



# ENRICO DI CAPUA

## AEROSPACE ENGINEER & DATA ANALYST

- Computational Fluid Dynamics, CAE, CFD, FEM, Data Analysis
- ANSYS Fluent, HyperMesh, MATLAB
- Excel, RStudio, Tableau, BigQuery, Google Sheets
- Python, C++, SQL, R
- Italian - English

### ABOUT ME

Aerospace Engineer & CFD Analyst with a strong background in CAE and FEM simulations.

- Skilled at turning complex engineering problems into structured models, I contribute to multidisciplinary engineering projects by producing accurate simulations that guide design and performance data-driven decisions, supporting teams in optimizing components and overall performance.
- Experienced in ANSYS Fluent, HyperMesh, MATLAB and programming languages (Python, R, SQL, C++) for modeling, processing, and analyze Data.
- Developed a CFD model of a methane-oxygen rocket combustion chamber for my thesis, simulating real-world conditions and validating results against theoretical expectations.

### EDUCATION

#### UNIVERSITY OF NAPLES FEDERICO II

June 2025

##### BACHELOR'S DEGREE IN AEROSPACE ENGINEERING

105/110

- Thesis: CFD modeling of combustion in an oxygen-methane rocket engine

#### UNIVERSITY OF MICHIGAN

July 2025

##### PYTHON SPECIALIZATION

- Using Databases with Python, Access Web Data
- HTTP, Regex, Web scraping, APIs, XML, JSON, SQL, relational databases, JOIN, data models

#### GOOGLE

June 2025

##### GOOGLE DATA ANALYTICS CERTIFICATE

- Excel, RStudio, Tableau, Google Sheets
- Data cleaning, analysis, visualization and storytelling

#### ALTAIR

August 2025

##### HYPERMESH FOR FEA PRE-PROCESSING ASSOCIATE SPECIALIST CERTIFICATION

- Model import, organization, geometry cleanup, mesh generation (1D, 2D, and 3D)
- Setting up finite element models for analysis FEA

### PROFESSIONAL EXPERIENCE

#### VINTAGE CAR DRIVER

Amalfi Coast

##### TOURIST SERVICES

2024

- Punctuality, reliability, interaction with international clients

#### KARATE INSTRUCTOR

Torre Annunziata

##### LOCAL GYM

2012-2021

- Teaching, discipline, responsibility

#### IT MONITORING

Naples

##### 24/7 SUPERVISION FACILITY

2022

- Monitoring of server parameters, anomaly detection, stress management

#### TOUR ENTERTAINER

Italy & Abroad

##### HOLIDAY VILLAGES

2016-2019

- Communication, creative problem - solving, teamwork

### PERSONAL ACHIEVEMENTS

#### 2ND DAN BLACK BELT IN KARATE

- Multiple-time Italian Champion (individual and team)

#### MEMBER OF THE SCHOOL CHESS TEAM

- Participation in 3 national chess championships

### BEYOND WORK

- Dire Straits & Pink Floyd fan
- Roman coin collector
- Blood donor
- Kitchen scientist