Mechanical and Aerospace Internship

Meridian Flight Systems Ltd. is a British aerospace start-up with a presence in the European Union. We are developing a novel, highly autonomous, large, unpiloted, hybrid powered, aerial vehicle (UAV) with vertical takeoff and landing intended for use in the logistics industry, law enforcement, environmental management, and infrastructure inspection to name a few.

Overview

We need an ambitious student in the BSc. or MSc. programme, eager to gain practical work experience and contribute to a groundbreaking aerospace project. We are seeking a dynamic intern to join our team. This is a unique opportunity to be part of a high-technology aerospace start-up that will be at the forefront of UAV innovation and hybrid power systems. The job will be remote working. It is a part time position up to a maximum of 50% in consideration of academic commitments.

Responsibilities

You will play a crucial role in the technical development and of the Meridian UAV technology as we aim to reach the first flight of our prototype. Your responsibilities will include but not be limited to the following:

Aerofoil Development: Using xFoil and other tools to develop the aerofoils for the lifting surfaces and main control surfaces of this novel aircraft.

Rotor Development: You will use xRotor and qProp to use xFoil data as input to develop our bespoke 3D rotor design for this novel eVTOL aircraft.

Three Dimensional CFD: Evolve two-dimensional studies to launch 3D Navier-Stokes CFD solutions for the critical phases of vertical and horizontal flight as part of the aircraft development exercise.

Performance Calculations: Using hand calculations and flight performance software, you will generate aircraft performance data that will inform the flight test programme.

Qualifications

- You should be enrolled a BSc. or MSc. programme studying Mechanical and Aerospace Engineering, Aeronautical Engineering. Mechatronics or Physics.
- A good understanding of fluid mechanics, aircraft aerodynamics, combustion, two-phase flows and High-Performance Computing is a bonus. A specific knowledge of turbomachinery theory and practice including gas turbine performance is preferred. Combustion, turbulence, and spray modelling knowledge is a plus chemical kinetics background is a plus
- Proficiency with model-based design workflows in Altair FlightStream, ANSYS Workbench including PCA Engineers Vista Software Suite including BladeGen, Vista CCD, Turbogrid, ANSYS CFX and Fluent CFD packages, ANSYS Chemkin and ANSYS Mechanical FEA is desirable.
- Knowledge of C, C^{++}, Python and other programming languages is required.

Fluency in written and spoken English and fluency in other European languages is an advantage with excellent communication and people skills.

Please send an introductory email and your curriculum vitae to info@meridianflight.com.