



Manuel Donsante

Experience

Vocational

- May 2019–Present **Research Collaborator & TLC System Engineer**, *Thales Alenia Space*, Rome.
Collaborator to the “Iris with IOC” Project (funded by the European Space Agency) in which I continue my theoretical studies and apply the notions studied during the degree and afterwards. The project is the *Phase B* of the Iris Programme aimed at developing a new satellite-based air-ground communication system for Air Traffic Management (ATM).
Detailed activities:
- Analysis of multi-agent scenarios in the future ATM environment;
 - Identification of candidate algorithms based on Optimal Datalink Selection;
 - Development of the simulation tool for the algorithm performance verification.

System Engineer for the *European Geostationary Navigation Overlay Service (EGNOS)* working on the *Central Control Facility (CCF)*, ground segment.

- May 2018–October 2018 **Junior Analyst**, *ELIS Consulting & Labs*, Rome.
Application of Machine Learning predictive technologies at Insurance Company.

Detailed achievements:

- Data understanding
 - Data hunting
 - Data preparation
- Descriptive analysis
 - Pattern discovery
- Modeling
 - Training and validation of the supervised model

Technology involved: Python using the libraries NumPy, Pandas, Seaborn and scikit-learn.

Education

- November 2019–Present **Ph.D. Student**, *Automatic Control, Bioengineering and Operations Research*, Sapienza University of Rome.
curriculum: Automatic Control
- 2016–March 2019 **Master's Degree (in English)**, *Sapienza University of Rome, Control Engineering*.
Final mark 110/110 Summa cum Laude
Master's thesis supervisors Data Analytics and Machine Learning for Pattern Discovery in Car Insurance Services
Prof. Francesco Delli Priscoli, Dr. Lorenzo Ricciardi Celsi

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in [manuel-donsante](#) • Birthdate 13 July 1993

description	Application of Machine Learning predictive technologies at Insurance Company. Thesis developed at the holding “ELIS Consulting & Labs”
2012–2016	Bachelor’s Degree (in Italian) , <i>Sapienza University of Rome, Ingegneria Informatica e Automatica</i> .
Final mark	105/110
Bachelor’s thesis	Data mining applicato alle reti di servizi di trasporto: identificazione dei profili di viaggio tramite analisi dei cluster
supervisors	Prof. Francesco Delli Priscoli, Ing. Silvia Canale
description	Big data analysis related the Bonvoyage European project (Horizon 2020, http://bonvoyage2020.eu/) using the machine learning algorithms OPTICS and DBSCAN

Languages

Italian	Mother tongue
English	Professional working proficiency

Technical skills

Programming Languages	Python, C, Java, Assembly (IA-32, x86-64)
Applications	MATLAB & Simulink, Robust Control Toolbox (MATLAB), GNU Octave, \LaTeX , Microsoft Office and LibreOffice suite
Operating Systems	the most common Linux distributions, all Windows versions

Certifications

MATLAB	Deep Learning with MATLAB
MATLAB	Deep Learning Onramp
MATLAB	MATLAB Programming Techniques
STK	STK Certification, Level 1

Publications

2019	<i>Multi-Connectivity in 5G Terrestrial-Satellite Networks: the 5G-ALLSTAR solution</i> . Lisi, F.; Losquadro, G.; Tortorelli, A.; Ornatelli, A.; Donsante, M, 25th Ka and Broadband Communications Conference
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Projects developed during the master degree

January 2019	Dynamic Scheduling for Charging Electric Vehicles
January 2019	Nonlinear Observability and Estimation for Multi-Agent Systems - Quadrotors. [Matab/Simulink simulations]
December 2018	A Torque Vectoring Control Strategy for an Electric Vehicle with Four In-Wheel Motors. [Matab/Simulink simulations]
July 2018	Optimal control analysis of the HIV/AIDS infection diffusion model. [Matab/Simulink simulations]

- February 2018 Estimate the DC motor parameters in order to obtain an estimate of the motor torque and design of a PI speed regulator using Arduino Due and MATLAB Support Package for Arduino Hardware
- November 2017 Stability Analysis of a Power Transmission Grid and Energy Storage System Placement to Counteract Dynamic Load Altering Attack on the Reduced Network Western Electricity Coordinating Council (WECC). [Matab/Simulink simulations]

Interests

- Sports I enjoy playing sports, I played Rugby and love do jogging on mountains
- Reading I like reading science fiction books, satire, thriller and everything about new technologies
- Travelling I am an open-minded person who likes travelling and knowing new people and cultures
- Music I love listening to all kinds of music, however my favourite genres are rock, jazz, pop and blues

Additional information

Available for business trips.

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