

CLARA RISK

Toronto, ON M4V 1N3 | clara.risk@mail.utoronto.ca | [LinkedIn](#) | [GitHub](#) | 647-765-2895

SUMMARY

Dedicated and hardworking IT professional specializing in research support. I have extensive experience helping researchers manage and manipulate their data in Python, R, and C++, prepare manuscripts for publication, and troubleshoot software and hardware issues. I am looking for opportunities supporting academic or clinical research.

SKILLS

- Programming Languages: Python, JavaScript / HTML / CSS, R, SQL, C++
- Platforms & Frameworks: Jupyter, Google Colab, QGIS, ArcGIS, NVivo, Adobe Illustrator, Google Earth Engine
- Database Software: MS Access, PostgreSQL, MongoDB
- Libraries: Pandas, Scikit-learn, Matplotlib, NumPy, SciPy, GDAL/OGR, Google OR-Tools
- Methods: linear/logistic regression, tree-based models, spatial interpolation, cross-validation, spatial clustering, web scraping, linear programming, remote sensing (spectral index calculation)
- Languages: bilingual in English and French
- Medical: Canadian Red Cross Medical Terminology Certificate, CITI Canada Good Clinical Practice Basic Course, & Health Canada Division 5- Drugs For Clinical Trials Involving Human Subjects Training

EMPLOYMENT EXPERIENCE

Library Assistant (Short-Term Contract) | University of Toronto Map & Data Library | May 2023 – Present

- [Python | Geocoding] Developed custom Python scripts for research purposes, including building a [custom geocoder to convert addresses to X, Y coordinates](#), saving time and ArcGIS credits for a professor
- [Python | Data Analysis] Created Python code for analyzing Map & Data Library requests over time
- [Python] Helped researchers analyze various datasets, including road network and air quality data
- [Jira] Respond to requests regarding troubleshooting ArcGIS/QGIS workflows, finding and analyzing data, and software installation issues using an IT ticketing system

IT Help Desk Analyst | University of Toronto Faculty of Law | September 2022 – Present

- First point of contact for staff and students facing technological issues
- [Jira] Respond to requests and track them to completion using IT ticketing software
- [Crestron] Confirm audio-visual equipment in classrooms is operational and troubleshoot any issues
- [MS Office, LAN set up] Set up computers and phones in offices, troubleshoot printer issues, and install software

Graduate Student Researcher | University of Toronto | May 2020 – May 2023

- [Python | Scikit-learn] [Published an article](#) on cross-validation methods to assess spatial interpolation methods for weather data, including inverse distance weighting, random forest, Gaussian process regression, and splines
- [Python | Scikit-learn, PyGAM] Developed a [method](#) to detect tree damage from satellite imagery using big data, machine learning, and statistical methods and [calculated odds ratios for tree damage likelihood across Ontario](#), and presented it at three international conferences
- [Python | Google OR-Tools] Designed a method of selecting sites to lower field work costs for researchers using mixed integer programming, and [presented it at the CANSSI Ontario Statistical Software Conference](#)
- [Python, R] [Prepared large geographic datasets](#) for graduate students and postdoctoral researchers
- [JavaScript / HTML / CSS] Developed [interactive websites](#) for data visualization purposes

Teaching Assistant | University of Toronto | September 2021 – April 2022

- [Python | Google Colab, SciPy] Created and taught [interactive tutorials](#) focused on linear programming in Python
- [Python/R | Google Colab] Redesigned tutorials using Google Colab to ensure accessibility for students with less computing resources
- [JavaScript / HTML / CSS] Developed interactive websites to support learning

GIS & Data Assistant | Ontario Ministry of Natural Resources & Forestry | May 2019 – March 2020

- [MS Access] Created an MS Access database of scientific trial results from 130 sources
- [SQL] Presented the database to senior researchers and policy makes and guided them through using SQL queries
- [ArcGIS] [Designed maps for publication](#) to effectively show locations of historical scientific trials
- [Authored published report](#) on the database to support industry and government strategy
- [Python | Scikit-learn, GDAL] Completed machine learning, and statistical tasks in Python for spatial analysis

Teaching Assistant | University of Wisconsin-Madison | September 2017 – May 2018, September 2018 – May 2019

- [ArcGIS] Taught practical tutorials focused on guiding students through tasks in mapping software, such as spatial joining, digitizing, and georeferencing

Research Intern | Environics Analytics | September 2016 – May 2017

- [ArcGIS] Digitized polygons and geocoded locations for geodemographic marketing purposes
- [Alteryx] Used data management software to join tables and remove duplicated records

EDUCATION

University of Wisconsin-Madison, United States

- MSc in Geographic Information Science (GIS), 3.9 / 4.0
- Thesis: Impact of Time Step on the Results of a Fully-Distributed Watershed Model for Scenario Analysis
- Coursework: GIS & Spatial Analysis, Spatial Database Management, Geocomputing, Advanced Quantitative Methods, Using Volunteered Geographic Information, Machine Learning

University of Toronto, Canada

- BSc in Geography & Geographic Information Systems (GIS), 3.7 / 4.0
- Coursework: Introductory & Advanced GIS, Analytical Methods, Computer Science for Sciences, Remote Sensing, Web Mapping, GIS for Public Health