

Terms of Reference
World Food Programme
Vulnerability Analysis and Mapping (VAM) Service
Rome, Italy

Title: Data Scientist
Contract type: Consultant, Level 1
Duration: 11 months, starting June 2017

The World Food Programme (WFP) is the world's largest humanitarian agency, fighting hunger worldwide. We are currently seeking to fill the position of a data scientist at WFP's headquarters in Rome, Italy to join the Vulnerability Assessment & Mapping team (VAM).

Background

Each year, on average, WFP feeds more than 90 million people in more than 70 countries. WFP VAM is a network of 150 specialists who track changes in people's food security worldwide. Led by the organization's Chief Economist, WFP VAM's areas of expertise include geospatial analysis, assessments, market analysis and monitoring systems.

The VAM unit is constantly exploring innovative sources of data to monitor food security. Since 2012, the 'mobile VAM' activity has worked to collect data from remote or conflict-affected areas through mobile-based assessments that have involved using SMS, IVR and voice calls. mVAM has been scaled to over 30 countries. WFP VAM has ongoing projects with Flowminder Foundation to analyze CDR data for humanitarian purposes.

WFP has secured resources to hire a data scientist to support the aforementioned activities research and development, and strengthening data analysis and reporting globally. The consultant will also play a key role in supporting the design of mobile surveys and assessments, analysing food and nutrition security data to identify opportunities to achieve Zero Hunger and lead data innovation efforts producing high quality data visualization and infographics for decision-making.

Duties and responsibilities

Under the direct supervision of VAM's Lead Data Scientist, the consultant will provide methodological advice and supervision on assessments using mobile methodologies. The consultant shall also co-lead, with Flowminder, the technical implementation of an operational CDR monitoring product in 1 or 2

Sub-Saharan African countries. Furthermore, Finally, he or she will also develop innovative analytical and/or data visualization products, work on mining unstructured semantic data, train and equip VAM Officers, and publish original research.

Specifically the consultant will:

- Act as a functional intermediary between Flowminder and WFP
- Research, create, and validate models that analyse CDR for displacement monitoring.
- Explore the integration of remotely conducted surveys (mVAM) to enhance the models.
- Provide design advice on WFP's assessments to ensure all aforementioned data can be used to work with the aforementioned models
- Develop software tools in R and Python to 'industrialize' the products to be able to perform such analysis relatively quickly and at scale
- Maintain and create databases to ensure all data is properly organized and stored
- Ensure adherence to WFP policies regarding data, including privacy, security, data management, and documenting code
- Perform other duties

Requirements

- M.S. or PhD degree in statistics, quantitative economics or mathematics
- 3+ years of experience in data science related field
- Competencies in Bayesian statistics and Survey statistics
- Proficient in Python and R and capable of learning new programming languages quickly
- Knowledge and experience of spatial statistical methods
- At least one past-experience with very large scale datasets
- At least one past-experience with complex survey research
- At least one past experience with machine learning and/or artificial intelligence
- SQL and Unix admin experience desirable
- Knowledge of French an advantage

Application Deadline: April 21st, 2017.

Email your CVs to jean-martin.bauer@wfp.org and gaurav.singhal@wfp.org