

SENIOR SOFTWARE ENGINEER- CONSULTANT

Contractual Arrangement: External Consultant

Contract Duration (Years, Months, Days): 55 Days

Location: Anywhere (Might Involve Travels to Sierra Leone)

Application Closing Date: March 29, 2024

Purpose of Consultancy

To enhance the National e-wallboard data visualization system with interactive trend analysis module and configure the newly revised national DHIS2 forms on the e-wallboard for real-time health data monitoring

Background

In May 2023 the honorable minister of health for the government of Sierra Leone launched the national e-wallboard for data visualization. This is a data visualization system that was built by JHPIEGO in collaboration with the Ministry of health DPPI to display national program data from different sources including the national DHIS platform. JHPIEGO in collaboration with DPPI plan to enhance the trend analysis module and configure the newly revised national DHIS form on the platform.

We are looking for an experienced and talented individual to consult as a Senior Software Engineer for the organization. The candidate will be responsible for providing substantial assistance in the design, development and installation of the trend analysis module and configure the new national DHIS forms on the interactive ewallboard platform. The system will be used in contexts to monitor auto-analyzed data in real-time across the country.

Deliverables of Consultancy

Deliverables 1: Perform platform requirements gathering including dataset, indicators and other functional requirements for the newly revised data elements/new DHIS forms and dimensions of trend analysis. A software requirement specification document will be delivered at this stage.

Deliverables 2: Design the system architecture, data models, UI/UX wireframing and other technical schematics. A Prototype trend analysis module is delivered at this stage.

Deliverables 3: Development of the smart analytics platform that consists of the data model, robo-analytic engine and web interface for visualizing data trends with quarterly, annual comparative analysis

Deliverables 4: Set up additional cloud server (A2 Hosting Hyper 3 Turbo AMD) that will host the robo-analytical dashboard database application to optimize its real time access and uptime.

Deliverables 5: Thorough system testing (unit test, function test, integration and user acceptance test); deployment of the trend analysis module and the newly configured forms.

Deliverables 6: Loading of historical data to the deployed platform with automatic data synchronization of historic data for backlog trend analysis.

Deliverables 7: Documentation of the analytical dashboard: User guides and manual, System documentation etc.

Deliverables 8: Conduct general orientation/training of stakeholders at all levels within the project and MoH DPPI staff on newly configured forms and trend analysis modules functionality.

Deliverable 9: Handover all system documentations, program codes, resources and reports to the organization at the end of the consultancy.

Development Stack:

- Angular frontend framework with Typescript
- Java Spring (boot) with Maven using Apache Tomcat
- Clustering with multiple Apache CouchDB NoSQL nodes
- NRT Indexing with Apache Solr 8+ using Zookeeper
- MS SQL Server
- Visualization development using D3, AM library
- DevOps using Webpack, Docker containers, and Kubernetes

- Session caching using Redis
- UI/UX with Figma
- Interactive Display Tizen OS

Qualifications

Educational Qualifications:

Essential:

- Master's degree in Computer Science, Software Engineering, or related field.

Desirable:

- Qualification in computer language/s with training in one or more of the following: Java development stack, SQL, NOSQL, PowerBI etc.

Experience

- 5-8 years' experience in Software development, especially robust data analytical systems and software development life cycle monitoring process.
- 4 years' experience as Frontend Designer to produce functional page designs and hand-coded pages.
- Professional experience in the following areas: relational databases languages (ex. SQL), JavaFX software development platform, Java Core backend development and Rreact frontend development.
- Experience in UX/UI design.
- Relevant experience working for large multinational company or International Organizations in complex business and/or IT programmed or projects.
- Strong experience with application analysis, design, code, unit test.
- Hands on experience with Object Oriented Programming and strong computer science fundamentals: data structures, algorithms and programming languages.
- Proven experience of working with full stack web development, architecting complex applications from the ground up.
- Proven evidence of similar work done by the candidate/consultant is a mandatory requirement.

Skills/Knowledge:

- Ability to design clean, modern, responsive web applications with thoughtful content architecture and navigation.
- Business analyst skill and software/web development life cycle knowledge.
- Advanced knowledge of Adobe Creative Suite, with expertise in Photoshop/Illustrator & XD for creating web design mock-ups and compressing images for web browsers.
- Thorough understanding of HTML5 and CSS3, and ability to hand-code semantic frontend web pages to current web standards.
- Ability to create appealing web page layouts and produce semantic HTML/CSS/JavaScript code necessary to bring those designs to life with cross-browser compatible web pages.
- Ability to design within the organization brand guidelines.
- Understanding of JavaScript/jQuery principles and implementation.
- Advanced knowledge and direct JavaScript development skills.
- Ability to create organized and intuitive file and directory structuring and file naming, and ability to adhere

Qualified persons are required to send their Curriculum Vitae (CV) and cover letter to SL-recruitment@jhpiego.org and copy slprocurement@jhpiego.org on or before the deadline.