



# Data Action Lab



**Enseignement univ.:** 50+ cours; **ateliers:** 40+; **projets:** 60+; **expérience combinée:** 35+ années.  
Co-entreprise pré-qualifiée à la liste des fournisseurs I.A. du GdC – EN578-180001/A (1<sup>ière</sup> bande).

Nouveau catalogue de formation approfondie disponible sur la toile au **data-action-lab.com**

**Combined experience:** 50+ university courses, 100+ corporate workshops, 60+ projects, 35+ years.  
Joint venture qualified for GoC A.I. Source List – EN578-180001/A (Band 1).

New advanced training catalogue available at **data-action-lab.com**



**Training and long courses**



**Workshops and short courses**



**Knowledgebase curation**



**Data labs**

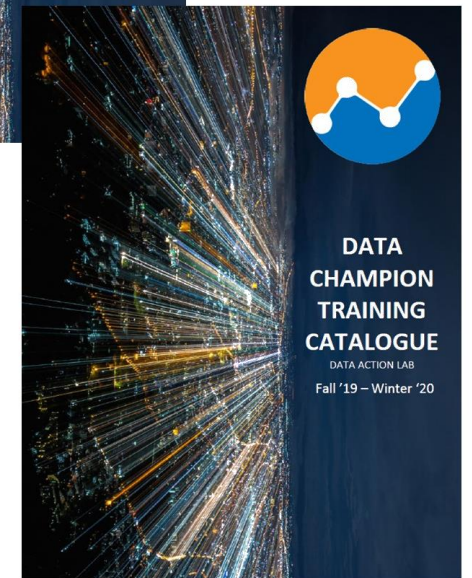
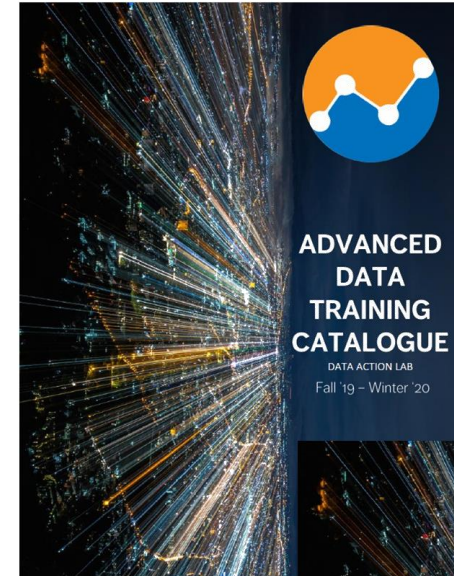


## Training Paths

- Data Novice
- Data Engineer
- Data Practitioner
- Data Scientist
- Data Manager
- Data Champion

## Training Learning Interests

- Visualization and Dashboards
- Introduction to Data Science
- Advanced Data Science
- Machine Learning Toolbox
- Spotlight on Classification
- Spotlight on Clustering
- Text Analysis
- Special Topics in AI and DS
- Hands on Data Analysis
- Data Strategy and Governance





- Business intelligence
- Data visualization design
- Data analytics and data science
- Data engineering
- Advanced statistics and machine learning
- Artificial and augmented intelligence
- Process and systems modeling
- Software implementation and integration







**Provide a space for data consumers, producers, practitioners, scientists and champions to make a place for themselves in the digital world.**



**Provide paths for education and enrichment for all these groups.**



**Keep pace with developments in the digital arena and keep Data Action Lab participants moving and aligned with these relevant developments.**



**Provide just-in-time learning opportunities for Data Action Lab members, focusing on their specific challenges and skillsets.**

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# DATA VISUALIZATION AND DASHBOARDS

@BANK OF CANADA



# OUTLINE

## Session 1

1. Visualization and Data Exploration
2. Storytelling with Data

## Session 2

3. Fundamental Principles of Data Visualization
4. Gestalt Principles

## Session 3

5. Decluttering Charts
6. Size, Colour, Position
7. Visualization Catalogue

## Session 4

8. Simple R Visualizations

## Session 5

9. The Grammar of Graphics and ggplot2

## Session 6

10. Introduction to Power BI

## Session 7

11. Power BI: Beyond the Basics

## Session 8

12. Incorporating R/ggplot2 into Power BI

# LEARNING OBJECTIVES

Understand the different roles of data visualization in the data analysis process.

Increase your understanding of how to represent simultaneously multiple dimensions.

Improve your ability to judge how many dimensions are being represented in a chart.

Recognize strategies to build good visualizations and dashboards.

Understand the difference between a visualization and an infographic.

Improve your judgment about the quality of data visualizations and dashboards.



# LEARNING OBJECTIVES

Understand the (layered) grammar of graphics.

Learn how to create multivariate visualizations with R and `ggplot2`.

Become familiar with some of the issues and concepts relating to dashboards and their design.

Learn how to incorporate R and `ggplot2` visualizations in Power BI.