



2019-IPR-D-000-012510

**Computer vision to recognize and map
crops and rural landscape management
from street level imagery**

<p>Position for:</p> <p>Trainee</p>	<p>As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.</p> <p>The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu</p> <p><u>Short description of activity:</u></p> <p>The Food Security Unit contributes scientific expertise towards a more effective and efficient management of EU policies related to agriculture and food security, including the Common Agriculture Policy (CAP). The trainee position and research activities are related to the Rural Digit WPK and the forthcoming Rural Refocus Exploratory Research project.</p> <p>The trainee will contribute to evaluating the capacity of machine learning techniques to derive crop and landscape relevant information from targeted and crowd-sourced geo-tagged and time-stamped imagery. The validated information derived from computer vision/machine learning is valuable as training data and validation ground-truth for the high-resolution Copernicus Sentinel suite of satellites.</p> <p>By accomplishing concrete and divers tasks in an innovative context, the trainee will develop skills and expertise in fields including image processing and machine learning, remote sensing, GIS and agronomy. In particular, the trainee will contribute to the valuation of a digital dataset of crowd-sourced street-level imagery. This dataset can be used to train relevant machine learning models for automatic recognition of crop types, crop development stages, and rural landscape management. Moreover, support will be given to help the trainee contribute to writing the</p>
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	<p>findings up in a scientific paper.</p> <p><u>Qualifications:</u></p> <p><u>Essential:</u></p> <ul style="list-style-type: none"> • The trainee must have a BSc University degree in computer science, remote sensing, data sciences, environmental sciences or related fields. • Basic remote sensing analysis, practical GIS skills, and experience with spatio-temporal data analysis, as well as coding skills preferably in R or python are required. • Good knowledge of spoken and written English (B2 level minimum) is essential. <p><u>Advantage:</u></p> <ul style="list-style-type: none"> • Experience with crowd sourcing and citizen science would be a plus. • Field experience in agriculture (ability to monitor agricultural practices, crop types and plant development stages) is an asset. <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Directorate / Unit	<p>Directorate D - Sustainable Resources, Food Security Unit MARS Farming and Food</p> <p>Further information: https://ec.europa.eu/jrc/en/mars</p>
Duration	5 months
Preferred starting date	As soon as possible
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: HR-AMC8-RECRUITMENT-TOOLS-SUPPORT@ec.europa.eu</p>