

CITY OF HAMILTON

CORPORATE SERVICES DEPARTMENT (INFORMATION SERVICES DIVISION – BUSINESS APPLICATIONS SPATIAL SOLUTIONS SERVICES- LOCATION – 55 YORK BLVD.)

GIS APPLICATIONS SPECIALIST

SUMMARY OF DUTIES

Reports to the Supervisor, Business Applications. The GIS Application Specialist provides spatial (Geographical Information System – GIS) solutions, application and backend support. Facilitates the effective use of business technologies, databases, and applications to meet the GIS needs of both internal and external corporate clients.

Through project and operational roles, the incumbent gathers business requirements, creates solution-based data models and data ETL (FME, Model Builder, and Python), develops and documents technology solutions and supporting documentation. Creates processes and workflows for capturing data in the field using mobile GIS solutions. Designs and implements ArcGIS Server content management, such as geocoder, map service or basemap design, publishing, and cache/tile management. Provides customer and application support for web and desktop GIS software (ArcMap/ArcGIS Pro) and solutions.

GENERAL DUTIES

Analyzes, designs, develops, implements, maintains, and integrates numerous GIS enabled systems for City stakeholders. Assists with the creation and maintenance of custom applications using GIS programming and spatial and relational database knowledge.

Collaborates on the development, review, implementation and maintenance of GIS application development standards, business specification and design documents for both "in-house" and contracted applications development.

Analyzes and reviews corporate and functional-specific business application requirements, including resources, hardware/software, data sources, training and preparing preliminary impact analysis.

Analyzes, designs, develops, implements, and maintains standard workflows and procedures, and application accesses to ensure that security policies and data standards are being applied and are effective. Undertakes and assists in the analysis and reconciliation of conflicting data, whether from spatial or relational database sources.

Performs GIS spatial analysis/manipulation, data QA/QC, analysis and statistical report development, and spatial and relational database development/modeling to ensure data integrity, application stability and process logic.

Records, analyzes and co-ordinates solutions to complex technical problems related to the operation and performance of spatial systems, GIS databases and/or applications within various departments and external partners. Recommends any necessary enhancements to these systems.

Identifies topics where additional education and training is required for the application user. Analyzes, designs, develops, implements and maintains on-line metadata and/or application help databases to include new or revised business data layers and/or application functionality.

Provides knowledge of network and database security, client support, data management, project and resource management, and customer relationships with respect to application implementation, use, and maintenance.

Collaborates on cross-functional teams with other City staff and consultants that may be involved in GIS application development projects throughout the Corporation.

Collaborates on the planning, scheduling and purchasing of GIS related applications. Prepares and contributes to Requests for Proposals, Request for Information, and evaluates bids for purchasing additional software and services.

Assists in the preparation of project plans. Provides estimates for current budgets required for the analysis, design, development and implementation and maintenance of GIS Systems.

Employs existing software tools and procedures to analyze, extract and distribute data in a variety of standard and media formats. Maintains a detailed data service request log, ensuring data distribution contracts, copyright and statement of liability are complete and properly authorized.

Identifies and assists in the resolution of problems related to geo-spatial software, and geo-spatial data

Receives and answers enquiries from staff. Provides daily support to users in a multi-disciplinary environment. May be required to plots maps and creates custom thematic maps.

Perform other duties as assigned which are directly related to the major responsibilities of the job.

QUALIFICATIONS

1. Demonstrated level of expertise related to the duties described above, normally acquired through a Bachelor of Computer Science/GIS or other related discipline or a combination of University education as well as relevant work-related experience in GIS. Able to analyze major problems and develop solutions by using a broad knowledge required.
2. Progressively responsible experience and proven knowledge in spatial database analysis, web mapping applications, and user support, including practical experience working with GIS technology (Esri suite of products preferred), preferably in a municipal environment.
3. Practical experience in analysing, designing, developing, implementing, maintaining and integrating GIS Systems including practical experience working with business applications technology and providing user support preferably in a municipal environment.
4. Working knowledge and experience with a range of computer and software including, GIS products (e.g. Esri ArcGIS), GIS databases (e.g. ArcSDE, Oracle 12c, SQL Server), GIS terminology, GIS methods and techniques, scripting languages (eg. FME, Python), cartography and cartographic procedures, coordinate systems and projections, geo-spatial digital imagery, digital equipment (e.g. survey, GPS, data collectors) on-site users GIS and tool support and trouble-shooting, managing GIS software and databases.
5. Working knowledge of spatial and relational database management system software (Oracle Spatial, ArcSDE, SQL Server, Microsoft Access) and SQL (Structured Query Language).
6. Ability to write, interpret and modify scripting languages commonly used in the development of GIS/business client and web-based applications (such as FME, Python, Java).
7. Demonstrated ability to compile, prepare and analyze source documents for conversion, perform manual and automated quality assurance/quality control data validity checks
8. Proven ability to establish and maintain strategies, policies and procedures that relate to GIS applications and to work with user groups.
9. Excellent presentation, analytical, report writing, and interpersonal skills to communicate effectively with all levels of City staff, external consultants and suppliers. Experience preparing reports, technical instructions and data share agreements.

10. Working knowledge of office software applications (e.g. Outlook, Word, Excel, PowerPoint) in support of communications, reporting, presentations and training.
11. Must be able to handle multiple changing priorities.
12. Thorough working knowledge of Project Management principals and techniques.
13. Geographic Information Systems Professional (GISP) certification (or eligible) through GISCI considered an asset
14. Ability to work both independently as well as in a team environment, work under pressure and meet deadlines.

THE INCUMBENT SHALL COMPLY WITH ALL HEALTH AND SAFETY POLICIES AND PRACTICES FOR THIS POSITION AND THE WORKPLACE.