World Vegetable Center

Position Announcement

Data Scientist

Shanhua, Tainan, Taiwan

The World Vegetable Center (WorldVeg) is a non-profit, autonomous international agricultural research center with headquarters in Taiwan and regional offices in Africa and Asia. WorldVeg conducts research and development programs that contribute to realizing the potential of vegetables for healthier lives and more resilient-livelihoods. The Center implements its science for development agenda through four outcome-oriented flagship programs: Safe and Sustainable Value Chains, Healthy Diets, Vegetable Diversity and Improvement, and Enabling Impact.

WorldVeg is seeking a Data Scientist to join its Enabling Impact Flagship Program.

The Enabling Impact Flagship Program supports the other three Flagship Programs in their intervention design, impact evaluation, and data management to achieve faster, greater and longer-lasting impact. The activities are part service provision and part research. Member of this program work closely with agronomists, plant breeders, entomologists, pathologists, molecular biologists, nutritionists, and other scientists within the organization. For more information, please visit our website: worldveg.org.

Key Job Responsibilities

Apply rigor in experimental study designs and analytical methods, plan and execute data processing, and develop effective ways of presenting and delivering the results clearly and concisely.

Conduct high quality statistical data analysis on complex data sets for variance components to optimize the effectiveness of breeding and other diverse research programs

- Design and create foundational data and algorithms for vegetable crop monitoring and management.
- Develop protocols, data structure and workflows for collection, managing large, diverse datasets and to apply cutting-edge statistical and data mining techniques.
- Develop new statistical and learning approaches including artificial intelligence and machine learning, using data from genome sequencing, phenotyping, sensors, remote sensing, and other digital sources from research experiments to characterize and predict interactions.
- Develop and apply statistical models to analyze and characterize germplasm diversity variation from data generated from an automatized phenotyping platform with laser triangulation.
- Write reports and present data in a clear, concise, and actionable manner.

Train researchers in the use of statistical methods and statistical software

- Support researchers in designing laboratory, glasshouse, and field trials, select statistical methods and analyze data, review statistical methods, analyses and interpretations in research papers prior to publication.
- Design and conduct training on statistical methods, analyses, interpretation for researchers.
- Interpret and determine data accuracy and validity.

The Person

Applicants must have MS, and/or PhD degree in Statistics, Agronomy, Agriculture, Horticulture, Molecular Genetics, Plant Breeding, Bioinformatics, Computational Biology, Computer Science, Engineering or other related discipline. At least five years of experience in agricultural/biological context with demonstrated understanding of agricultural research and plant breeding.

Expert knowledge of experimental design, data analysis, and data management

- Previous experience in experimental design, statistical analysis of breeding and other agricultural trials, and mixed model theory.
- Proven experience with complex data and analytics, independent problem solving, from hypothesis generation through results interpretation.
- Ability to analyze phenotypic and genetic data including association analysis, linkage mapping, QTL analysis, genome-wide association mapping and genomic selection and Genetic x Environment x Management interactions.
- Experience in quantitative and/or qualitative analytical methods, data mining, machine learning and handling large and complex datasets.

Proficiency with data analysis/storage/management tools

- Expertise in statistical analysis using R, SAS, STATA, etc.
- Programming in R, Python, etc.
- Familiarity with commonly used data science libraries.

Communication and working skills

- Foster and maintain relationships at individual and team levels.
- Proficiency in speaking and writing in English.
- Experience presenting results to varied audiences & influencing project direction/strategy.
- Skills to consult, teach, and review of publications.

The Reward

This is an Internationally Recruited Staff (IRS) position with a competitive pay and benefits. The initial appointment is for three years and may be extended depending on performance of the incumbent and availability of funding.

How to Apply

Submit a letter of application with curriculum vitae, names and addresses (including telephone/fax/e-mail) of three referees, and date of availability. Please send the application by email, stating the job title in the subject line, to human.resources@worldveg.org before 20 June 2019.