

## Data Science and Artificial Intelligence Assistant 4 (DSAIA-4)

### Vacancy – Terms of reference

#### A. Job description

**JOB TITLE:** Data Science and Artificial Intelligence Assistant-4 (DSAIA-4)

**PURPOSE:** The DSAIA-4 will assist both PIs of the SmartEcoMountains LifeWatch ERIC-funded project (Thematic Centre on Mountain Ecosystem and Remote Sensing, Deep Learning-AI e-Services University of Granada-Sierra Nevada) at the University of Granada, and the CTO –ICT-Core Director–, in the strategy and the day-to-day implementation of the Deep –Machine Learning and AI algorithms and methods as required

**LOCATION:** University of Granada (Andalusia, Spain)

**POSITION:** Full-time

**FUNDING RESOURCES:** ERDF Andalusia Projects – SMART ECOMOUNTAINS (Ref. LifeWatch-2019-10-UGR-01) Operational Framework 2014-2020 POPE

**COMPENSATION:** Competitive salary, commensurate to degrees and relevant experience

#### B. Main responsibilities

- S/he will directly report to the PI of the SmartEcoMountains (Work Package 7) at University of Granada, as well as to the Chief Technology Officer/Director of the ICT-Core;

- S/he will hold a position which requires multi-, inter- and trans-disciplinary ICT skills accrediting proven research experience on artificial intelligence and deep learning techniques;
- S/he will lead end-to-end research to solve the application of artificial intelligence algorithms to remote sensing problems: i.e., downloading, pre-processing and post-processing of multispectral time series of satellite images. Annotating these data to map different types of land use and land covers. Developing deep learning models to map and detect the change in land use and land cover types. Predicting the concentration of photosynthetic pigments using satellite image data, calibrated and validated with field measurements.

### **C. The ideal candidate should meet the following requirements:**

1. Bachelor's degree in engineering or mathematics;
2. PhD in applied mathematics, computer science, artificial intelligence, or related fields;
3. At least 1 year's experience as a postdoc researcher;
4. Experience of more than 3 years in applied machine learning and Deep Learning, proven with relevant publications in journals and conferences;
5. Strong background in statistical models, time series analysis, and forecasting;
6. Accredited experience on solving real world problems using machine learning models;
7. Strong expertise in adapting state-of-the-art deep learning models to complex problems;
8. Strong expertise in feature engineering and processing of remote sensing data (i.e., satellite images and multispectral time series);
9. Experience in creation and annotation of smart high quality remote sensing datasets;
10. Experience on multiple machine learning facets: working with large data sets, model development, statistics, experimentation, data visualisation, and optimisation;
11. Fluency in at least one programming language, with a strong preference for Python;
12. Excellent English communication skills, both written and oral; with ability to communicate with team members and other stakeholders;
13. Out-of-the-box thinker and innovative problem solver.

## ADDITIONAL DESIRABLE SKILLS

- Hands-on experience in the application of deep learning to biology and remote sensing;
- Practical experience with machine learning frameworks such as PyTorch, TensorFlow/Keras, etc;
- Practical experience with remote sensing platforms, e.g., Google Earth Engine and QGIS.

## D. The vacancy is subject to the following procedure:

- A **short covering letter** and **Curriculum Vitae**<sup>1</sup> (EUROPASS format and annexes, 10 pages at the most) shall be submitted to the Chief Technology Officer/ICT-Core Director [cto@lifewatch.eu](mailto:cto@lifewatch.eu) and in cc to [ictoffice@lifewatch.eu](mailto:ictoffice@lifewatch.eu) by **3 May 2022**. Please write "**DSAIA-4 Candidature**" in the mail subject;
- The selection process will follow the Employment Policy of LifeWatch ERIC;
- S/he will be appointed full-time. A competitive gross salary, based on the qualifications and experience of the candidate, will be offered. Employment will be in Spain, follow Spanish employment law and be subject to a 180-day trial (probation) period;
- This position is a full-time job. Her/his main office will be located at the University of Granada (Spain) with short stays at the LifeWatch ERIC ICT-Core premises in Seville (Spain), without prejudice to the establishment of others in the future;
- Start date in office for the appointed individual: **May 2022**.

**LifeWatch ERIC is an equal opportunity employer, and encourages all qualified candidates to apply, regardless of race, gender, age, national origin, or sexual orientation.**

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<sup>1</sup> Special note for Spanish market: According to Spanish Privacy Protection Law, any resumé not mentioning explicitly the following wording: 'I authorise the use of my personal data in accordance with Spanish Privacy Protection' will be automatically deleted from our database and consequently not taken into further considerations.