Farshad SHAMLU
Strategic and Space Engineer (SSE)

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Personal Profile

I am a second-year M.Sc student in Engineering Technology for Strategy and Security **(STRATEGOS)**. STRATEGOS is my second Master's degree at the University of Genoa, and my first Master's degree is Space Engineering. STRATEGOS as a Multidisciplinary approach promotes the Strategic Engineering, a new Discipline based on combining in close loop **Modeling, Simulation, Data Analytics, Machine Learning and Artificial Intelligence** to support Strategic Decision Makers. In my first-year at University of Genoa, I studied and did project based on Simulation and Modelling, and currently, I am continuing my studies in Data Science and Machine Learning at the French private engineering school (Efrei) for my second year of Master's degree as an **ERASMUS+** student.

Education

Sep 2021 - Present	M.Sc in Engineering Technology for Strategy and Security - University of Genoa, Genoa, Italy ERASMUS+ student in Data Science and Artificial Intelligence - French Private Engineering School Efrei, Paris, France	

Modelling and Design of Complex Systems	$A^+ (With Honor)$
Mathematical Modelling and Continuous/Discrete Simulation	A^+
Operation Research for Strategic Decision: Models, Methods	A^+
Development Economics	A^+

2014-2016	M.Sc in Aerospace-Space Engineering - Amirkabir University of Technology, Tehran, Iran	

Advanced Mathematics	A
Advanced Orbital Mechanics	A
Flight Dynamics and Control of Spacecraft	A
M.Sc Thesis	A

2009-2014	B.Sc in Geomatics Engineering - University of Isfahan, Isfahan, Iran	

Mathematics 1	A^+
Physics (Classical Mechanics)	A^+
Differential Equation	A
Programming (C++)	A

Awards and Scientific Experiences

Aug 2022 - Jul 2023	Winner of Erasmus+ scholarship French Private Engineering School Efrei, Paris, France
May 2022	Award for **Best Sustainable Project** by the 26th International, Cultural and Academic Meeting of Engineering Students (ICAMES 2022)
Apr 2022	Participated in the Simulation Exploration Experience, SEE 2022 Event Professional Association with SISO, Liophant, SCS, GICSR and NASA

2017-2020	Research Assistant in System Engineering with focus on Need Identification and Requirement Management.
2019-2020	Participated in Translating the book of Design Structure Matrix Methods and Applications from Steven D. Eppinger and Tyson R.Browning to Persian.
Jul 2017	Scientific Papers on Journal of Space Science and Technology (JSST), Vol. 10, No. 2, Summer 2017, pp. 1-8. (In Persian)
2015-2016	Teaching Assistant Teaching and Supervising students in Course Materials and Exams, (MATLAB) Instructor: Professor Albolghasem Naghash (Amirkabir University of Technology)
2014-2016	Ranked 1st, among Graduate Students in Space Engineering, Amirkabir University of technology GPA: 3.5/4.0
Jul 2009	Ranked the Top 1% among over than 300,000 Participants in the Nationwide Entrance Exam of Iranian National Universities in B.Sc.

Projects

- **AIROSCE:** Artificial Intelligence and Robotic System for Cleaning Natural Environments
  26th International, Cultural and Academic Meeting of Engineering Students (ICAMES 2022)

- **MIRAGE:** Multifunctional Interoperable Rover for Advanced Ground Exploration
  Deployed to map the Lunar Surface to accumulate observation on Moon for water and minerals.
  Simulation Exploration Experience SEE 2022 Event

- New Polar Routes and Strategic Engineering
  The New Polar Routes are a possible alternative for World Logistics due to Climate Change
  STRATEGOS Webinar / Workshop, University of Genoa, Italian Navy.

- Satellite Orbit Prediction by the Artificial Neural Network (ANNs) and the Time Series.
  Master's Thesis, Space Engineering, Amirkabir University of Technology

- Design and Simulate satellite orbits for Remote Sensing satellites

- Spacecraft Orbital Manoeuvre Flight Dynamics Simulation from Earth orbit to Mars orbit

- Modelling and Simulation of Spacecraft Attitude and Dynamics

- Research Paper about Satellite Ranging Techniques

Computer Engineering Skills

- **Programming Languages**

  - *Python*
  - *MATLAB / SIMULINK*
  - *C / C#*
  - *C / C++*

- **Software Skills**

  - *Linux*
  - *Git*
  - *Microsoft Office*
  - *AutoCad*
  - *Unity3D*
  - *Blender*
  - *Systems Tool Kit*
  - Pitch

Professional Affiliation

- **Simulation Team** Member
- **Pytopia** Member

Language Level

- **English:** **Fluent**
- **French:** **Beginner**
- **Italy:** **Beginner**
- **Persian:** **Native**

Interests

- **Most of Engineering Fields 🙂 Specially those ones related to Space Missions**
- **Modeling, interoperable Simulation**
- **Virtual and Augmented Reality, Digital Twin, Serious Games**
- **Programming Specially Python**
- **Autonomous Systems**
- **Spacecraft Fight Dynamics and Control - Orbital Mechanics**
- **Exercise (Gym, Mountain Climbing, Football, Swimming)**

Referees

Name	Agostino Bruzzone	**Name**	Abolghasem Naghash
Institution	Simulation Team, University of Genoa	**Institution**	Amirkabir University of Technology
Position	President, Full Professor	**Position**	Association Professor
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