

## Training Opportunity for Irish Trainees

Reference	Title	Duty Station
IE-2019- OPS-OS(2)	Innovative web applications for AI powered spacecraft operations	ESOC
<p><b><u>Overview of the unit's mission:</u></b></p> <p>The Artificial Intelligence (AI) and Operations Innovation Manager and its team (in OPS-OS) is entrusted with:</p> <ul style="list-style-type: none"> <li>a) providing AI related consultancy, including Data Analytics, Visual Analytics, AI Planning &amp; Scheduling)</li> <li>b) to coordinate related AI research activities in OPS and across ESA</li> <li>c) to provide Data Analytics and AI services.</li> </ul> <p>The team is focused on developing prototypes and novel applications to support space operations tasks, such as early detection, diagnostics, forecasting and planning, using AI technology The team is supported by Research &amp; Development computer facility, which allows hands-on work on artificial intelligence applications.</p>		
<p><b><u>Overview of the field of activity proposed:</u></b></p> <p>The candidate trainee will become member of the AI &amp; Operations Innovation team and will be actively contributing to on-going internal projects. Several prototypes for innovative solutions to support spacecraft operations have been completed in the recent years. Those solutions span across several computer science disciplines, like planning and scheduling using artificial intelligence or machine learning. The trainee will support the team during the integration of those solutions in a web application that is being distributed to our internal partners.</p> <p>The main activities proposed would involve the development and integration of a scalable web application for:</p> <ul style="list-style-type: none"> <li>- Timeseries analysis</li> <li>- Data annotation</li> <li>- Data-driven visualization</li> <li>- Automated planning and scheduling</li> </ul> <p>Activities will require collaboration with multiple teams (data scientists, IT and infrastructure, flight control teams, system engineers, etc.). The team works on multiple, related projects requiring creativity, ingenuity and a sense for holistic perspectives. As part of the traineeship the candidate will be involved in the DevOps lifecycle of our projects, including the setup and design of a CI/CD pipeline.</p>		
<p><b><u>Required education:</u></b></p> <p>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.</p> <p>Required skills:</p> <ul style="list-style-type: none"> <li>- Good knowledge and practice of programming languages: Typescript, JavaScript, Python, Java Experience in web technologies and applications development frameworks (particularly, Angular, Django, RESTful interfaces, micro-services, etc.)</li> <li>- Fair knowledge and practice of Linux administration and bash scripting</li> <li>- Knowledge of relational and non-relational databases (e.g. MariaDB, MongoDB)</li> <li>- Knowledge of git (and particularly working with GitLab) is an asset</li> <li>- A strong interest in developing DevOps skills</li> <li>- Greatly developed empathy and motivation</li> </ul>		