CLARA RISK

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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, Adobe Illustrator] Developed interactive websites and graphics

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