

Henry Chen

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EDUCATION

Toronto Metropolitan University

Master Spatial Analysis, Physical and Environmental

Toronto, ON

Sept. 2023 -Present

- Coursework: Applied Spatial Statistics, Spatial Database Management, Geovisualization, Project Management for GIS,

Queen's University

Honours Bachelor of Arts, Geography

Kingston, ON

Sept. 2018 - June 2023

- Certificate: Geographic Information Science Certificate, Urban Planning and Development
- Coursework: Climate Change, Remote Sensing, App Design, Geographic Information Science, Photogrammetry, Application Design and Customization in GIS, Surface Processes and Landforms, Cities and Planning, Urban Transportation

EXPERIENCE

Toronto Metropolitan University

Teaching/Grading Assistant

Toronto, ON

Nov 2023 – Present

- **Teaching/Grading Assistant:** Grading and reviewing student coursework for introductory geography and GIS courses at undergraduate level
- **Exam Invigilation:** Supervising undergraduate, graduate in exam for the department geography and environment studies

Wild Fork Canada

GIS Analyst/Project Manager

Toronto, ON

Sept 2023 – Nov. 2023

- *Created high quality maps and conducted geospatial research of demographics of customer, finalizing report for client*
- *Tools: Georeferenced, Geospatial Join, Kernel Density, Choropleth, Regression*

PORTFOLIO PROJECTS

Principles of Electromagnetic Radiation and Landsat Data

- Calculating frequency for wavelength
- Spectral features and bands, analyzing spectrum of electromagnetic radiation using wavelengths and frequency
- Using USGS program to create digital image analysis, analysing Operational land imager (OLI), thermal infrared sensor (TIRS)
- Studying how radiation balance over groundwater, spill over ice sheets, widely varied vegetation, etc.

Camera Calibration in CalibCam

- Distortion Visualization from CalibCam, Generating RO points

- Running Automatic Relative-only points, camera details, image residuals, parameter correlation matrix, lens distortion

Statistics SPSS Clustering

- Regression model, showing steps performed
- Running nonrated, rated, skewness and kurtosis variables
- Creating a cartographic map that displays residual value data

Statistics Clustering Analysis, Hierarchical, K-means and 2 Steps Models

- Conduct Hierarchical, K means and 2 steps models
- Euclidean Distance, Conduct a Hierarchical Cluster Model, dendogram, k-means analysis
- Creating 2 cartographic map between group linkage and square Euclidean distance, K-mean analysis

Creating and Sharing GIS Content

- Creating content, share content and develop an interface
- Data analysis and visualization
- Mapping enhancements within applications

Breast Cancer Rates – Visualization Methods

- Mapping several datasets to apply a variety of data visualization methods
- Spatially explore and provide a description of the hotspots identified for breast cancer rates in the U.S
- Calculating hot spots for spatial analysis, researching the topic and summarizing

Homelessness Policy Mapping - Spatial Analysis and Policy Development

- Spatial join, creating three maps to visualize for analysis
- Creating web app to share

City of Toronto Biking Network and Collision with neighbourhood

- Creating spatially enabled SQL Server databased in Toronto biking network with collision with neighbourhood
- Generating entire data modelling process, entity relationships modelling, a detailed explanation of ER model, construction of Data Dictionary

TECHNICAL SKILLS

Languages: Python, R, SQL, HTML, Familiar with JavaScript, CSS

Software: QGIS, ESRI – (ArcGIS Pro, ArcPy, ModelBuilder, ArcMap, ArcCatalog), Google Suite, Google Earth Engine, FME

Skill set: Camera Operator, Drone Operator, Gimbal, Lidar