



# Food and Agriculture Organization of the United Nations

## Senior Software Engineer NPP - 8

The Senior Software Engineer shall work under the overall supervision of the FAO Country Representative, the general technical supervision of the FAO ECTAD Programme Chief Technical Adviser (CTA) in Indonesia and the day-to-day technical supervision of the ECTAD National Monitoring and Evaluation (M&E) Adviser. Furthermore, the incumbent will work in close collaboration with relevant sub-directorates of the Directorate of Animal Health (DAH) and the Directorate of Veterinary Public Health (DVPH) of the Directorate General of Livestock and Animal Health Services, as well as other national authorities, and FAO technical staffs.

The Senior Software Engineer (SE) will be a skilled and experienced software developer responsible for the detailed design, implementation, and testing of subsystems and system components in complex, multi-vendor, multi-platform environments.

Specific responsibilities will include:

- Analyze, design and coordinate the development of software systems (including mapping modules) for zoonoses and emerging infectious diseases/EIDs (for animal health and wildlife health) in an independent language which focuses on system performance and a more cost effective product, using advanced technology such as a cloud-based system with synchronization or a distributed-system with limited resources while being adaptable to different programming languages;
- Write, edit, and debug applications required and developed by the project to ensure good performance, correct logic, accurate outputs, while troubleshoot problems and design solutions including reviewing and repairing legacy code to deliver high quality user friendly products;
- Supervise and assist the National Software Engineer with programming assignments;
- Analyze system specifications and translate system requirements and components into task specifications for the software engineer within the context of the larger system and project; as required, act as the focal person when working with external software consultants;
- Develop a variety of software subsystems and components (complex, multi-vendor, multi-platform environments) including modules for spatial analysis, based on provided specifications for an information system of zoonoses and EIDs prevention and control including value chain information.
- When needed, document code consistently throughout the development process by listing a description of the program, special instructions, and any changes made in database tables on the procedural, modular and database level as needed;
- Interact with other FAO technical teams and representatives of other stakeholders and counterparts (GOI and non-GOI) to understand and/or recommend data interchange formats, APIs, messaging strategies, application server software, as well as hardware and virtual machine requirements;
- Provide source code of all database programs developed and a backup copy of all functional database applications on an external hard drive on a regular basis;
- Provide inputs for FAO and donor reports;
- Participate and provide inputs in annual project planning activities;
- Provide an End-of-Assignment report on work carried out;
- Perform other related duties as required.

### KEY PERFORMANCE INDICATORS

#### Expected Outputs:

- A web-based database application for zoonoses and EID information access and sharing including HPAI control and value chain information
- Report on database reviews and recommendations for a national web based platform for zoonoses and EID.
- A backup copy of all source code and documentation of all database applications.
- End of Assignment Report

#### Required Completion Date:

September 2019

September 2018

As completed

End of assignment

### REQUIRED COMPETENCIES

**Academic Qualifications:**

- Hold a Computer Science or Computer Engineering degree of at least Bachelor's level or similar technical discipline or equivalent demonstrable experience. Master's level of relevant discipline is preferred.

**Technical Competencies and Experience Requirements:**

- Seven years of experience as a software engineer; demonstrated success in developing a variety of software systems while taking on increasing responsibility for analysis, design, implementation and task deployment (with significant individual contribution as a programmer)
- Proven experience in solving challenging technical problems and supporting multiple projects and objectives simultaneously and efficiently.
- Seven years of experience developing data-driven applications utilizing significant relational database engines as part of the overall application architecture (experience with any or all of the following programme is highly desirable: MySQL, PostgreSQL, Oracle, SQL Server; as well as ORM technologies: JPA2, Hibernate).
- Seven years of experience building web-based software systems, utilizing N-tier architectures, dynamic content, highly-scalable approaches, and complex security models/implementations as well as using at least one popular web framework.
- Familiar with server operation from the iron up.
- Good knowledge on the use of spatial analysis software or other relevant open source GIS software to develop a mapping module for spatial analysis in a web-based environment.
- Proficiency in developing and troubleshooting complex software systems that run in mixed-environments including Linux, Unix and/or Windows on desktop, server, tablet, and mobile systems
- Previous experience configuring and using any or all of the following is desirable:
  - ➔ HTML[5], PHP (Yii, Laravel, etc.), Javascript (AJAX, AngularJs, JQuery, etc.), Web service (REST, SOAP, etc.), Ant, Subversion, Git, TCP/IP networking, Push, LAMP stacks and messaging protocols
  - ➔ Web services APIs through web services
  - ➔ Writing scalable, globally distributed applications
  - ➔ UI and human-computer interaction design
  - ➔ Enterprise application integration;
- Content Management and Learning Management System exposure is desirable.
- Experience and familiarity with test-driven development, software development methodology and release processes, document requirements and specifications.
- Experience with development of software application for the medical or veterinary field is desirable.
- Previous relevant experience with other UN project is desirable.

**Soft skills requirements:**

- Cooperative, thorough approach, multi tasked, results oriented in a tight deadline and a team player to ensure project success with excellent numerical and analytical skills.
- Innovative and able to work independently with minimum supervision in a professional working environment with ability to work to another's design.
- Possess excellent communication skills, with an emphasis on verbal and written communication especially on the design and implementation of software systems including relevant strengths/weaknesses and reasons for implementation decisions.
- Able to travel to other cities to assist training and workshop as required.

**Languages:** Fluency in written and spoken English and Bahasa Indonesia

**Duration and Commitment:** 3 months probation with possible extension depend on the performance

**Duty Station:** Jakarta

**GENERAL NOTE TO ALL APPLICANTS:**

**Interested candidates should submit a CV and a covering letter clearly stating their relevant skills, experience, vacancy and reference code by e-mail to:**

**E-mail: [FAO-ID@fao.org](mailto:FAO-ID@fao.org)**

**Submission DEADLINE: 26th April 2018**

**FAO regrets to inform applicants that only short-listed candidates will be contacted.**