CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT
(TRANSIT DIVISION)

TRANSIT DATA AND BUSINESS INTELLIGENCE ANALYST

SUMMARY OF DUTIES

Reporting to the Senior Project Manager of Business Support, the Transit Data and Business Intelligence Analyst (Advanced Analytics) uses tools and algorithms to solve data-related problems. Programming and statistics are two key functions, as well as data wrangling and data visualization. The Analyst puts together custom database queries to answer the questions of business users, implements new metrics from existing data, strives to improve data quality, and contributes to correct acquisition of new data.

Besides technical duties, the Analyst also tackles open-ended questions and undirected research in ways that will bring measurable business benefits to the Transit Division. The Analyst develops predictive models for key lead measures / indicators. The Analyst is inquisitive by nature and can relate simultaneously to data, to organizational needs, and to the various Transit audiences, while promoting a customer-centric, data-driven culture.

GENERAL DUTIES

KPI, Dashboards, and Reports Development

- Develop and automate reports, performance measures, monitoring tools and benchmarks, solving for the Business Intelligence and analytical needs of full range stakeholders. Work with stakeholders to establish the right metrics for monitoring business processes. Present recommendations to the Transit Leadership Team.
- Conduct external benchmarking on key metrics, analytics practices and tools.

Statistical and Quantitative Analysis

- Use mathematical skills which include knowledge of numbers and figures, to understand relationships between numbers, interpret mathematical information, organize and lead the aggregation of large amounts of data / information, use argumentation and logical thinking, present information visually with diagrams, charts, tables, calculations, work with graphical information, schedule and / or budget, discover / define / analyze trends, measurements, and data analysis

Predictive Modelling

- Mine data and statistics to predict outcomes related to workforce planning and absenteeism, customer behaviour, and preventative maintenance schedules, etc.
- Writes code from scratch when necessary

Data Quality

- Work with modern data quality software (e.g. SAS, Informatica, Oracle) to build analytic models and tools and understand the importance of data quality rules and measures, including the concept of “dimensions” to quantify matters against various characteristics that are required of the data.

- Understand and reconcile gaps, overlaps, and apparent contradictions among data used within reports and reporting tools and work with management to resolve them, suggest workable alternatives and solutions. Assist in the implementation of alternatives.
- Document report specifications to ensure consistency of future reporting.
- Performs formal compliance audits in the divisional section in where appropriate.

Data Visualization

- Work with multivariate data and explore data in a tool such as Microsoft Power BI, Excel, and Trapeze ViewPoint to understand the shape of data and get revelation of hidden Business Acumen

Data Management

- Clear understanding of data management model types, such as Enterprise Data Warehouse, Operational Data Store and Data Marts. Work with various stakeholder and IT staff to ensure all data warehousing meetings ongoing Business Intelligence requirements.

Work in accordance with the provisions of applicable Health and Safety legislation and all City of Hamilton corporate and departmental policies and procedures related to Occupational Health and Safety.

Perform such other duties, which are related to the normal job function.

QUALIFICATIONS

1. Post-secondary Bachelor's degree with an emphasis on business, finance, quantitative and system structures; or other related areas; considerable related experience preferably in an operations environment, or the approved equivalent combination of education and/or relevant work experience.

2. Experience programming with SQL, VBA, Python.

3. Experience in advanced quantitative / statistical analysis using tools such as SAS, R, MATLAB.

4. Experience with business intelligence / data warehousing tools such as Power BI, SSRS, SSAS, SSIS, Tableau, Qlik Sense, MicroStrategy.

5. Expert-level experience working with MS Excel and pivot tables.

6. Proven computer experience using industry standard tools such as RDBMS (Database) such as SQL Server, Oracle, Teradata, SAS, and MS Access.

7. Advanced problem solving and critical thinking skills.

8. Experience in creating complex reports, dashboards, and creating/tracking effective metrics.

9. Excellent organizational, reporting and presentation skills are required.

10. Ability to deal effectively with elected officials, representatives of other levels of government, management, peers, staff and the general public.

11. Experience with Big Data, Machine Learning and Data Mining, NoSQL, API and Web Scraping, and / or Agile methodologies is an asset.

12. Good understanding of problems associated with the business that the organization is currently involved in. Ability to perceive which problems can immediately benefit from data/business analytics.

13. Assist with productivity improvement studies and implement changes as required.

14. Ability to meet deadlines. Manage time for collecting, gathering, and analyzing data.

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

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