

# Rafik M. Chemli - Sr Data Scientist

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## Skills

- **Machine Learning:** Expertise in end-to-end ML pipelines, including model development, evaluation, and deployment.
- **AI Research:** Published research on privacy-preserving machine learning and Federated Learning for the United Nations.
- **Programming & Cloud:** Proficient in Python, SQL, GCP, Azure, with a focus on secure data solutions.
- **Privacy and Security:** Implemented Differential Privacy techniques, Generated Synthetic Data and led projects on privacy-preserving technologies.
- **Collaboration:** Experienced leading projects with cross-functional international teams (eg: CIFAR, UN).

## Experience

**Senior Data Scientist — Government of Canada, Statistics Canada**

*2021 – Present*

- **AI Research & ML Expertise:** Developed automated synthetic data generation pipelines, employing advanced AI models like TimeGan. Conducted research on privacy-preserving techniques, collaborating with CIFAR and United Nations Privacy Enhancing Techniques Lab.
- **Cloud Solutions:** Deployed ML models and data pipelines on Google Cloud and Microsoft Azure, ensuring robust and scalable implementations.
- **Cross-Functional Leadership:** Led international teams on projects focusing on Privacy Enhancing Technologies, and contributed to prominent AI and health conferences.
- **Mentoring Junior Team Members:** Mentored and guided junior team members, in developing their skills and successfully completing their projects.

**Data Scientist — Galenvs Sciences**

*2020 – 2021*

- **ML Model Development:** Enhanced COVID-19 testing kits through the optimization of laboratory experiments, employing techniques such as Modeling, Monte Carlo Simulation and Operational Research.
- **Interactive Dashboards:** Created a real-time, flexible web application for ML predictions, improving the visualisation and analysis of laboratory experiments and model performance.

## Education

**Master's Degree, Bioinformatics**

*2018 – 2019*

Université du Québec à Montréal, Montréal, Canada

## Publications & Certifications

- **Privacy-Preserving Machine Learning and Federated Learning:** Co-authored research paper for the United Nations on privacy-preserving federated machine learning.
- **Machine Learning in Production:** Issued by DeepLearning.AI in 2024.
- **Microsoft Azure Machine Learning:** Issued by Microsoft Azure in 2024.