



2022-IPR-F7-FGIV-021350

**FG IV - Scientific Project Officer – Interpretable
Machine Learning in Digital Health**

POSITION FOR:

Member of the contract staff FGIV – art. 3b of the Conditions of Employment of Other Servants

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1962R0031:20110101:EN:PDF>

WE ARE:

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre (JRC) is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <https://ec.europa.eu/jrc/>

The current vacancy is in the Knowledge for Health and Consumer Safety Unit, within the Directorate for Health, Consumers and Reference Materials.

The Unit supports EU policies on consumers, food safety and health by mapping, collating, analysing, quality checking and communicating in a systematic and comprehensible way all the relevant scientific data, methods, tools and knowledge available worldwide in their policy area.

WE PROPOSE:

A post as scientific officer to contribute to the Unit's task to deeper understand interpretable methods and techniques in the field of Artificial Intelligence, starting with data from health information systems, scientific data or publicly available health data.

S/he will identify interpretable machine learning techniques that would unlock opportunities in the health scientific area that can contribute to build patient value and patient experience insights.

This will be enabled by developing and on-boarding a digital transformation road map using Artificial Intelligence (AI) to unlock the value of health information data, improve insight and knowledge generation through advanced data science methods and liaise and engage with a wide range of expertise such as the analysis / interpretation through the use of AI, data mining and visualization approaches.

As data scientist in digital health, you will:

- Contribute to projects that implement new or further advanced methods and tools in order to automate health information processing and enable advanced analytics.
- Identify and implement innovative analytical solutions, which will enable the exploration of health and medical data.
- Create, further develop and align, in collaboration with other groups in and outside the organization, international and transdisciplinary data standards and analytical methods for medical information, delivering actionable knowledge.
- Understand content and structure of health data and make it available for analysis.

WE LOOK FOR:

A Data Scientist expert in explainability and interpretable machine learning in the field of Digital Health.

Candidates must hold a PhD degree in life-science / bioinformatics / computer science / (bio)statistics/ mathematics / physics with skills in the following areas:

Scientific Impact of Research

- At least 5 scientific papers published in Q1 peer-reviewed journals on machine learning methods applied to health data.
- An h-index of at least 8 (i.e. 8 peer-reviewed papers cited at least 8 times).

Life and Medical Sciences

- Scientific leadership combined with flexibility, intellectual curiosity, ideation and eagerness to contribute.
- Understanding of medical information concepts, knowledge of life science and medicine concepts.

Computer Science

- Experience with Python and deep learning frameworks (pytorch preferred).
- Experience with parallel training of deep learning models in text or vision on multi-gpus systems.
- Experience with synthetic health data generation.
- Experience with R for the analysis of experimental data.
- Demonstrable experience for machine learning interpretability and explainability and data visualization, preferably applied to biomedical analytical problems with knowledge of the main data types used in biopharmaceutical/medical scientific data.
- Demonstrable Experience in text-based unstructured data and NLP.
- Knowledge of edge-computing (IoT) and Digital Biomarkers for remote patients monitoring.
- Strong (bio)statistical background with focus on data science

Project Management & Communication

- Ability to lead research projects and work both independently and in a team.
- Excellent English (C1) verbal and written communication.

Preferred

- Experience with SQL or noSQL
- Java/JavaScript would be an advantage.

INDICATIVE CONTRACT'S DURATION:

36 months initial contract with possible renewals up to maximum 6 years.

PLACE OF WORK:

Ispra (IT)

ELIGIBILITY CRITERIA:

Candidates for this contract agent post shall:

– (i) have passed a valid EPSO CAST selection procedure;

or

– (ii) be registered in the EPSO Permanent CAST <https://epso.europa.eu/en/documents/call-expressions-interest-0>

or

– (iii) be registered in the specialised call for researchers https://joint-research-centre.ec.europa.eu/working-us/jobs-jrc/temporary-positions/contract-staff-members/function-group-iv/job-opportunities-research-fellows-european-commission_en (used mainly by the JRC).

With a valid application number to one of the above, you may then apply for this specific vacancy at JRC through: <http://recruitment.jrc.ec.europa.eu/?type=AX>.

RECRUITMENT POLICY:

The Joint Research Centre

- Cultivates a workplace based on respect for other people and the environment.
- Embraces non-discriminatory practices and equality of opportunity. In case of equal merit, preference will be given to the gender in minority.