

# SENIOR OPENMRS DEVELOPER JOB DESCRIPTION

Position Title: Senior OPENMRS Developer  
Reports To: Technical Director, Informatics UCSF  
Liaise With: HIS Team

## Background

Established in 2016, the Global Programs for Research and Training, based in Kampala and Nairobi, is a Non-Governmental Organization to represent the University of California, San Francisco (UCSF) East Africa projects. UCSF's Global Strategic Information (GSI) has worked closely with CDC/PEPFAR for over 8 years with a focus on strategic information (SI) and development of associated Health Information Systems (HIS). Additionally GSI has more than 10 years' experience working on HIS in over 15 countries in sub-Saharan Africa (SSA), the Caribbean, Southeast Asia, and eastern Europe, providing high-level strategic thinking, technical assistance (TA) in the development of all levels of HIS systems, data presentation and interpretation, and local capacity building. UCSF works closely with multiple stakeholders including MOHs, various funders, institutions of higher education, and implementing partners (IP).

Currently, UCSF is a partner for CDC-funded development and implementation of an OpenMRS HIV Reference Implementation (OHRI). The program seeks to create a system of global support with buy-in from six selected countries (Uganda, Kenya, Mozambique, Nigeria, Haiti and Rwanda) for OHRI and has a focus on driving data exchange and interoperability across the HIS systems to improve efficiencies for providing patient care, improving program monitoring and leveraging analytics for data driven decision making. We will be working with University of Nairobi and Makerere University to help manage developers, collaborate in a community of practice, and ultimately build capacity in more junior developers.

## Job Description

The Senior OpenMRS Developer shall be responsible for leading a team of developers, project managers, and business analysts in designing, developing, implementing, maintaining, auditing and improving new and existing health information systems and project software. He/she shall be responsible for architecting and leading the technical approach for developing and eventually implementing OHRI. To ensure bi-directional data exchange between electronic medical records systems and aggregate systems and patient's tracker

system, the senior developer will bring expertise to activities related to developing standards-based (HL7, FHIR) interoperability between EMR, Lab, and Case Based Surveillance systems and development of program workflows within OHRI . The developer shall also ensure that the different software developed conforms to UCSF and country software development standards by overseeing a business analyst team conducting rigorous diagnosis, tests, code debugging, and technical documentation through reference manuals.

### **Duties and Responsibilities**

1. Work with and direct HIS business analysts and developers to design software solutions by studying information needs; systems flow, data usage, and work processes while adhering to the software development lifecycle
2. Managing and juggling multiple deadlines and priorities, while also successfully setting scopes of work and tasks for main development teams
3. Liaising with high level leadership from CDC/PEPFAR/MOH/NGOs to set priorities, agendas, and scopes of work  
Support the development of an integrations and interoperability between OHRI and other systems such as LIS and CBS
4. Work with and direct HIS business analysts, developers, and IT support staff to support the piloting, rollout and maintenance of HIS systems in public health facilities.
5. Work with and direct HIS business analysts and developers to investigate, analyse and make recommendations to management regarding technology improvements, upgrades and modifications
6. Work with and direct HIS business analysts and project managers to analyse user needs and software requirements to determine feasibility of design within time and cost constraints.
7. Develop and direct software system testing and validation procedures, programming and documentation
8. Work with and direct HIS business analysts and developers to prepare reference materials for end and technical users by writing operating instructions, flowcharts, layouts, diagrams, charts, code comments and clear code
9. Undertake such other tasks within the scope of the role as directed by leadership from time to time.
10. Develop OHRI program workflows from data collection forms, clinical dashboards with decision support summaries, monitoring and clinical reports

### **Required knowledge, skills and abilities**

1. A minimum of 10 years of experience as a software developer or engineer; with 5 years of OpenMRS development experience and **demonstrable** leadership in

developing a variety of software systems and managing teams of OpenMRS developers while taking on increasing responsibility for analysis, design, implementation and development tasks [reference required].

2. Ability to meet deadlines against multiple priorities and schedules, as well as the ability to manage scope creep and immediately alert leadership of issues with budgeting or timelines
3. Ability to speak to high level leadership who may need technical descriptions and developments translated to ease understanding and acceptance
4. Advanced experience in developing data-driven applications utilizing significant relational database engines as part of the overall application architecture (experience with any or all of the following highly desirable: PostgreSQL, MySQL, Oracle, MS SQL Server, H2 SQL)
5. Working experience using Spring, Hibernate, JQuery, Subversion, Liquibase, Git, Restful web services, Agile methodology, Maven, React
6. Advanced knowledge and demonstrable skill with popular open source programming languages (must include JAVA and JavaScript)
7. Proficiency developing and troubleshooting complex software systems that run in mixed-environments including Linux, Unix and/or Windows on desktop, server, tablet, and mobile systems
8. Experience with React and Micro-frontends based architectures
9. Proven experience in leadership of informatics teams while coordinating among multiple stakeholders and funders

### **Qualifications and Experience**

A bachelor's degree in computer science and software engineering and Information systems with a minimum of ten years' experience in software development or working with health information systems.

### **About the position**

Duration: January 1, 2021 – September 29, 2021 (with possibility of extension – 5 year Cooperative Agreement)

Candidates must submit their CV in English, accompanied by a letter of application, to the email Peruth Kyomugisha ([peruth.kyomugisha@ucglobalprograms.org](mailto:peruth.kyomugisha@ucglobalprograms.org)) by February 25, 2021 indicating the title of the position in the “subject” of the email and in the cover letter.