[ENGLISH] GIS Data Science Specialist

Overview
The Togo Data Lab, a joint initiative by the [Togo's Ministry of Digital Economy and Transformation](#) (MoDET) and the [Center for Effective Global Action](#) (CEGA), seeks two (2) full-time GIS Data Science Specialists to be based in Lomé for at least one year (with the possibility of extension). The specialists will support MoDET's efforts to institutionalize the use of [MOSAIKS](#), a multi-purpose earth image analysis tool, in agricultural decision-making as well as other priority policy areas. Ideal candidates will have prior experience with the use of geospatial analysis for global development, communicating research results to both technical and non-technical audiences, and teaching and/or mentoring. This is an opportunity for candidates with data science expertise who are passionate about sharing it with others and using it for social impact. You will work closely with Prof. [Tamma Carleton](#), a leader of the research team that developed MOSAIKS, while working directly with MoDET staff in Lomé, Togo. These roles will be hired directly (as full-time contractors) by the MoDET.

About the Togo Data Lab
The Togo Data Lab supports Togo's sustainable capacity to use novel data sources and data science approaches for developing, deploying, and evaluating the effectiveness of digital public services under the leadership of Min. [Cina Lawson](#). It features a dedicated team of Togolese and international data scientists with support from faculty and program staff based at CEGA-affiliated campuses (including the University of California, Berkeley and UC Santa Barbara).

Position Detail
The GIS Data Scientist Specialists will provide technical support, training, and oversight to the Togo Data Lab's efforts to institutionalize the use of MOSAIKS. They will also serve as external technical ambassadors, with the support of program staff at CEGA and the MInistry, to communicate the value of remote sensing approaches and geospatial analysis for public policy decision-making to different stakeholders in Togo and beyond. This position will require candidates to be based in Togo, as well as attend an in-person training at UC Santa Barbara in California, and travel between Togo, the US, and other countries as appropriate.

- *MOSAIKS expertise development (10%)*
  As part of our on-boarding process, the GIS Data Scientist Specialists will receive a tailored training on the MOSAIKS tool from PI Tamma Carleton with the rest of the MOSAIKS team at UC Santa Barbara. GIS Data Scientist Specialists will be expected to develop proficiency using the tool, ensure timely delivery of technical outputs with input from PI Carleton and Project Scientist Cullen Molitor, and lead the Togo Data Lab in developing a predictive model for agricultural outcomes in Togo.

- *Training and Mentorship (25%)*
  A critical responsibility of the GIS Data Scientist Specialists will be to facilitate technical expertise development among Togo Data Lab staff in Lomé. Specialists will be expected to liaise with staff with different levels of technical expertise and domain knowledge and support the development of staff's ability to independently conduct complex statistical analyses, interpret results, and identify limitations. This will include facilitating workshops, providing individual feedback to junior analysts' inputs, supporting senior staff to interpret outputs, and serving as in-country experts on GIS analysis and MOSAIKS for MoDET.

- *Agricultural   Survey   Oversight   (10%)*
  A key responsibility for the technical team to successfully develop a predictive model will

be to collect and refine training datasets. We plan to use both historical survey data alongside an original survey to ensure the project has high quality ground truth data. The GIS Data Scientist Specialists will provide input into the survey design and support its fielding in Togo. With support from the Togo Data Lab team, GIS Data Science Specialists will provide oversight to the training of enumerators, the piloting the survey instrument, ensuring data collection teams follow research protocols, and ensuring data collection remains on-track to comply with project timelines.

- *Predictive   Model   and   Dashboard   Development   (30%)*
  The principal technical output of the Togo Data Lab's first year will be a predictive model using historical agricultural data, original survey data from Togo, and MOSAIKS features. GIS Data Science Specialists will also lead and mentor Data Lab staff in the development of an interactive dashboard that will visualize predictions generated by the model to facilitate the use of these data by our government partners in the Ministry of Agriculture.

- *Stakeholder Outreach and Research Dissemination (25%)*
  The Togo Data Lab will engage in strategic dissemination and partnership building to maximize the impact of its work with MoDET and accelerate transferring expertise to local researchers, policy makers, and public servants who can use MOSAIKS and other data science approaches to inform decision-making.

Minimum Qualifications
- Bachelor's degree in geography, environmental science and management, data science, statistics, natural resource economics, or a related field at the time of appointment.

In addition, the candidate must have:
- At least 5 years of professional experience providing analytical research support to projects related to remote sensing, environmental economics, geography, or a related field;

  OR

- A Master's degree in geography, environmental science and management, data science, statistics, natural resource economics, or a related field at the time of appointment AND two years of professional experience providing research support to relevant projects.

Desired Qualifications
- Strong French language skills, or willingness to develop them for the appointment. French and English bilinguals are highly desired.
- Excellent quantitative skills including experience collecting, managing, processing, and analyzing large datasets;
- Excellent understanding of inferential and descriptive statistics;
- Experience with data visualization and dashboard development;
- Experience working with remotely sensed data from a variety of sensors, including datasets with different spatial, spectral, and temporal properties, as well as data from both active and passive sensors;
- Proficiency with coding languages such as R, Python, the Google Earth Engine API, and/or Stata;
- Familiarity with the application of machine learning methods to remotely sensed data;
- Passion and demonstrated interest in digital agriculture;

- Ability to synthesize and communicate scientific methods and results to a variety of partners and stakeholders;
- Excellent creative problem solving and troubleshooting skills;
- Excellent verbal and written communication skills;
- Ability to take initiative, self manage, and work independently as well as collaboratively as part of a multidisciplinary team;
- Exceptional attention to detail and strong organizational and time management skills.

To Apply
All applications must be submitted through MoDET's application forum. Please submit your cover letter and resume as a single attachment when applying. In addition to a current CV, candidates should submit a cover letter outlining (1) qualifications for the responsibilities listed above, (2) specific interest in the position, and (3) three academic and/or professional references. Incomplete applications will not be considered. The Government of Togo will sponsor visas for selected candidates regardless of national origin. The Togo Data Lab supports CEGA's efforts to to include people from under-represented groups on their team. Read CEGA's values statement.

Salary and Benefits
Salary is commensurate with prior experience; the approximate annual range for this position is $75,000-$85,000. We will also offer a concession to help candidates cover health and dental benefits. Data scientists will have a travel budget for their travel to Lomé, Santa Barbara, and other destinations for official Togo Data Lab business.