

# Cathrine Nayrouz

Data Scientist

## Interests

Environmental sustainability  
Environmental data science  
Eco-informatics  
Medical informatics  
Neurodegenerative diseases  
Motor neuron disease research  
Biomedical machine learning  
Computational neuroscience  
Predictive modeling  
Health data analytics  
Data stewardship  
Metadata standards  
Interoperability  
Data governance  
Responsible AI

## Pleasure Projects

Facial classification software using big data From Fair Face, and other organizations that aim to reduce bias in facial recognition  
Neural Network Model analysing MRI Brain Scans

## Volunteer Work

Tutoring New Immigrants in Maths and English  
/ September 2015 - Present  
Food Banks / November 2018 - Present  
Special Needs Camp / September 2017  
Multiculture Event Organisation / May 2015-May 2018

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CathPierre

cnayrouz-resume

.vercelapp

## EXPERIENCE

July 2024 - Present

### CAN2oNET/ADC Reasearch Collaboration Project

DATA MANAGER · University of Guelph

Design and implement a data pipeline, and data governance system for a Canada wide research group collecting big data for soil analysis and nitrogen dioxide emissions research

2025-Present

### AIR ALERT

RESEARCH ASSOCIATE · St. Joseph's Healthcare Hamilton

Data collection, analysis, and clean up. Collecting thermal imaging data in hemodialysis unit using a thermal camera (FLIR), and using collected participant data to reconstruct metabolic markers such as heart rate and respiratory rate for health surveillance.

Sept 2024

### CARE-AI

CURRICULUM WRITING · University of Guelph

Helped write and design an AI curriculum to help inform industry professionals about AI topics, and responsible AI

2019-2020

### Linamar

RESEARCH ASSOCIATE · Guelph

Data collection, analysis, and clean up. Using predictive modelling on high frequency data to predict tool life

2019-2020

### Graduate Teacher's Assistant

RESEARCH ASSOCIATE · University of Guelph

Served as a Graduate Teaching Assistant for various courses including CIS\*2250 Software Design II, CIS\*3010 Systems Programming, and CIS\*3090 Parallel Programming, CIS\*2030 Microcomputing. Where I delivered guest lectures, ran labs and seminars, and held office hours. As well as writing assignments and labs.

## DEGREES

2025

### Masters of Science

MSC OF COMPUTER SCIENCE

· University of Guelph

2021

### Bachelors of Science

BSC.IN COMPUTER SCIENCE, WITH AN AREA OF APPLICATION IN PHILOSOPHY, AND PSYCHOLOGY BRAIN AND COGNITION · University of Guelph

## PROGRAMMING

html, css

L<sup>A</sup>T<sub>E</sub>X

python

MySQL

C

R

javascript

Android

Java

Assembly

## LANGUAGES

Arabic  
English  
French

C2 mother tongue

C2

A2

## CONFERENCES

June. 2024

"Modelling Motor Neuron Diseases in Sythetic Muscles" at: ISEK's Poster Session in Japan.

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