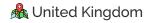
Alberto Soragna







iRobot

ABOUT ME



I am a Software Engineer with comprehensive hands-on experience in autonomous mobile robotics, proven in developing software architecture, behaviors, and estimation algorithms. As a ROS 2 expert, I am a member of its Technical Steering Committee and one of the maintainers of its core libraries.

I am a Technical Lead and a skilled contributor, and I excel at organizing and executing complex projects for small development teams, adhering to Agile methodologies, with a focus on writing clean, well-documented, and thoroughly tested code. I expertly track team progress and communicate effectively with management and stakeholders through concise and informative reports. I remain aligned with business priorities and can move with urgency to deliver successful solutions.

In my free time, I enjoy a balance of outdoor and indoor hobbies such as hiking, playing board games, reading books, and studying personal finance

TECH SKILLS



8+ years experience with C++

It is my go-to language. I have an indepth understanding of its features and design choices. I contributed to define coding guidelines for my company and mentored junior developers.

Proficient with Python

I often use it for prototypes and nonperformance-critical applications.

Worked on projects using Bash, C, Java, JavaScript, Matlab.

Daily user of Docker, Git, LaTeX.

ANGUAGES



ltalian: Mothertongue **=** English: Fluent

🚱 Chinese: Basic spoken

EXPERIENCE



Sr. Robotics Software Engineer

August 2018 - Present

Pasadena, CA, USA

Technical Lead of 5 people team that improved ROS 2 performance, reducing CPU usage by over 70%, and integrated it on Roomba™ robots. Software Architect for floorcare robots and designed the Create™3 navigation application. Improved accuracy of dead-reckoning through data synchronization and developed libraries for behavior trees.

Data Scientist | MusixMatch

January 2018 - July 2018

9 Bologna, Italy

Implemented a Java pipeline to recognize products references in lyrics for advertisements recommendations. Developed a Python framework to train and test Neural Networks for different Natural Language Processing tasks.



Robot

Graduate Internship | KUKA Robotics

July 2017 - January 2018

♀ Augsburg, Germany

Designed and implemented C++ algorithms for the efficient autonomous exploration of environments using potentially imprecise prior information. Published multiple patents and a paper based on this project.

KUKA

FDUCATION



M.S. Artificial Intelligence and Robotics | La Sapienza September 2015 – January 2018 • Rome. Italy

Final Grade: 110/110 With Honors | Thesis: "Active SLAM using Connectivity Graphs as Prior" Advisor: Prof. Giorgio Grisetti



B.S. Automation Engineering University of Bologna

September 2012 - June 2015

♥ Bologna, Italy

Final Grade: 109/110 | Thesis: "Design and Implementation of the Guidance Law for a Quadrotor Aerial Vehicle" Advisor: Prof. Lorenzo Marconi



AWARDS AND CERTIFICATES



- 2022 iRobot STEM Star
- 2017 Sapienza University Excellence Path
- 2013 AlmaTong Double-Degree Scholarship

PUBLICATIONS



- 2019 Active SLAM using Connectivity Graphs as Priors. Soragna A., Baldini M., Joho D., Kuemmerle R., and Grisetti G. IROS.
- 2019 ROS 2 for Consumer Robotics. Soragna A., Oxoby J., and Goel D.
- 2018 Optimal graph exploration with active loop closure. Soragna A., Baldini M., and Kuemmerle R. European patent.
- Online adaptation of a prior topology graph to the observed envi-2018 ronment during autonomous exploration. Soragna A., Baldini M., and Joho D. European patent.