

DAVID RENÉ

SOFTWARE DEVELOPER

Email: davrene11@gmail.com

Website: <https://davidrene.ca>

SKILLS

Programming languages: C#, Python, R, JavaScript/TypeScript, Java, MATLAB, lua

Tools & Technologies: Azure, AWS, .NET, Django/Flask, RShiny, Tailwind, HTML/CSS, LATEX

Languages: French, English, German

EXPERIENCE

Programmer | IT Analyst

Shared Services Canada

Jan. 2022 – Present

Ottawa, ON

- Designed, developed and integrated full-stack features for a .NET cloud native solution, including a self-service deployment of Docker images to Azure App Service.
- Built and maintained a business intelligence pipeline using Databricks, Azure DevOps and PowerBI for platforms analytics used in critical management decisions.
- Supported relations with scientific user base of several hundred users in the research lifecycle.

Data Scientist

Canadian Space Agency

Jan. 2021 – Aug. 2021

Montréal, QC

- Developed and improved new and existing visual analysis tools in Python web applications used in scientific data analysis.
- Provided analysis of atmospheric gas composition data using SCISAT-1 and Alouette satellites.

Geomagnetic Network Developer

Natural Resources Canada

Sep. 2021 – Dec. 2021

Ottawa, ON

- Orchestrated several streams of magnetometer data into a data acquisition system using Bash and Python scripting.
- Modeled Ottawa's Light Rail Train's impact on the background magnetic field to provide assessment of electromagnetic pollution.

Mathematics Teaching Assistant

University of Waterloo

Sep. 2020 – Dec. 2020

Waterloo, ON

- Provided solutions, graded assignments, improved course notes and hosted office hours for the MATH218: Differential Equations for Engineers and MATH227: Calculus 3 for Honour Physics courses for the Fall 2020 term.

EDUCATION

B.Sc. Honours | Mathematical Physics

University of Waterloo

Sep. 2018 – May 2023

Waterloo, ON

- Co-operative program with a minor in astrophysics and a minor in German. Specialized in applied mathematics, with various courses on advanced differential equations, fluid dynamics and mathematics of climate change.

College Diploma | Computer Science and Mathematics

CÉGEP Limoilou

Sep. 2016 – May 2018

Québec, QC

- Data structures, algorithms, MVC and UI in Java with a focus on Agile development and project management.

PROJECTS

Anomaly & outliers detection in geomagnetic data

CSA SpaceApps Hackathon

Sep. 2019

Waterloo, ON

- Developed a Python app that uses mode decomposition algorithms and geographical metadata to assign reliability scores to geographical data records. Won 1st place in Canada for the GO Canada challenge as part of team *Beans*.