

## DestinE Artificial Intelligence (AI) Applications Lead

**Job Req ID:** 14362

**Closing Date:** 09 January 2022

**Publication:** Internal & External

**Vacancy Type:** Fixed-Term

**Date Posted:** 10 December 2021

Vacancy in the Directorate of Earth Observation Programmes.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. We therefore welcome applications from all qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

This is a non-renewable post for a limited duration of four years and is classified A2-A4 on the Coordinated Organisations' salary scale.

### Location

ESRIN, Frascati, Italy

### Description

The objective of the European Commission Destination Earth (DestinE) Initiative is to develop a very high accuracy digital model of the Earth to monitor and simulate natural and human activity, and to develop and test scenarios that would enable more sustainable development and support European environmental policies.

DestinE will contribute to the European Commission's Green Deal and Digital Strategy. It will unlock the potential of digital modelling of the Earth's physical resources and related phenomena such as climate change, water/marine environments, polar areas and the cryosphere on a global scale to speed up the Green Transition and help plan for major environmental degradation and disasters as well as support the expansion of commercial sustainable exploitation of that information.

The DestinE Initiative will be implemented by ESA in partnership with the ECMWF (the European Centre for Medium-Range Weather Forecasts) and EUMETSAT under the system authority of the European Commission (DG CNECT). The legal basis for the implementation of the initiative consists of three Contributing Agreements including a Technical Annex established with each of the partners with DG CNECT. The DestinE Initiative is divided into three phases spanning the current MFF (Multiannual Financial Framework) of the European Union (2021–2027). The first phase lasts from 2021 to the end of 2023 and will be financed by DG CNECT. ESA assumed a leadership role in the definition of the DestinE architecture and its operational services. ESA is also responsible for the DestinE Core Service Platform implementation and operations as well as the DestinE system integration and validation.

Complementary to DestinE, an ESA Programme Proposal called Digital Twin Earth & Universe (DTE&U) is in preparation. Should this programme also be approved for implementation, in addition to tasks related to DestinE, major aspects of the DTE&U programme implementation would also fall under your responsibility.

### Duties

Under the authority of the Head of the Explore Office within the  $\Phi$ -lab Division and in coordination with the EOP DestinE Project Manager, you will bear delegated responsibility for:

- defining, procuring and implementing research & innovation (R&I) activities supporting the integration of EO data, Earth System models and leading-edge AI techniques to enhance the observing and predictive capabilities of the DTE&U, and foster its transfer to a more pre-operational environment in DestinE;
- leading the architecture, development and deployment of scalable AI and machine learning software and workflows on high-performance computing environments;
- coordinating with key DTE&U and DestinE users/actors;
- engaging with the AI ecosystem to remain up to date with the latest advances in AI and evaluate new software/hardware architectures;
- promoting the uptake of new AI4DTE capabilities to a wider community;
- collaborating with scientists and industry partners to develop new applications of AI for EO and DTE&U type applications.

### **Technical competencies**

Sound experience and knowledge of the use of AI algorithms for EO data science applications

Experience in interfacing with users

Solid understanding of EO science and applications

### **Behavioural competencies**

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

### **Education**

A Ph.D. or Master's Degree in a relevant field e.g. Earth / Computer / Data / Physical Science, or a related domain is required for this post.

### **Additional requirements**

The following competencies are considered assets:

- High-level motivation and dedication, taking ownership and acting proactively
- Proven ability to work productively both independently and as part of an interdisciplinary team
- Excellent communication and interpersonal skills.
- Familiarity with deep learning architectures, technologies, software cycle, and computing.

### **Other information**

For behavioural competencies expected from ESA staff in general, please refer to the [ESA Competency Framework](#).

The working languages of the Agency are English and French. A good knowledge of one of these is required. Knowledge of another Member State language would be an asset.

The Agency may require applicants to undergo selection tests.

At the Agency we value diversity and we welcome people with disabilities. Whenever possible, we seek to accommodate individuals with disabilities by providing the necessary support at the workplace. The Human Resources Department can also provide assistance during the recruitment process. If you would like to discuss this further please contact us at [contact.human.resources@esa.int](mailto:contact.human.resources@esa.int).

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Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada, Latvia, Lithuania and Slovenia.

According to the ESA Convention, the recruitment of staff must take into account an adequate distribution of posts among nationals of the ESA Member States\*. When short-listing for an interview, priority will first be given to internal candidates and secondly to external candidates from under-represented or balanced Member States\*. (<https://esamultimedia.esa.int/docs/careers/NationalityTargets.pdf>)

In view of the limited duration of this post, internal candidates are strongly advised to contact their HR advisor before applying.

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening before appointment.

Recruitment will normally be at the first grade in the band (A2); however, if the candidate selected has little or no experience, the position may be filled at A1 level.

\*Member States, Associate Members or Cooperating States.