



Internship – Geospatial Intern (Development and Innovation)

Geospatial Support Unit, Emergencies Division WFP HQ Rome, Italy

The World Food Programme (WFP) is the leading humanitarian organization saving lives and changing lives, delivering food assistance in emergencies and working with communities to improve nutrition and build resilience. We are currently seeking to fill a Geospatial intern (Development and Innovation) position in our Geospatial Support Unit of the Emergencies (EME) Division, based in Rome, Italy.

Brief description of (Unit), (Division): The Geospatial Support Unit within EME gathers data from a wide range of internal and external sources and updates geo-referenced information to ensure availability and easy access to detailed cartography as well as spatial analyses to support WFP's operation in response to humanitarian emergencies. 72 hours after major emergencies is a crucial time frame to estimate the impact and need for automated building damage estimation is at its highest. The Development and Innovation unit focuses on identifying geospatial solutions using machine learning with an aim to develop a data-agnostic, automated building damage model. The geospatial intern will work closely with GIS developer and the Development and Innovation lead to identify ways to better improve and operationalize the existing models.

General Information

- **Title of Post:** Geospatial Intern (Development and Innovation)
- **Supervisor:** Development and Innovation Lead
- **Unit:** Geospatial Support Unit
- **Country:** Italy
- **Duty Station:** Rome
- **Duration of internship:** 8 months
- **Expected Start Date:** Jan 2023

Duties and responsibilities

Under the direct supervision of the Development and Innovation lead, the candidate will perform the following duties:

- Review the current machine learning models that are currently in development and identify solutions for automated infrastructure damage assessment (for both natural hazards and complex emergencies)
- Deploy automated models to perform rapid damage assessment during emergencies
- Assist the team with Impact AI project scale-up which aims to create training datasets for lesser-known regions in the world
- Any other duties, as relevant and needed

Qualifications and experience

- Currently enrolled with at least two years graduate studies completed, or recently graduated (within the past six months) in Geographic Information Systems, Geoinformatics, Computer Science or related field
- University course attendance in the past 12 months
- Proficiency in developing machine learning models applied to satellite/drone images and in utilizing GIS tools and spatial data (ArcGIS, QGIS and relevant software)
- Proficiency in programming/scripting for AI-ML-CV (Artificial Intelligence – Machine Learning – Computer Vision), especially in Python and R.

Required soft skills/WFP Competencies:

- Good spoken and written communication in English
- Ability to work independently as well as in team

Working Languages

Working knowledge of English (proficiency/level C) is required.

Supervision (Level/Methods of Supervision)

Under the direct supervision of the Development and Innovation lead, the incumbent will be provided with close mentoring, guidance and technical supervision. Performance planning and reviews as well as learning and development discussions will be elemental part of the supervision. The Head of Geospatial Support Unit will be the second-level supervisor.

Training components

Throughout their assignment WFP interns have access to an industry leading learning platform, WeLearn. Depending on opportunities and availability of funds, he/she may participate in WFP workshops or seminars, as appropriate.

Learning Elements

At the end of the assignment, the Intern should:

- Understand the use of geospatial technology in WFP operations
- Understand the challenges and limitations of operationalizing innovation projects

Information on the Country of Assignment

- **Living conditions in Rome, Italy**

The security situation in Italy remains in line with other European Countries. There are no specific threats against the UN in Italy. Considering the ongoing defeat of Daesh in the war territories, the trend in the short and mid-term will most likely continue to see the return of the militants to the countries of origins, including Italy. Insurrectional anarchism remains sufficiently organized on the Italian territory, as it has been present for many years. This movement could target the UN in the context of its anti-capitalism/anti-western narrative. 2) Whilst UN staff continue to be victims of minor crime such as street robbery and apartment break-ins, the infrequency of attacks and random nature of locations do not indicate that UN staff are at an elevated risk in comparison to residents or tourists in Italy. 3) Italy's national territory is exposed to a broader range of natural hazards than any other European country. The vulnerability of its population and built environment is often severe and has in some cases been exacerbated by human activities.