Training Opportunity for Luxemburgish Trainees

Reference	Title	Duty Station
LU-2019-OPS-OS	**Artificial Intelligence for Space Operations Innovation**	**ESOC**

Overview of the unit's mission:

The Artificial Intelligence and Operation Innovation Team is strongly committed to innovation and technology investigation to support more flexible and cost effective operational concepts for current missions and to work on the assessment of new concepts for future mission. Added value generated by AI applications for space is the final goal of the team.

The mission is implemented carrying active research and working on projects. The output of a project includes documentation, architecture, software prototype and an operational assessment. In specific cases it can be a stand-alone product. Results are often published on international, top level conferences. Consolidated applications are then inherited in the ESA infrastructure asset.

Overview of the field of activity proposed:

The candidate trainee will become member of the Artificial Intelligence and Operation Innovation Team and will be initially integrated in one of the on-going internal projects.

The activities proposed lay among the following areas:

- AI Planning and Scheduling
- Software Engineering for AI-based tools
- Knowledge Engineering for planning and scheduling in space
- Autonomy
- Machine Learning
- Predictive analytics
- Data-driven visualization

Activities will require collaboration with multiple teams (data scientists, IT and infrastructure, flight control teams, system engineers, etc.). The proposed traineeship involves the development of prototypes using agile methods (scrum) with analysis and understanding of user needs.

Required education:

Applicants must have recently attained their Master degree or be close to successfully completing their studies in Computer Science, Data Science, System Engineering or equivalent.
Required skills:

- Good knowledge and practice of programming languages: python, java or C++ - Mandatory
- Background on AI (Planning and Scheduling, Autonomy or Machine Learning) - Preferable
- Experience in web applications development framework (e.g., Angular, Ionic, React) - Preferable
- Good presentation delivery skills
- Greatly developed empathy and motivation