NITHIN STEPHEN **PUSHPAGIRI**

ISAE - SUPAERO MSc in Aerospace Engineering Student

"I am seeking opportunities to do internship in organizations that can help me in enhancing my skills, strengthening my knowledge, and assist in the vision of the organization".

Looking for **CDI contract from April 2024 in** Systems Engineering

CONTACT

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in Nithin Stephen Pushpagiri LinkedIn

SKILLS

CODING - Python, SysML, UML, C++

TOOLS: Capella, Cameo, Rhapsody, DOORS, Jira Software, Catia, SolidWorks, MATLAB, Ansys ICEM CFD, OpenFoam, AutoCAD, Excel VBA, Gasturb, Minitab, OpenModelica.

OPERATING SYSTEMS – Linux, Microsoft Windows, Mac OS

LANGUAGE SKIILS

English   - Fluent (C1 IELTS)
French   - Intermediate level
Malayalam - Native
Hindi   - Advanced

STRENGTHS

Perseverance, Adaptability, Problem-solving, Flexibility, Leadership, Communication, Sense of Priorities and Team working, Ability to Synthesis

HOBBIES

Travelling, Public Speaking, Travel Planning, Table tennis, Badminton,

EDUCATION

ISAE SUPAERO
Toulouse, France
2022-2024

Hindustan Institute of Technology and Science
Chennai, India
2018-2022

MSc in Aerospace Engineering
System Engineering Major
Requirement Engineering, Introduction to Validation & Verification, System Modelling and Analysis, Flight dynamics, Aerostructures, Control of Dynamic Systems.

Bachelor Of Technology Aerospace Engineering
Aircraft Performance, Aircraft Stability and Control, Aircraft Systems & Instrumentation, Space Mechanics, Avionics, Advanced Aerodynamics

EXPERIENCE

A MBSE Approach for A Fail-Stop Failure Control System in a BWB

Lead System Engineer Hades Project Club

2023
Ongoing
(2 months)

o Engaged in the development of a simplified 5kg BWB (Blended Wing Body) drone system architecture using *Cameo*.
o Utilizing a system thinking and engineering approach with a specific emphasis on addressing potential failures within the control system.

MBSE Based System Design and Analysis for Emergency Return Functionality in Remote Controlled UAV Drone

Mini Project

2023
2-months

o Led a project to develop an Emergency Return system for remote- controlled UAV drones enhancing operational safety.
o Utilized MBSE to design a robust system architecture, ensuring compliance with detailed use cases and improving overall reliability using *Rhapsody*.

High-Fidelity Aerodynamic Analysis of High Aspect Ratio Wing

Research Graduate- ISAE SUPAERO

2022
Ongoing
(10 months)

o Project under ISAE-SUPAERO and ONERA focusing on high aspect ratio wings.
o A *MDAO* study on such wings using *DAFOAM* (*Discrete Adjoint OpenFOAM*) and *Mach Aero* framework for optimization.
o High Fidelity Aerodynamics parametric study on various struct positions along the wing's chord.

Development of Onboard Guidance Algorithm on an Atmospheric Re-entry Vehicles - **Bachelor Thesis**

2021
6-months

o Led a team to develop an online guidance system that can reduce high potential energy during re-entry of spaceplane to reduce landing velocity.
o Developed Online Trajectory predictor and control laws using *MATLAB*.
o Successfully simulated the guidance system on a Spaceplane control system using *Simulink.*
Publication: DOI: 10.13111/2066-8201.2022.14.3.3

Internship at AMTDC – Indian Institute of Technology Madras

Junior Intern – IIT Madras

2021
3-months

o An internship for AMTDC- IITM and Ministry of Heavy Industries - Govt of India.
o *Dynamic System Modelling* for Energy Simulation data for a HVAC application
o Coupling of *OpenModelica* and *OpenFOAM* for hands on experience.
o Collaborate with leading experts in the field.

Boeing- VFS Student's Design Competition 2020

2020
7-months

o Lead a team in designing VTOL - UAV for medical equipment distribution at high speed in a competition was organized by Vertical flight society, sponsored by Boeing company.
o Demonstrated innovation in an efficient design for delivery of medical supplies.

AREA OF INTEREST

UAVs, Systems Engineering, System Architect, INCOSE, Circular Economy, Life Cycle Assessment, Overall Aircraft Design, Control system, Project Management