



# Sooraj Francis Mani

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## About me:

I have an expertise in engineering design achieved by a MSc in Mechanical Engineering Design with a total of 101/110 and a MSc in Product Design with a total of 100/110 (both taken in Sapienza). Since 2017 I am collaborating with the **Industrial Design Methods and Tools Research Group of DIMA** (SSD ing-Ind/15, SC09-A3) in various external and internal projects related to CAD modeling (with a contract), Reverse Engineering (with a contract), Virtual Reality and Haptic Systems (that was also the subject of the Master Thesis in Mechanical Engineering). Recently I attended the ADM2021 conference in particular the sessions related to my field of expertise and the Special Session "Engineering Methods and Applications in Cultural Heritage". I also collaborate in the 3D modeling and simulation of the support structure of ancient bronze statues, and I also operated as tutor in the lab of Advanced methods in Mechanical Design where Reverse Engineering expertise is required. I also worked on the design and analysis of naval vehicles in the same department. From these previous work experiences, I attained skills in designing models with Mechanical CAD & simulations with FEM Analysis software

## ● WORK EXPERIENCE

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09/07/2018 – 31/10/2020 – Rome, Italy

### **EXTERNAL PROJECT COLLABORATOR – SAPIENZA UNIVERSITY OF ROME**

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- Design and Assembly of Support Structure for a Historical damaged statue
- Technical Drawing & BOM of the parts and Assembly
- Research on Force Feedback Haptic Device and its application
- Collaborating in the lab activities of Virtual Reality and Reverse Engineering
- Collaborating on the projects of Reverse Engineering

05/10/2017 – 08/07/2018 – Rome, Italy

### **MECHANICAL DESIGN INTERN – SAPIENZA UNIVERSITY OF ROME**

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- Design & Analysis of Autonomous Naval Vehicle using Catia v5
- 3D Modeling, Surface Design, Assembly Design, Technical Drawing of all the assemblies and sub-assemblies, BOM
- FEM Analysis of the Naval Vehicle Structure
- Collaborating in work related to Reverse Engineering (acquisition, meshing & Surface designing)

## ● EDUCATION AND TRAINING

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24/09/2018 – 28/10/2021

### **MASTER OF SCIENCE IN MECHANICAL ENGINEERING DESIGN – Sapienza University of Rome**

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- Research work on Active Camber System
- Main Subjects: Advanced Methods in Mechanical Design, Additive Manufacturing, Vehicle System Dynamics, etc

#### **Field(s) of study**

- Engineering, manufacturing and construction

**Thesis:** Design & Development of Haptic Device

101/110 | <https://www.uniroma1.it/it>

24/10/2014 – 22/03/2017 – Rome, Italy

## MASTER OF SCIENCE IN PRODUCT DESIGN – Sapienza University of Rome

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- Product Design Studio
- Conceptual Design of Commercial Refrigeration Fridges for a Refrigeration Company

### Field(s) of study

- Product Development

**Thesis:** Solar Powered Robotic Lawn Mower

100/110 | <https://www.uniroma1.it/it>

03/07/2013 – 18/02/2014 – Ernakulam, India

## DIPLOMA IN MECHANICAL CAD – CAD Center

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03/08/2009 – 30/06/2013 – Ernakulam, India

## BACHELOR DEGREE IN MECHANICAL ENGINEERING – Federal Institute of Science and Technology

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- Thesis on Multi-Fuel Two-Wheeler
- Main Subjects: Engineering Drawing, Theory of Machines, Machine Design, Fluid & Hydraulic Machinery, HVAC, etc

### Field(s) of study

- Engineering, manufacturing and construction

65/100 | <https://www.fisat.ac.in/>

## ● DIGITAL SKILLS

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### Mechanical 3D Softwares

Catia-V5 | Solidworks (Professional Proficiency) | AutoDesk INVENTOR | Solid edge | Rhinoceroses | PTC CREO (Professional Proficiency)

### Simulation & Analysis Softwares

Ansys | HyperWorks (HyperMesh, Optistruct, RADIOSS, HyperView) | Matlab | Simulink | Simscape

### Other

Microsoft Word | Luxion Keyshot

## ● LANGUAGE SKILLS

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Mother tongue(s): **MALAYALAM**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C2	C2	C2	C2	C2
<b>ITALIAN</b>	B1	B1	A2	A2	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user