



ABOUT ME



I'm a robotics engineer working on mobile robotics and SLAM. I have a deep passion for programming and an industrial expertise with many different languages. I'm an active contributor to many well-known open source projects, such as ROS 2. I enjoy practicing sports and working on CS hobby projects involving machine learning and front-end development.

LANGUAGES



Italian: Mother tongue
 English: Professional proficiency
 Chinese: Basic spoken

SKILLS



TECH SKILLS

3+ years experience with **C++**

Libraries: Eigen, OpenCV, ROS

3+ years experience with **Python**

Libraries: Numpy, Scikit-learn, Tensorflow

Worked on several projects using **Bash**,

C, **Java**, **JavaScript**, **Matlab**

Daily user of **Docker**, **Git**, **LaTeX**

SOFT SKILLS

Fast Learner

I'm always curious and eager to learn new concepts in any subject I encounter.

Problem Solver

My objective-driven mindset allows me to quickly find scalable solutions to everyday issues.

Independent

I'm capable of working and of organizing duties with small or no supervision.

Communicator

I have done several public speeches and created effective presentation slides.

EXPERIENCE



iRobot | Robotics & Vision Engineer

August 2018 – Present

Pasadena, CA

Design of the software architecture for floorcare consumer mobile robots.

C++ implementation of sensor processing and navigation algorithms.

Profiling and optimization of pub-sub communication mechanisms.

iRobot

MusixMatch | Data Scientist, Machine Learning & AI

January 2018 – July 2018

Bologna, Italy

Implementation and deployment of Machine Learning, statistics and deep neural network techniques for NLP. Creation of NLP pipeline for lyrics processing. Dataset collection and features engineering.



KUKA Robotics | Software Developer

July 2017 – January 2018

Augsburg, Germany

Master Thesis student in the Mobile Robotics Navigation team. Development of algorithms for the exploration of industrial environments, active Simultaneous Localization And Mapping, map representation.

KUKA

EDUCATION



LA SAPIENZA | MSc. Artificial Intelligence and Robotics

September 2015 – January 2018

Rome, Italy

Final Grade: 110/110 Summa cum Laude | Dissertation: "Active SLAM using Connectivity Graphs as Prior" Advisor: Prof. Giorgio Grisetti

Study Emphases: Computer Vision, Machine Learning, Mobile Robotics, Neural Networks, Probabilistic Robotics



ALMA MATER STUDIORUM | BSc. Automation Engineering

September 2012 – June 2015

Bologna, Italy

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

Study Emphases: Automatic Controls, Computer Science, Control System Technologies, Control Theory, Electric Drives, Mathematics



AWARDS AND CERTIFICATES



2017 Sapienza University Excellence Path

2013 AlmaTong Double-Degree Scholarship

PUBLICATIONS



2019 A. Soragna, J. Oxoby, and D. Goel. Ros2 for consumer robotics. ROSCon, 2019.

A. Soragna, Baldini M., Joho D., Kuemmerle R., and Grisetti G. Active slam using connectivity graphs as priors. IROS, 2019.

2018 A. Soragna, Baldini M., and Kuemmerle R. Optimal graph exploration with active loop closure. European patent, 2018.

A. Soragna, Baldini M., and Joho D. Online adaptation of a prior topology graph to the observed environment during autonomous exploration. European patent, 2018.