

**Mail**

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Personal Site

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(+39) 3331501761

Address

Via Larderia, 2
87042, Altomonte
Italy

Birthday

21 Maggio 1991

Irvin Aloise

Software Engineer

Education

2017 - now, Sapienza University of Rome

Ph.D. in Computer Science (in English)

Research Topics: Mobile Robotics, Simultaneous Localization and Mapping, Computer Vision.

Supervisor: *Prof. Giorgio Grisetti*

2014 - 2017, Sapienza University of Rome

Master of Science in Artificial Intelligence and Robotics (in English)

Thesis title: *Extended Measurements in Pose-Graph Optimization*

Supervisor: *Prof. Giorgio Grisetti and Ph.D. Dominik Schlegel*

Final grades: First Class with Honors ($^{110}/_{110}$ cum laude)

2010 - 2014, Sapienza University of Rome

Bachelor of Science in Electronic Engineering (in Italian)

Thesis title: *L'uso del Capture Point nello studio della reazione alle spinte nei robot umanoidi.*

Supervisor: *Prof. Giuseppe Oriolo*

Final grades: $^{100}/_{110}$

Experience

Nov 2016 - Feb 2017, Sapienza University of Rome, Exam project

Person Detection and Tracking for Human-Robot Interaction

This project aims to detect and track a person in human-friendly environments (like in a school). The system is developed for a differential drive robot and exploits laser data together with RGB-D images to achieve the goal. It has been developed a ROS package that uses *OpenCV* to perform proper image processing in an efficient way.

Jul 2016 - Dec 2016, Sapienza University of Rome, Exam project

Development of a Simulation Environment for Teleoperated Surgical Task

Realization of a simulative framework for a teleoperation task between a real haptic device (Geomagic Touch) and a virtual manipulator (KUKA LBR 4+) using VREP software. The surgical task that has been designed is a needle penetration in a simulated biological tissue.

Jun 2016 - Jul 2016, Sapienza University of Rome, Exam project

Analyzing Visualization Techniques for Convolutional Neural Networks

In this project, it has been tested and reproduced some of the most employed visualization techniques for Convolutional Neural Networks (CNNs), in order to better understand the representation of the images that a network produces. This has been developed using the *Caffe* framework.

Oct 2015 - Dec 2015, Sapienza University of Rome, Exam project

MIDI Classification Using Similarity Metric Based on Kolmogorov Complexity

The project proposes a method to classify MIDI instances by author, evaluating a similarity metric based on the concept of Kolmogorov Complexity. The classifier can be used as the first stage of a multi-stage classifier, in order to bias more specific units. The entire project has been developed in *MATLAB*.

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Dec 2014 - Feb 2015, Sapienza University of Rome, Exam project**A Third Person Game Based on the Three.js Library**

It has been developed a game based on WebGL using a Javascript library (*Three.js*). The game is straightforward and it can be played on a browser that supports HTML5.

Computer Skills

Programming

- C++
- C
- \LaTeX
- Matlab
- HTML
- Python
- Javascript

Other Software

- OpenCV
- ROS
- OpenGL

Operating Systems

- Ubuntu
- Windows
- MacOS

Languages

Italian

Mother-tongue

English

Advanced

Interests

Professional

Robotics, SLAM, Machine Learning, Deep Learning, Convolutional Neural Networks, Computer Vision, Autonomous Robotics

Personal

Music, photography, cinema, technology, motor sports