

## Data Scientists

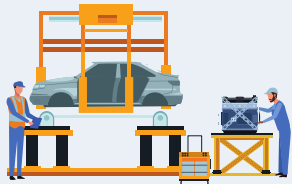


The need for data driven business solutions is a trend across all manner of industry. Data Scientists develop and work with exciting technology including internet of things (IoT), machine learning and artificial intelligence (AI). Using predictive modelling and analytical software, they identify and support trends and can provide automated recommendations based on their findings. Within the automotive sector, data scientists are breaking new ground by using data to increase the accuracy and utility of auto pilot technology and sustainability within automobiles.

### Where do Data Scientists work?



Insurance and Credit Intermediation



Automotive Technology Support



Computer System Design and Related Services



Scientific Research and Development



Telecommunication Carriers

### What do Data Scientists do?

Using programming and statistical modelling, Data Scientists conduct studies, research and perform analysis on data sets to aid in business decision making by improving the accuracy of conclusions drawn through data. Below are common tasks Data Scientist encounter in their work:

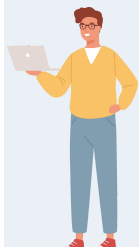
- Visualize data in a way that allows a business to quickly draw conclusions and make decisions
- Coordinate research and analysis activities using unstructured and structured data and use programming to clean and organize data
- Create advanced machine learning algorithms such as regression, simulation, scenario analysis, modeling, clustering, decision trees and, neural networks
- Implement cutting-edge techniques and tools in machine learning, deep learning and artificial intelligence to make data analysis more efficient

### Career pathways & potential earnings of Data Scientists

Data Scientists can progress into senior management and executive roles with adequate experience and knowledge:

#### Data Engineer

Data Engineers as highly skilled workers make high wages, starting from \$23/hr and going up to \$72/hr based on experience and seniority



#### Engineering Management

Capable of managing multiple professional managers and their activities, Engineering Managers can earn up to \$86/hr



#### Senior Executives (Chief Data Officer)

Capable of earning up to \$160/hr, Data Officers manage the data needs, policies and procedures of entire firms.



Data Scientists can also apply their skills and expertise in other occupations such as the following:

- Database analysts and administrators
- Computer and information systems managers
- Information system analysts and consultants

## How do I become a Data Scientist?

There are several educational, licensing and training requirements to become a Data Scientist. Some requirements may vary by province or company. Below are the most commonly required qualifications to work as a Data Scientist:

- **Minimum Education:** Bachelor's degree in statistics, mathematics, computer science computer systems engineering or a related discipline or a college diploma in computer science. Work on machine learning and AI usually requires a masters or doctorate in machine learning, data science, or another quantitative field of study.
- **Training and other requirements:** Experience in computer programming or related areas is usually required.



## What are the most important skills to have as a Data Scientist?

Data Scientists must have good analytical skills and creativity in manipulating data and drawing conclusions from trends. It requires a strong technical foundation and effective communication skills in order to implement data technology and share results to assist in business decision making.

### Technical Knowledge and Skills

- Engineering and Technology
- Administration and Management
- Statistics and Mathematics
- Computer Programming
- Scientific and Analytical Software
- Systems Evaluation and Analysis

### Soft Skills

- Active Learning
- Judgement and Decision Making
- Originality
- Coordination
- Inductive and Deductive Reasoning
- Information Ordering

## Future of Data Scientists in Canada

As the need for data solutions grows due to increasing digitization of processes and internet of things (IoT), the job market for Data Scientists in Canada will provide more opportunities. In 2021, more than 67,000 were employed across Canada's sectors and industries. Over the next decade 29,000 openings are projected for Data Scientists across sectors and industries with 32,000 new job seekers, resulting in some oversaturation in this occupational group. The development of self-driving technology will require data science expertise, and presents an opportunity within the automotive sector for these professionals.



Learn more about the job market for Data Scientists, as well as about many other developments and new technologies in Canada's automotive manufacturing by visiting our website [futureautolabourforce.ca](http://futureautolabourforce.ca).

You can also check our social media by following these links:

 [/focalinitiative](https://www.instagram.com/focalinitiative)

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