

JOB DESCRIPTION

BCGEU

1. Position No. TBD	2. Descriptive Working Title Data Scientist		3. Present Classification SA5
4. Branch Strategic Business Operations & Performance	5. Department Research	6. Work Location Hybrid – Site Central	Date Sep 2023
7. Position No. of Supervisor 81688	8. Descriptive Work Title of Supervisor Director, Research Analytics and Reporting		9. Classification of Supervisor Excluded Mgmt
10. Job Summary:			

Reporting to the Director, Research Analytics and Reporting, the Data Scientist interprets and analyses data for policy, program, research and evaluation initiatives across the BC Housing Management Commission, working closely with the Ministry of Housing and other stakeholders including the federal government and non-profit organizations. He/She/They provides a high level of expertise with data science tools, leveraging Big Data to gain insights, improve business intelligence, and identify key trends for executive management for making data-driven, informed strategic business decisions and mitigating emerging risks. The position optimizes data performance and leverages tools and technology to solve complex organization-wide problems by telling a story with Big Data and using predictive analytics to forecast outcomes and options. Working closely with governance stakeholders, the role leads Commission's data-driven projects including Data Governance Framework and influences BC Housing's branches and external partners by providing guidance for the adoption of practices and principles. The position also supports the Commission's Performance Measurement Framework to ensure that the appropriate technology is in place and provides consultation to achieve alignment between stakeholders and partners.

11. Duties:

1. Uses statistical software such as Structured query language (SQL), Python, R (Statistical Programming Language) and Statistical Package for the Social Sciences (SPSS) to devise models and algorithms to connect multiple unstructured data sets of considerable complexity, conduct data mining to identify relationships, uncover hidden meaning, forecast future trends, identify risks, and solve complex problems.
2. Use Artificial Intelligence, Machine Learning and Deep Learning as analytical techniques for automating, enhancing data preparation, and predictive modelling of enormous volumes of data (Big Data).
3. Utilizing technology such as Jupyter Notebook and ArcGIS to correlate information, create data visualizations to generate insights into business performance, identify emerging trends, planning future investments and design of housing using a location and data-driven approach such as climate and environmental impacts, and reassessing and conveying strategic risks and opportunities to stakeholders.
4. Ensures the practices of Computational Journalism are employed including the gathering, organization, sensemaking, communication and dissemination of information, while upholding values of accuracy and verifiability.
5. Leads, plans, and organizes enterprise-wide data-driven projects, interpreting patterns, consolidating findings, communicating results and presenting recommendations to internal and external stakeholders.
6. Coordinates data sharing, data governance and data documentation activities throughout the Commission in the collection, modelling and provision of reliable, accessible, authoritative high value data.
7. Acts as a lead, or co-investigator in collaboration with research partners, institutions, and community organizations.
8. Optimizes data performance using methods such as feature engineering, predictive modelling, and machine learning.

Leverages tools and technology to recommend improvements on how data is used and to increase efficiencies in analysis through automation. Works in collaboration with Information Management and Technology (IMT) to determine which programming languages and tools are ideal for Research Centre needs.

