

# FILOTHEOU, Alexandros

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[github.com/li9i](https://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, DevOps, and git repository maintainer in large-scale R&D projects
- Developed and deployed autonomous ground and aerial platforms in [construction sites](#), [libraries](#), [museums](#)
- Orchestrated and deployed fleet of concrete- and metal-additive manufacturing robots in scalable manner
- Engaging 2,000+ visitors annually since 2023 at the [AMTh museum](#) with [human-robot applications](#)
- 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

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

## Quick Links

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

## Education

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