**Data Scientist**

**Take a central role**  
The Bank of Canada has a vision to be “a leading central bank—dynamic, engaged and trusted—committed to a better Canada.” No other employer in the country offers you the unique opportunity to work at the very center of Canada’s economy, in a diverse and inclusive organization with significant impact on the economic and financial well-being of all Canadians. You will be challenged, energized and motivated to excel in an environment where we are reinventing central banking, renewing ways of doing business and reinforcing a culture of innovation.

Find out more about the next steps in our [Recruitment process](https://careers.bankofcanada.ca/content/Recruitment-Process/?locale=en_US).

**Did you know?**  
The Bank recently partnered with the [Creative Destruction Lab](https://www.creativedestructionlab.com/)(CDL) and created the [Partnerships in Innovation and Technology Program](https://www.bankofcanada.ca/research/partnerships-in-innovation-and-technology-pivot-program/) (PIVOT) both of which will help us deepen our knowledge of leading Machine Learning and AI technologies.

**What you will do**  
This position is located in downtown Ottawa, but we are open to candidates who may be able to work from Montreal.

The Financial Markets Department (FMD) is aligned with the financial system function of the Bank of Canada. The department provides analysis, policy advice and research on a wide range of topics in support of the goal of promoting the safety and efficiency of the overall financial system both domestically and internationally. FMD also contributes to the monetary policy and funds-management functions. In coordination with the Funds Management and Banking Department, FMD contributes to the overall management of Government of Canada financial assets and market debt, and executes the transactions that the Bank undertakes on behalf of the Government of Canada in Canadian-dollar- and foreign-currency-denominated markets. Finally, the department advises on and implements monetary policy, and provides liquidity to the financial system, through a range of operations.

The Financial Market Data Analytics (FMDA) team is looking for a Data Scientist to help it support the increased use of big data analytics, machine learning, and broader use of varied data resources across the department. The position reports directly to the FMDA Director.

As a Data Scientist, you work with other economists and financial market experts to build analytical solutions that enhance the department’s market operations, policy analysis and research.

You strive to understand business requirements and identify use cases for the deployment of predictive analytics. You lead data science projects, applying sophisticated analytics techniques at every stage: extraction, cleaning and validation of data, data exploration, design and evaluation of models and communication. You use big data technologies to leverage structured and unstructured data from a variety of internal and external sources. You find creative ways to develop tools and services, collaborating with specialists from other departments to drive innovation and expand departmental capabilities.

You will also:

* act as a subject matter expert in the areas of data science, big data, and new technologies
* apply, adapt and design computer programs for statistical analysis of data
* leverage extensive theoretical and practical knowledge of advanced analytic methods and algorithms
* propose data visualization techniques to present the results of statistical analyses
* deliver training to economists on key tools and big data analytic approaches
* keep current with industry and academic developments

**What you need to succeed**  
We are looking for someone who possesses strong interpersonal skills and enjoys working in an innovative environment who can clearly communicate information and ideas adapted to a target audience. You must be action-oriented and focused on results, with an openness to finding new ways of working and thinking outside the box.

This role will require you to work with other teams, thus building positive working relationships to deliver on commitments and lead projects effectively. You should be committed to learning and self-development and able to grasp the essence of policy and technical issues and develop insightful concepts, models or frameworks.

You must have experience:

* with scientific programming languages and libraries (Python) and statistical and quantitative analysis (R, Matlab, Stata, etc.)
* with data-mining techniques, including the application of machine learning and distributed computing
* with modern data processing technologies (STORM, SPARK, HADOOP etc.)
* working with different database technologies (relational – OLTP/OLAP, NoSQL, object databases, etc.)
* using data visualization tools (Tableau, D3.js, Plotly, etc.)

**Nice-to-have**

* knowledge of economics and finance
* experience working with financial market data
* significant expertise in Natural Language Processing (NLP)
* fully functional in second official language

**Your education and experience**  
The position requires a completed master’s degree in a related discipline such as computer science, mathematics, or statistics and two years of recent relevant experience or an equivalent combination of education and experience may be considered.

**What you need to know**

* Language requirement: English or French essential
* Priority will be given to Canadian citizens and permanent residents
* Security level required: Secret
* There will be no relocation assistance provided

*We wish to thank all applicants for their interest and effort in applying for this position. Only candidates selected for interviews will be contacted.*

**What you can expect from us**  
This is a great opportunity to join a leading organization and be part of a high-performing team. We offer a competitive compensation and benefits package designed to meet your needs at every stage of your life and career. For more information on key benefits please visit [A great deal to consider](https://careers.bankofcanada.ca/content/A-great-deal-to-consider/?locale=en_US).

* Salaries are based on qualifications and experience and typically range from $79,100 to $93,000 (job grade 16)
* Depending on performance, you may be eligible for performance pay for successfully meeting (5 to 7% of your base salary) or for exceeding expectations (10% of your base salary). Exceptional performers who far exceed expectations may be eligible for higher performance pay.
* Flexible and comprehensive benefits so you can choose the level of health and dental coverage that meets your needs
* Extra vacation days (up to five each year) that you can purchase to add to your vacation entitlement
* Option to join the indexed, defined-benefit pension plan after 24 consecutive months of service

We strive to make our policies, programs and workplace more inclusive, respectful and barrier-free. We encourage applications from women, Indigenous peoples, veterans, persons with disabilities, members of visible minorities and persons of all races, ethnic origins, religions, abilities, sexual orientations, and gender identities and expressions.