Alexandros FILOTHEOU

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github.com/li9i · Portfolio

I am a Senior Robotics Engineer specialising in the full product lifecycle—from concept and simulation to continuous system integration and field deployment. I have 9+ years of experience in integration, state estimation, sensor fusion, SLAM, localisation, autonomous navigation, control, perception, computer vision, and troubleshooting on real hardware. I have reduced deployment time >10x across fleet of manufacturing robots and delivered 50% boost in localisation accuracy for fleet of RFID-based inventory robots, thus achieving centimeter precision. I am able to conduct research independently and materialise it into real-world development and deployment, with my aim being to bridge the two worlds in order to deliver cutting-edge systems with repeatable behaviours.

Skills

English	Native / Fluent (IELTS 8.5 - C2 Proficiency)
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

Action Points

- Owner of software integration and git repository maintainer in large-scale R&D projects
- Developed and deployed autonomous ground and aerial platforms in construction sites, libraries, museums
- Engaging 2,000+ visitors annually since 2023 at the AMTh museum with human-robot applications
- Orchestrated and deployed fleet of concrete- and metal-additive manufacturing robots in scalable manner
- Ensured code quality via tests, linters; continuous integration and deployment
- Achieved robust ROS-ROS 2 interoperability and communication across multiple machines
- Delivered production-grade 2D/3D SLAM and autonomous navigation pipelines with intuitive user GUIs

Experience

Robotics Software Engineer	ITI-CERTH, Thessaloniki GR Additive-Manufacturing Robots R&D Project RoBétArmé	Sep 2023 – Present
Robotics & Control Engineer	ECE Dept., Aristotle University of Thessaloniki GR Warehouse Inventorying Robots R&D Project RELIEF Robots in Museums R&D Project CultureId	Sep 2018 – Mar 2023
Computer Vision Engineer	PANDORA Robotics (Volunteer) Thessaloniki GR 2nd place, 2015 RoboCup Rescue Competition	Oct 2013 – Jul 2014

Quick Links

Fast Global Localisation for LiDAR sensors: Demo-1 · Demo-2 · code
Robust LiDAR Odometry: Demo · code
Robust Path Following for RC car via MPC control: Demo
Software packages: fsm · ros2-utils · lama-odom · pandora-hd
R&D Projects Demos/Videos: RELIEF · CultureId

Education

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