

# CARLO ALESSI

## PhD Candidate in BioRobotics

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🐙 noobcode

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## EDUCATION

### Ph.D. in BioRobotics

#### Scuola Superiore Sant'Anna

📅 Oct. 2020 – current

📍 Pisa, Italy

- **Research Area:** Soft Robotics (Head: Prof. Cecilia Laschi);
- **Research Topic:** Modeling and Control of Continuum Soft Robots (Supervisor: Dr. Egidio Falotico, Tutor: Dr. Alessandro Lucantonio).
- Participating to the EU project PROBOSCIS (WP7 "Robot behavioral control")

### M.Sc. in Computer Science (Artificial Intelligence)

#### University of Pisa

📅 Sept. 2017 – Dec. 2019

📍 Pisa, Italy

- **Grade:** 110/110; **ECTS:** 129/120
- **Thesis:** *Learning and Modulating Motor Commands using FORCE-trained Spiking Neural Networks*
- PhD+ Contamination Lab: valorization of research, innovation and entrepreneurial mindset

### B.Sc. in Computer Science

#### University of Pisa

📅 Sept. 2013 – July 2017

📍 Pisa, Italy

- **Grade:** 110/110; **ECTS:** 188/180
- **Thesis:** *Detecting a Species in Natural Images using Convolutional Neural Networks*

## INTERNATIONAL EXCHANGE

### Erasmus+ Traineeship

#### Technical University of Munich

📅 Apr. 2019 - Sept. 2019

📍 Munich, Germany

- Chair: Robotics, Artificial Intelligence and Real-time Systems (Head: Prof. Alois Knoll)
- MSc Thesis (Tutor: Dr. Fabrice Morin)
- German as a foreign language at the TUM language centre

### Erasmus+ Study

#### University of Barcelona & Technical University of Catalonia

📅 Feb. 2018 - July 2018

📍 Barcelona, Spain

- MSc Courses in Artificial Intelligence and Data Science

### Erasmus+ Study

#### University of Bristol

📅 Sept. 2016 - July 2017

📍 Bristol, United Kingdom

- BSc Thesis (Dr. Tilo Burghardt)
- MSc and BSc courses in Computer Science

## WORK EXPERIENCE

### Research Fellow

#### Scuola Superiore Sant'Anna

📅 Jan. 2020 – Sept. 2020

📍 Pisa, Italy

#### Educative Soft Robotics

- Contributed to the development of an educational environment for a continuum manipulator (I-SUPPORT) for the hands-on learning of soft robotics control using machine learning.
- **Industrial partners:** ROBOTECH, GREAT Robotics
- **Tools:** Python, PyTorch, Keras, ROS, Git, Arduino, Mat-Lab

### Student Software Engineer

#### Nokia Networks

📅 May 2017 – Dec. 2017

📍 Bristol, United Kingdom

#### Real-Time Database (RTDB)

- Unit tested several modules with +95% coverage;
- Refactored code improving quality and performance;
- Developed packages for code validation on remote machines;
- Modification to code generator;
- Participated in daily scrums, brainstorming, retrospectives, performance and code reviews, social meetings;
- Professional software engineering training and mentoring on agile methodologies and effective C++ coding;
- Worked with local/remote teams (UK, EU, India).
- **Tools:** C++, C, CMake, Boost, GitLab, Jira, Jenkins

## SKILLS

- **Coding languages:** C, C++, Python, Java, Matlab, SQL, Bash scripting, OCaml
- **Frameworks:** OpenMP, MPI, OpenCL, POSIX pthread, Boost, Keras, PyTorch, Scikit-learn, NLTK, Caffe, TensorFlow, OpenCV, Pandas, Numpy, Matplotlib
- **Robotics:** ROS, Gazebo, Lego Mindstorms NXT
- **OS:** Ubuntu, Windows
- **Other:** Valgrind, GDB, Gprof, Makefile, CMake, Unit Testing, Version Control, Agile Software Development, Jira, Jenkins

## LANGUAGES

- **Italian:** Native
- **English:** Band 7 IELTS UKVI Academic (C1 CEFR)
- **German:** A1.1 (CEFR level)
- **Spanish:** Beginner

## SPORT

- **Football** : competitive level until 19 years old
- **Boxing** : competitive level for 2 years