FrancescoArgentieri

junior Mechatronics Engineer

contact

Circonvallazione
Istoniense, 20
Vasto (CH), 66054
Italy

✆ +39 334 273 4061

✉
francesco.argentieri89
@gmail.com
in Francesco Argentieri
Ⓢ francesco_argentieri

languages
Italian−mother tongue
English−upper
intermediate

education

2015−2020	**M. Sc.** in Mechatronics Engineering	University of Trento

Thesis *"Enhancing UAV capabilities with machine learning on board"*.
Specialization in Mechanics−Mechatronics

2008−2015	**Bachelor** Mechanics Engineering	Marche Polytechnic University

Thesis *"Structural analysis of an automotive hot formed sheet component with variable thickness"*.
Specialization in Energy-Thermomechanical

experience

4/2019−3/2020   University of Trento — Trento, Italy
Thesis *"Enhancing UAV capabilities with machine learning on board"*.
This project focuses on the activity of providing the drone's ability to take advantage of the detection and classification of objects with TensorFlow Lite. The whole system is run on ARM cortex-A53 and TPU processors for tensor calculation, the project uses Raspberry Pi3b and Coral Dev - Board.
sofware: Python, Tensorflow, Altair PBS (HPC), C++/Qt

9/2018−11/2018   University of Trento — Trento, Italy
Rapid development CNN for image classification using fine-tuning techniques and implementation on SoC systems
Using framework like Keras is possible to develop refinement techniques starting from already known models. Using architecture of a USB commercial device, Intel Movidius neural compute stick, with low power consumption for neural network execution on SoC systems such as Raspberry.
sofware: Python, Keras, Tensorflow, Altair PBS (HPC)

9/2017−6/2018   University of Trento — Trento, Italy
Distributed robots mapping exploration
Project for the final exam where we consider the problem of exploring an environment unknown with a team of robots. As in the exploration of single robots, the goal is to minimize the overall exploration time. The key problem to solve in the context of multiple robots is that of choose the appropriate destination points for the individual robots so that can explore different regions of the environment simultaneously.
software: Matlab, mex, C++, LaTeX

| 5/2017–8/2017 | **University of Trento** | Trento, Italy |

Helicopter's tail-boom and rotor vibration analysis
This work performed during the master course of Modelling and Design with Finite Elements, for the part about the course project. The purpose is to present a consistent finite-element formulation, developed to predict the free vibration characteristics of two different helicopters tail-boom structures.
software: Ansys Mechanical (APDL), LaTeX

| 2/2015–6/2015 | **DIISM, Marche Polytechnic University** | Ancona, Italy |

Intership
In the field of machine design developed a thesis during which it has developed the ability to set and solve problems through the FEM simulations.
software: Ansys Mechanical, Altair HyperMesh, LsDyna, Qt, LaTeX

skills

OS
MacOS, Linux, Windows

Package
Matlab & Simulink, Maple, Ansys, SolidWorks, HyperWorks

Software
Microsoft Office, iLife

Programming
C++, C, Qt, Python, Ruby, R, LaTeX

Other
Internet networking, Arduino, Raspberry Pi

certification

| 2015 | **Council of Europe Level B1 (PET)** | Cambridge English, University of Cambridge |

driver's license B

March 27, 2020