

JOB DESCRIPTION

TITLE OF POSITION: Senior Systems Analyst (Temporary up to 7 months)

POSITION #: IT-137

GROUP/UNIT: IT Digital Innovation and Development

REPORTS TO: Manager, IT Digital Innovation and Development

PRIMARY PURPOSE

Through its services and products, CCOHS advances health and safety in Canadian workplaces, and the physical and mental well-being of Canadians.

The IT Digital Innovation and Development Service Unit provides computer and information technology support to CCOHS products, services and operations under an integrated Information Technology (IT) strategy, incorporating the most appropriate IT infrastructure tools and processes to support mission-critical functions. The IT Digital Innovation and Development Service Unit is responsible for the analysis, design and development of computer system products including web and mobile applications; the production and delivery of information products; the design, development and maintenance of databases; the development and management of CCOHS products and services including the CCOHS website, as well as websites and mobile apps for partner organizations; and the management and delivery of projects assigned to the unit.

The Senior Systems Analyst is responsible for the strategic analysis, design and implementation of assigned applications used to support CCOHS and partner systems and services. The incumbent is the leader of CCOHS web site/service and development/support teams, and may lead other development projects as needed.

| | <u>DUTIES</u> | <u>% OF TIME</u> |
|----|---|-------------------------|
| 1. | Analyzes business requirements and client needs; designs, develops, and maintains sustainable applications. Builds applications, web services and web sites using proper technologies and platforms following best practices, or interacts with other CCOHS and third-party service providers. Tests for consistent and flexible delivery to web and mobile device platforms. | 50% |
| 2. | Leads CCOHS and third-party development teams by assigning tasks and providing guidance to team members, conducting final reviews of development work and approving the deployment of software releases to production environments. | 20% |

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| 3. | Sets up, manages and maintains CCOHS and partner web sites and production and development environment including web servers, storage services, containers on remote and on-premises cloud-based platforms such as AWS. Designs and builds production update and deployment procedures following CI/CD technologies and DevOps best practices. | 15% |
| 4. | Conducts research on relevant technologies and best practices, and provides recommendations regarding storage capacity, technical support, trouble-shooting, performance tuning and security review for CCOHS and partner web sites/services, as well as storage design to support CCOHS strategic goals. | 10% |
| 5. | Documents system structures and processes and any changes to existing systems. Prepares regular reports pertaining to the above and performs other related duties, as required. | 5% |

NATURE AND SCOPE OF POSITION

The position reports to the Manager, IT Digital Innovation and Development Service Unit. The incumbent works closely with members of the IT Digital Innovation and Development Service Unit and other teams, as assigned. The incumbent is expected to participate in the planning of the Service Unit or Team activities, to ensure that they play an active part in achieving the goals without causing work overload or imposing conflicting demands, including deadlines. They must adjust to frequently changing priorities and deadlines, and notify their Service Unit Manager and team lead(s) should time constraints or other challenges arise that require resolution. The incumbent is accountable for completing work agreed to and assigned in project or Service Unit plans and achieving the goals set up by the manager and senior management team.

Know-How

The incumbent:

- must have analytical skills to understand business requirements, as well as the overall objectives of the product or service, and translate these into very usable solutions.
- must have knowledge and understanding of the long term maintenance implications, performance and integration impacts with other systems, and systems' usefulness in achieving organizational goals, in order to design an efficient and effective product or service.
- is required to have a thorough knowledge and experience in web development protocols and standards (HTTP, HTML, CSS, XML, REST, SOAP, JSON), languages as required (PHP, JavaScript, Scripting languages such as bash and Python, and SQL), full-stack frameworks as required, server software (Linux operating systems, Apache or Nginx, Docker), and deployment platforms such as AWS cloud service.
- must have excellent experience with persistent storage techniques and administration including installation, upgrades, performance tuning and replication.
- is required to work with staff at all levels within CCOHS to discuss problems, exchange information, prepare recommendations and provide support and guidance to others in the Technology Solutions Service Unit and the other service units.
- must have excellent skills to communicate and collaborate with outside service providers, vendors, and clients to solve technical problems, seek technical support, build web services, and understand the products/services during technical solution investigation and evaluation.

- is required to exercise sound judgement to prioritize assigned tasks from different projects with competing deadlines.

Problem-Solving

The incumbent:

- researches, develops, recommends and implements new software tools and procedures for optimum automation and performance in various delivery environments.
- interprets and analyzes business requirements and client needs to produce systems that fulfil these requirements and needs.
- considers response time, service interactions, user interface design, and ease of maintenance in designing applications.
- troubleshoots software and applications and their integration with CCOHS and client web sites and services.
- monitors CCOHS and client web site and storage performance and finds solutions to Website or storage problems in the production environment.
- monitors and evaluates trends and developments in the computer industry and makes use of these to produce better products that respond to the needs of CCOHS customers.

