

# Mustapha Bouhsen

Canadian citizen

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Langue: French, English, Arabic

## SKILLS

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Machine Learning, Deep Learning, Data Engineering, Data Analysis, Data Visualization

Probability, Statistic, Risk Theory, Survival analysis, Actuarial mathematic

Languages: R, Python, SQL, C++, Git, Bash

Tech Tools: Databricks, Microsoft Azure, Synapse, Tableau, Power BI

Frameworks: PySpark, PyTorch, Pandas, NumPy, Matplotlib, Sci-Kit Learn, ggplot.

## EDUCATION

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**M.Sc. in Data Science**

HEC Montréal

2022 - 2023

**B.Sc. in Actuarial Science.**

École d'actuariat - Université Laval

2019 - 2022

## EXPERIENCE

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**Data Engineer at Bombardier**

2023/09-

- Create **PySpark** ETL pipeline to transfer files in parquet format to **Microsoft Azure storage**.
- Created **ML algorithms** to predict plant part prices.
- Implemented **pipelines** and **SQL** scripts for tracking and communicating automated migration progress via email.

### Achievements:

- Optimize ETLs that initially took at least **48 hours** to reduce it to just **8 minutes (99.72%)**, improving business efficiency and productivity.
- Developed a robust general-purpose library using **Apache Spark** to streamline and accelerate the creation of data processing pipelines.
- Refactor the transformation process from using **Pandas** to **PySpark** for process optimization.
- Convert **SQL** to **PySpark** code for enhanced flexibility and leverage Spark's distributed computing capabilities, contributing to optimized data workflows.

**Actuarial Analyst at Telus Health**

2022/04-2023/02

- Calculate pension benefits for participants, considering plan-specific calculation formulas, years of service, average salaries, and interest rates.
- Maintain databases (Ariel) as well as participant files.
- Analyze and validate the annual and periodic data.

**Data Scientist at Laval University**

2021/04-2022/09

- Employ **Pandas** and **Scikit-learn** for thorough data cleaning, addressing missing values, and handling outliers.
- Conduct **statistical inference**, employing Regression Analysis and Hypothesis Testing, to gain insights into the influence of variables on the overall condition of golf courses.
- Implement **machine learning** algorithms, including **Random Forest**, **KNN**, and **Gradient Boosting**. These models predict the impact of chemical components on the condition of golf courses.
- Run optimization algorithms on Compute Canada using **C++**.
- Analyzed **optimization algorithms**, producing **statistical** improvements.
- Developed automated data processing workflows using **R** and **Python**, significantly reducing processing time from **hours** to **minutes**.

## Projects

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- [Financial Data Intelligence Suite](#)
- [A STUDY OF BANK CUSTOMER CHURN](#)
- To see all my projects, please visit my [website](#)