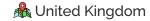
Alberto Soragna







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 also a Technical Lead and skilled contributor, excelling at organizing and executing complex projects for small development teams. I adhere to Aqile 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.

LANGUAGES



ltalian: Mothertongue **=** English: Fluent

Chinese: Basic spoken

EXPERIENCE



Principal Robotics Engineer |

August 2018 - Present

Pasadena, CA, USA

iRobot

- · Promoted from Robotics Engineer to Senior Robotics Engineer to Principal Robotics Engineer, consistently exceeding expectations.
- Served as Technical Lead for a team of 5 people. Improved ROS 2 performance, reducing CPU usage by over 70%, and successfully deployed it on Roomba™ robots.
- Software Architect for floorcare robots and the Create™3 application.
- · Developed libraries for writing strategies using behavior trees.
- Improved accuracy of dead-reckoning through data synchronization.

Data Scientist MusixMatch

January 2018 - July 2018 Bologna, Italy Implemented a Java pipeline to recognize product references in lyrics and provide recommendations for advertisements. Developed a Python framework for training and testing neural networks for various NLP tasks.



Robot

Graduate Internship | KUKA Robotics

July 2017 - January 2018 ♀ Augsburg, Germany Designed and implemented C++ algorithms for the efficient autonomous exploration of environments exploiting prior information. Published multiple patents and a paper based on this project.



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



- 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. ROSCon.
- 2018 Optimal graph exploration with active loop closure. Soragna A., Baldini M., and Kuemmerle R. European patent.
- 2018 Online adaptation of a prior topology graph to the observed environment during autonomous exploration. Soragna A., Baldini M., and Joho D. European patent.