Orbit modelling and simulation for satellite servicing use cases

Code: 20/25

Company: Space Forms Ltd.

Location: Remote (Flexible Working) or Reading, UK

Company Description:

Space Forms aims to build space drones for autonomous fault detection and maintenance of satellites and space structures. We are a new space start-up building products and services within the satellite servicing arena. We plan to provide customers with rich-data and insights to make informed decisions. https://www.space-forms.com/

Project Description:

Space Forms is working on building and enhancing software modules for orbit modelling, simulation and flight dynamics. Given the company's goals in the satellite servicing arena, this project would enable us to automate and streamline key tasks associated with relevant space missions.

The internship will comprise of working on a range of orbit modelling, simulation and flight dynamics tasks using a programming language. All the development and modelling work plans to be packaged into a software module for wider use and interoperability. A mixture of orbital mechanics expertise and software engineering skillset will be needed to deliver this project.

Applicant Specification:

Academic:
- Bachelors or Master's degree (completed/pursuing or equivalent experience)

Minimum Requirements:

Technical competencies:
- Good knowledge of python/matlab/java and related libraries, modern software design methods
- Experience of working on orbit modelling & simulation, space flight dynamic problems
- Good knowledge of astrophysics, spacecraft/satellite operations

Behavioural competencies:
- Passion for space exploration
- Continuous Learning
- Problem Solving

- Good people skills
- Teamwork
- Results Orientation

Preferred Additional Requirements:

- At least 2 years' experience using python/matlab/java and related libraries
- Experience using Orekit or GMAT or AGI STK,ODTK etc. for orbit simulation, flight dynamics
- Spacecraft/satellite AIT and/or operations experience
- Knowledge of modern software design best practices and full-stack engineering experience.

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around 15 June 2020 to attend the SPIN Induction day at the Satellite Applications Catapult, and completion before 20 September for the Showcase the following week. Salary is £1,500 per calendar month gross.

Closing Date for Applications: 5pm Wednesday 29 April

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.