TERM OF REFERENCE (ToR)

FOR THE RECRUITMENT OF 2024 CSC PROGRAM

**GENERAL INFORMATION**

**Post Title:** Software Development internship

**Host Organization: International Fund for Agricultural Development (IFAD)**

**Host Department/Division: Information Communications and Technology Division/CSD**

**Duty Station:** Preference for In presence but can accommodate home based/hybrid

**\***subject to change according to world-wide COVID-19 situation

**Expected Places of Travel: IFAD HQ – Rome, Italy**

**Duration: 6 months**

**Expected Start Date: April, 2024 or thereafter**

**JOB DESCRIPTION**

# SCOPE OF ASSIGNMENT

# Type of assignment:

# This is a very practical assignment where the intern will join an existing team working on several initiatives in software development, including web applications, data analytics, cloud services, and artificial intelligence. The intern will have specific tasks assigned with expected outputs, which will include a combination of daily ICT activities and project-specific software development.

# Specific Description:

# Expected activities will vary according to business needs and will be modified to fit specific intern skills, background, experience, objectives, and program of work. Expected activities may include any, but not all, of the following:

# Support in developing machine learning models for various use cases, using techniques such as anomaly detection, clustering, regression, classification, and predictive analytics.

# Support in developing artificial intelligence systems for various use cases, using technologies such as natural language processing, image recognition, topic modeling, text-to-speech, speech-to-text, etc.

# Support in developing geographic information systems for various use cases related to IFAD's field projects.

# Support in developing webapps for various use cases related to IFAD's corporate systems.

# Support in developing cloud services automation scripts and API toolkits.

# EXPECTED DURATION OF ASSIGNMENT

**Maximum duration is 6 months**

# QUALIFICATION/EXPERIENCE

The successful offeror shall meet the following minimum criteria:

# EDUCATION

* Studying or having completed a degree in Mathematics, Science, Computer Science or Computer Engineering or similar

# \* Note) Minimum academic background for the CSC program is those who have completed the second year of university or higher

# EXPERIENCE

* Experience of working on prototypes of projects involving cloud, data, full-stack, or AI components would be an advantage
* Any knowledge of agriculture or international development or working with data, products, or systems related to those sectors would be appreciated.

# LANGUAGE

* Good level of English – which is the working language of the project

**FUNCTIONAL COMPETENCIES**

* Experience of work with any of the following programming languages – Python, Java, Javascript, Ruby, or C++ and adaptability to learn new languages (especially Python)
* Understanding of the software development lifecycle
* Knowledge of algorithms and data structures for designing software solutions
* Knowledge of web development technologies such as HTML, CSS and Javascript
* Knowledge of cloud development platforms such as AWS, Azure, Google
* Knowledge of designing and developing APIs
* Knowledge of secure coding practices and awareness of potential vulnerabilities
* Strong analytical and problem-solving skills

**Core Competencies**

* Collaboration and Teamwork – this work is part of a larger initiative and involves working with technical and non-technical people, the ability to collaborate, brainstorm challenges, share insights and learnings are key
* Ability to document work in a clear and concise manner
* Attention to detail, in technical work and in communication and interactions with business users
* Ethical understanding – understanding of the ethical implications of AI and data analysis and the need for careful adherence to data privacy and other relevant security standards