Post-Doctoral Fellow - Data Scientist

The International Maize and Wheat Improvement Center, known by its Spanish acronym, CIMMYT®, is not-for-profit agricultural research for development organization with partners in over 100 countries. Please refer to our website for more information: www.cimmyt.org

CIMMYT is looking for an innovative, highly self-motivated, and results-oriented candidate to work on improving maize and wheat agri-food systems in sub-Saharan Africa and other parts of the developing world. The Post-Doctoral Fellow – Data Scientist will work within Sustainable Agri-food Systems (SAS) program with a focus on projects in the areas of agronomy, climate adaptation and resilience and agri-food systems.

The specific research areas of this position include developing workflows to guide targeting of a group of predictive agronomy at scale innovations for current and future climate scenarios, applying different analytical tools (yield prediction at scale, yield gap analysis, farm typologies, geospatial analysis, etc.) to existing biophysical and socioeconomic data, and developing methods for cost-effective collection of spatially explicit data. The position may also focus on applying agro-advisory tools, precision cropping, advanced crop/soil diagnostics, geospatial analysis, remote sensing, big data analysis, and digital agronomy in the context of scaling farm innovations. The Fellow will contribute to several research activities focusing primarily on sub-Saharan Africa but may include activities in other developing regions.

The position will be based at CIMMYT office in Addis Ababa, Ethiopia.

Specific duties:
→ Involve in the process of acquiring, cleaning, managing, and analyzing data on soil, climate, crop, and agronomy at scale interventions.
→ Conduct a full review of existing methods relating to data analytic tools and methodologies in agronomy.
→ Develop new research questions that address core knowledge gaps, by leveraging new and emerging data mining methods, tools, and analytics.
→ Apply new and emerging methods including machine learning, artificial intelligence, big data analysis, and geospatial data analysis to guide and target innovative agronomy and soil health management strategies at scale.
→ Develop scientific manuscripts and publish in high impact scientific journals.
→ Develop and/or adapt ICT-based tools for field data collection at scale for agronomic and socioeconomic data.
→ Develop scripts and tools for statistical analysis that can be used by other CIMMYT scientists to analyze data
→ Collect, pre-process (e.g., grided and remote sensing data) and set-up data for modelling crop yields under different management and environmental scenarios.
→ Contribute to training and stakeholder engagement workshops, in data management, analysis and visualization.
→ Perform other duties as assigned by supervisor.

Required academic qualifications, skills and attitudes:
→ PhD in computer programming/statistics/climate/data science with some experience in applied sciences such as Ecology, Agroecology, Agronomy, Soil Science, Economics or any related disciplines and proven proficiency in data generation, management, and analysis.
→ Prior experience with collection, assembly, processing, and visualization of large datasets to describe patterns in agricultural productivity, resilience of cropping systems and corresponding explanatory factors using statistical procedures.
→ Advanced R and/or Python programming skills, including multivariate analysis and (preferably) a background in one or more of mixed linear models.
→ Experience in big data analytics, and machine learning.

→ Experience with IoT and handling multi-source datasets and statistical analyses of experimental and monitoring data.
→ A candidate with an interest in the dynamics between crop production and climate change (adaptation and mitigation) is preferable.
→ Integrate data from multiple sources (e.g., open data, crowd-sourcing, and remote sensing).
→ Prior experience with smallholder farming systems is an asset.
→ Demonstrated ability to publish peer-reviewed papers.
→ Proficiency in written and spoken English.
→ The selected candidate must exhibit the following competencies: Teamwork, Negotiation and Conflict Resolution, Critical Thinking, Client Orientation, and Communication.

The position is for an initial fixed-term for two (2) years, after which further employment is subject to performance and the continued availability of funds. CIMMYT's internationally competitive salary and benefits include housing allowance, car, comprehensive health and life insurance, assistance for children's education, paid vacation, annual home travel airfare, contribution to a retirement plan, and generous assistance with relocation shipment.

Candidates must **apply online** for **IRS22129_ Post-Doctoral Fellow – Data Scientist.**
Screening and follow up of applications will begin on **Monday, August 8th, 2022.** Applications must include a CV, with contact details of 3 work-related references and a cover letter. Incomplete applications will not be taken into consideration. For further information on the selection process, please contact Yessica Castillo, at y.castillo@cgiar.org
Please note that only short-listed candidates will be contacted.
This position will remain open until filled.

CIMMYT is an equal opportunity employer. It fosters a multicultural work environment that values gender equality, teamwork, and respect for diversity. Women are encouraged to apply.