperability and communication across multiple machines
- Ensured code quality, continuous integration/deployment, and coordinated collaboration

Robotics & Control Engineer · ECE dept., Aristotle University of Thessaloniki GR Sep 2018 – Mar 2023

- Technical robotics lead in large-scale R&D projects RELIEF and CultureId
- Owner of system design, SW implementation, deployment of autonomous ground and aerial platforms
- \bullet Delivered production-grade 2D/3D SLAM and navigation pipelines with intuitive user GUIs in warehouses
- Improved RFID-tag localisation accuracy 2x through robustifying LiDAR-based filtering
- Deployed human-mobile-robot applications at the AMTh museum, engaging 3,000+ visitors since 2023
- Developed and integrated codebases for 18+ publications, enabling multi-team experiments and translating novel robotics and RFID research into real-world applications

Teaching Assistant · KTH Royal Institute of Technology, Stockholm SE

Sep 2016 - Nov 2016

• DD2380 - Artificial Intelligence under Prof. Patric Jensfelt

Links

Software packages ros2-utils · cbgl · fsm-lo · lama-odom · pandora-hole-detection

Demos/Videos Global Localisation · LiDAR Odometry · Multi-agent navigation · RELIEF · CultureId

Publications [Global Localisation] · [LiDAR Odometry] · [Multi-agent navigation]

Education

Doctorate · Electrical & Computer Engineering · Aristotle University of ThessalonikiSep 2018 – Jun 2023Master of Science · Systems, Control, and Robotics · KTH Royal Inst. of TechnologySep 2015 – Jun 2017Diploma · Electrical & Computer Engineering · Aristotle University of ThessalonikiSep 2005 – Jul 2013

Volunteering

Computer Vision Engineer · PANDORA Robotics, Thessaloniki GR

Oct 2013 - Jul 2014

• Enhanced robot perception by developing a C++ wall-hole detection system using Microsoft Kinect RGB-D for the international RoboCup Rescue competition, gaining 2nd place in 2015

English

Fluent — IELTS Score 8.5 (Greek native and citizen)

References

- Antonis Dimitriou · Coordinator of R&D projects · (+30) 697 88 96 350 · antodimi@auth.gr
- A complete list of professional references, including supervisors and colleagues, may be found at

github.com/li9i/cv/tree/master/references