

Tommaso Scali

Curriculum Vitae



Work Experience

- 09/19–03/20 **Propulsion Engineer**, *SPARC Industries SARL*, Esch-sur-Alzette, Luxembourg.
I worked 6 months (Master Thesis's Project) in this start-up collaborating closely with all the team members managing the different phases of a project concerning the development of a novel electric propulsion technology and its commercialization for space missions.
- Project Management.
 - Ionization Chamber Design.
 - Statistic analysis and Mathematical modeling.
- 03/17–06/17 **Intern**, *SAFM (School of High Formation at the Management)*, Turin, Italy.
I have taken part in a project called: "Innovation for change". I was included in a group of students including PhD candidates of various disciplines. We have proposed an idea of start-up to solve one of the current problems related to global issues such as health insurance. The start-up project was continuously carried out in close contact with the customer who has had raised the specific problem.
- Business Analytics.
 - Customer Care.
 - Market Research.

Education and Training

- 09/18–06/19 **EU/Young Talents Program**, *Faculty of Space Engineering, Delft University of Technology*, Delft, Netherlands.
During this year of international experience I have been working on many student projects; in particular I have worked on the design of space missions (Ground Systems, Operations in Orbit, De-Orbit) and the development of innovative thrusters including technologies that use water as the main propellant.
- Interplanetary Trajectory Optimization.
 - Multi-Objective Optimization.
 - Electric Propulsion.
- 09/17–04/20 **M.Sc. Space Engineering**, Polytechnic of Turin, **110 with honors**.
During my master's year in Turin I worked in particular in the exam: "Project of Missions and Space Systems". Together with my other student colleagues, we have done a complete report to present a hypothetical Space Mission to the Moon respecting all ESA's indications on PHASE A of the approval process of a mission.
- Development of different Flight Operations Plans (FOPs).
 - Project Budgets Allocation.
 - Trade-off analysis of different Mission Concepts.
- 09/14–07/17 **B.Sc. Aerospace Engineering**, *Project "Giovani Talenti" ("Young talents")*, Polytechnic of Turin, **110/110**.
- 05/20–07/20 **365 Data Science Program**.
In this online course, I expanded my knowledge in Data Science. In particular, I have acquired the ability to ingest, transform, visualize and model datasets.
- Machine Learning with Python: SciPy, Tensor Flow, NumPy, Pandas.
 - Create and modify database schemas with SQL.
 - Statistical computing with R.

Language skills

Italian Mother tongue,

English IELTS 7.5 (C1).

Understanding		Speaking		Writing
Listening	Reading	Spoken Production	Spoken Interaction	Technical Writing
C2	C2	C1	C1	C1

Programming Languages

Basic R, SQL, Java.

Intermediate C, C++, Python.

Software and Computer Skills

Basic Catia, SolidWorks.

Intermediate Systems Tool Kit (STK), MSC PatranNastran.

Advanced Matlab, L^AT_EX, Word, PowerPoint, Excel.

Communication and Interpersonal Skills

- The technical training provided by the Polytechnic allowed me to acquire and develop a highly analytical mentality. Carrying out individual and team projects helped me develop leadership, team-working and problem solving skills. This helped me to develop excellent communication skills either in Italian and in English. The constant commitment as a collaborator also helped me to understand what it means to be a teacher and the importance of behaving also as a model for young people who have embarked on a path similar to mine, helping them to overcome the same difficulties I encountered along the way.
- My Erasmus experience has allowed me to come into contact with new cultures teaching me to adapt to different situations.
- Having taken part in a stimulating and challenging context such as the "Young Talents" project has finally developed and consolidated in me the predisposition to sacrifice and the habit of working under pressure.

Additional Information

- Driving license B (own car)
- Available to travel abroad.

References

- *Prof. Sabrina Corpino* (sabrina.corpino@polito.it). She's been the referent for the project of the Space Mission carried out in Turin.
- *Prof. Lorenzo Casalino* (lorenzo.casalino@polito.it). He's been my referent professor for my Master Thesis's project in SPARC.
- *Ing. Dejan Petkow* (d.petkow@sparc-industries.com). CEO of SPARC Industries SARL.