

Costero Valero

Daniel

Aerospace Engineer

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Guadalajara, Spain

B2 license

Languages

French [C1] • 765-990 TFI exam (2017)

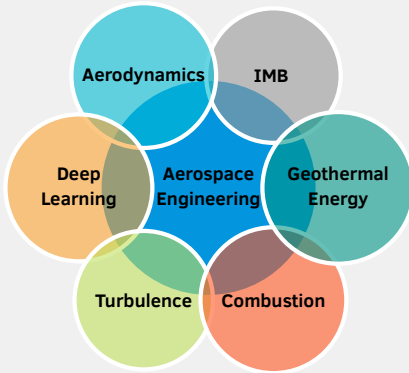
English [C1] • 945-990 TOEIC exam (2017)

Spanish • Mother tongue

Italian [B1]

Technical Skills

Overview



Programming

Python • MATLAB • CATIA V5

Fluent • OpenFOAM • Paraview

StarCCM • PROOSIS • GAMBIT

Basic → Expert

Education

- May. 2020 - **PhD. Student in Aerospace Engineering** Milan, Italy
- May. 2023 **Politecnico di Milano** (*Department of Aerospace Science and Technology (DAER)*)
Thesis: Methodology for automatic mesh refinement; application to simulation of combustion in dual-fuel engines
Supervisor Prof. Federico Piscaglia

- Sep. 2018 - **Master TAT (Aeronautics and Terrestrial Transports)** Poitiers, France
- Feb. 2020 **ISAE-ENSMA** (*École Nationale Supérieure de Mécanique et d'Aérotechnique*)
Master of Research specialized in Combustion. Turbulent and Biphasic combustion

- Sep. 2016 - **Master in Aeronautical Engineering** Madrid, Spain
- Sep. 2018 **UPM** (*Technical University of Madrid*)
Aerospace Propulsion specialization. Double degree program with ISAE-ENSMA under Erasmus+ Scholarship. Space vehicles design, Advanced Aerodynamics and Aeroelasticity, Airports Design, Air Navigation, Flight Dynamics, Control and Optimization of Aerospace Engines, Advanced Materials and Production, Advanced Structural Calculations

- Sep. 2017 - **Diplôme d'ingénieur** Poitiers, France
- Sep. 2019 **ISAE-ENSMA** (*École Nationale Supérieure de Mécanique et d'Aérotechnique*)
Energetic Specialization. Turbulence, Combustion, Shock Waves, Aerospace Engines, Detonation and Explosions, Transport and Turbulence in Combustion, Thermal Modeling

- Sep. 2012 - **Degree in Aerospace Engineering** Madrid, Spain
- Feb. 2017 **UPM** (*Technical University of Madrid*)
Aerospace vehicles Specialization. Rockets, Helicopters, CFD, MEF, Advanced Fluid Mechanics, Flight Mechanics, Aerodynamics, Aerospace Structures, Aerospace Engines, Aircraft Design and Certification, Aeroelasticity and Vibrations, Aerospace Fabrication and Production

- Apr. 2019 - **MSc. Candidate, Graduate Research Assistant** Isae-Supaero
- Apr. 2020 **Thesis:** Modeling of compressibility effects in a transonic airfoil with Deep Learning techniques
 - Creation of a database with different regimes around an airfoil with Fluent
 - Use of deep learning to train a network able to predict velocity and pressure fields
 - Integration of the network in Palabos to accelerate the LBM
 - Use of a supercomputer with GPUs to conduct the calculations
 - **Tools:** Python, PyTorch, Fluent, Palabos, Keras
 - **Professor:** N. Gourdain and M. Bauerheim

- Jul. 2018 - **MSc. Candidate, Graduate Research Assistant** UPM
- Sep. 2018 **Thesis:** Prediction of the HVAC needs of a geothermal building by means of Machine Learning algorithms
 - Data Engineering of the geothermal installation of an office building
 - Creation of a power consumption model with Random Forest Algorithm
 - **Tools:** Matlab, Python, scikit-learn, pandas
 - **Professor:** M. Hermanns

- Feb. 2016 - **Technical Office Collaborator** Ciemat
- Jul. 2016 **Thesis:** Preliminary Design of Parameters for Friction Stir Welding (FSW) Processes