Accountability

The incumbent is accountable for:

- strategic analysis, design and implementation of assigned applications used to support CCOHS and client properties and services.
 - leading development teams and taking the necessary steps to ensure that the work is completed on schedule, and discussing problems and reaching solutions with other Project Leaders, and Service Unit Managers. Assigns work to programmer analysts on the team and has final authority for approving the deployment of software releases to production environments.
 - leading CCOHS and third-party development teams, develops plans to achieve the objectives of the team.
 - preparing recommendations for technical solutions. These recommendations are made to the Manager, other Service Unit Managers, appropriate Project Leaders, or the Information Technology Director for negotiation and approval.
 - the integrity and reliability of the persistent storage of assigned applications.
 - producing systems that are sustainable and flexible to allow for changes in business requirements or client needs.
 - developing and delivering applications that perform well on different delivery platforms, which may include web and mobile devices.
 - providing architectural expertise, direction and assistance to programmers, programmer/analysts and others (technical leadership).
 - writing the necessary systems documentation to ensure programmers, programmer/analysts, systems analysts and others can understand and work on the system.
 - the successful performance and continuous improvement of products and services within his/her area of skills and competencies.
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- completing work agreed to and assigned in project and Service Unit plans and annual business plans.
 - adjusting to frequently changing priorities and deadlines, and notifying the affected Service Unit Manager(s) should time constraints or other challenges arise that require resolution.

WORKING CONDITIONS

- Physical Effort:** The employee works at a computer (keyboarding and mousing to read and reply to e-mail, prepare reports, review information, etc.) for the majority of the work day. The work is interspersed with non-computer based activity, such as reading, thinking, proof-reading, photocopying, filing. The employee has some control over the workload and has the opportunity to get up, stretch, and walk on a regular basis. Some stooping and lifting (or handling of light material) may be required.
- Physical Environment:** The employee works at a desk and/or a computer workstation with a keyboard and a mouse for the majority of the work day. The workstation and desk are ergonomically set up, with a wrist rest, mouse rest, document holder, task lamp, as required. The lighting meets standards and there are adjustable blinds on the windows as required. The building environmental controls meet general office requirements.
- Sensory Attention:** The position requires concentration to compose, enter data, proof-read, quality assure, read routine information, communicate with others via e-mail, search for information and listen to others carefully.
- The work requires close concentration when analyzing data and requirements, debugging software programs/applications, troubleshooting problems, and preparing, researching and writing documents. Listening attentively to determine the needs of callers, communicating precisely with clients, and attention to detail when demonstrating different solutions to client's problems.
- Mental Stress:** There are priorities and deadlines which need to be met on a regular basis. There are interruptions from colleagues, supervisor or telephone calls. The employee has some control over the pace of work. Work may be repetitious.
- The incumbent deals with staff at all levels from different groups with different and conflicting priorities. Detailed work is affected by numerous interruptions. There could be serious consequences if deadlines are missed or errors are made. Must react immediately to emergencies when live systems go down. There is a disruption to lifestyle when responding to after-hours system or database problems.

SPECIFICATIONS

- A university degree in Computer Science, Information Systems or Mathematics, or college diploma with concentration in computer technology or an equivalent combination of education and experience.
- At least five years' experience with web development in an environment using PHP, HTML, JavaScript, Linux and MySQL database. Must have excellent understanding and work experience with web server software such as Nginx, web standards and protocols such as HTTP, HTML, CSS, XML, JSON and also beneficial is experience with other languages or framework such as Vue.js, Laravel, and Node.js.
- Experience in developing search-based web applications using search engines such as Fusion, Apache Solr, or Elasticsearch are preferred; knowledge of and experience with implementing Single Sign On (SSO) solutions such as KeyCloak is an asset.
- Proficiency in using Linux operating system including tools and command lines. Comfortable with writing scripts using scripting languages such as bash and csh etc. in server environment. Work experience with Windows operating system.
- Five years experience with relational DBMS such as MySQL and hands-on experience in writing SQL scripts in database as well as programming.
- Hands-on experience in setting up containerized web development environment including servers, web applications and supporting tools using Docker containers and Cloud Services such as AWS.
- Good understanding of full software development life cycle and DevOps best practices such as CI/CD and unit/automated testing. Good knowledge of web service standards such as REST or SOAP and experience with CI/CD tools such as GitHub Actions. Working experience with source code version control systems such as GitHub.
- Two years' experience with leading or managing projects and preparing project/work plans.
- Excellent interpersonal and communications (oral and written) skills.