9. Supports the work of the Data Architect in Enterprise Architecture Team to define technologies used in collecting, organizing, storing and accessing information.
10. Conducts analytics to advance business intelligence. Prepares and delivers demonstrations and knowledge transfer training to internal and external users on dashboards and interactive tools. Establishes and maintains effective working relationships with the subject matter experts across branches, Ministries, and levels of government to identify business intelligence priorities.
11. Leads project teams for data-driven projects including Data Governance Framework by ensuring the activities of projects are successfully implemented, maintained, regularly reviewed, and updated as required. Provides oversight of the work to ensure that diverse initiatives are coordinated and change management is in place. Working closely with governance stakeholders, analyse datasets to determine impact and develop the principles and key activities. Communicates status updates and progress to executive management and makes recommendations for corrections.
12. Participates in the development of protocols and guidelines for data methodologies and analytics. Documents all existing and newly developed methodologies for corporate knowledge and transparency.
13. Provides advice and consultation in developing and implementing analytics to support research projects and to ensure analytics align with BC Housing's goals and priorities.
14. Maintains awareness of trends and issues that relate to the housing system, particularly social housing, housing needs and homelessness.
15. Provides advice on policies and practices and influences culture of continuous improvement and adoption of standards and best practices in data quality, security, stewardship, and governance.
16. Consults to achieve alignment within the Commission and with government stakeholders, providers, and partners to reconfigure systems and data structures to attain meaningful Key Performance Indicators (KPI) for the Commission's Performance Measurement Framework.
17. Incorporates perspectives of lived expertise and considers the range of diverse populations (Indigenous peoples, racialized groups, people with disabilities, immigrant populations, 2SLGBTQ+ communities, etc.) to ensure that equitable outcomes for residents result from research and evaluation initiatives.
18. Works closely with Corporate Planning & Reporting team and Branch Data Analysts to make data more reliable and accessible, including hosting more data open source, and furthering the knowledge that is publicly available.
19. Works closely with the Office of Equity, Diversity, Inclusion and Belonging (EDIB), Indigenous Relations, Licensing and Consumer Services and other teams across the Commission to ensure equitable outcomes from research projects.
20. Respond to information requests related to big data projects from other agencies, Ministries, and members of the public.

Performs other related duties that do not affect the nature of the job, including participating on project task teams or assisting with special assignments.

STAFFING CRITERIA

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4. Education, Training and Experience		

Graduate degree in business analytics, economics, statistics, computer science, public administration, mathematics or other relevant fields.

Considerable experience in advanced and quantitative data analytics, modelling analytics and data science including machine learning. Experience must include:

- Fluency in Python, R and SQL programming languages for statistical analysis with large datasets.
- Extensive experience with modelling statistical relationships and predictive analytics, using both regression-based and machine-learning methods.
- Experience with Jupyter Notebook.
- Experience with Artificial Intelligence software.

Considerable experience in leading and managing multi-stakeholder, enterprise-wide, complex data analytics and leading project teams.

Or an equivalent combination of education, training and experience acceptable to the employer.

5. Knowledge, Skills and Abilities

Core Competencies:

- Personal Effectiveness
- Communication
- Results Oriented
- Teamwork
- Service Oriented

Sound knowledge and familiarity with the following software and languages:

Software

- Scientific computing software such as Jupyter Notebook
- Artificial Intelligence software
- Spatial software such as ArcGIS
- Statistical social science software such as SPSS
- Reporting and visualization software such as Power BI and Tableau
- MS Excel, MS Word, MS project and MS Visio
- Microsoft's Office365 and SharePoint technologies

Languages

- Proficiency with relational databases and SQL
- Open source programming languages such as Python and R

Considerable knowledge of analytics tools to improve efficiency and automation.

Considerable knowledge of relational databases and the ability to extract, summarize and analyse data.

Considerable knowledge of developing and using effective tools and techniques to solve complex business problems using machine learning and statistical models.

Sound knowledge of the housing system needs and affordable housing sector in the province of BC and ability to maintain an understanding of emerging policy issues.

Ability to synthesize complicated concepts and create graphics and presentation materials for a variety of audiences.

Strong analytical skills including intersectional analysis, research, problem-solving and organizational skills, and a proven ability to reason through complex issues.

Ability to learn and understand the Commission's structure and business operations.

Ability to advise decision-makers on strategic and operational business improvements based on data-driven findings.

Ability to think conceptually, conduct research, analyse and solve complex issues, exercise sound judgment and make effective recommendations.

Ability to lead a project from generating ideas to execution while managing multiple inputs and priorities.

Ability to work collaboratively with internal and external stakeholders to achieve common goals.

Ability to adapt to changing priorities, and high level of comfort with adjusting workplans accordingly.

Strong oral and written communication, report writing, presentation, leadership, facilitation, and interpersonal skills.

6. Occupational Certification

Criminal Record Check Required