



# GIS SERVICES AND RESOURCES

## McMaster University Library

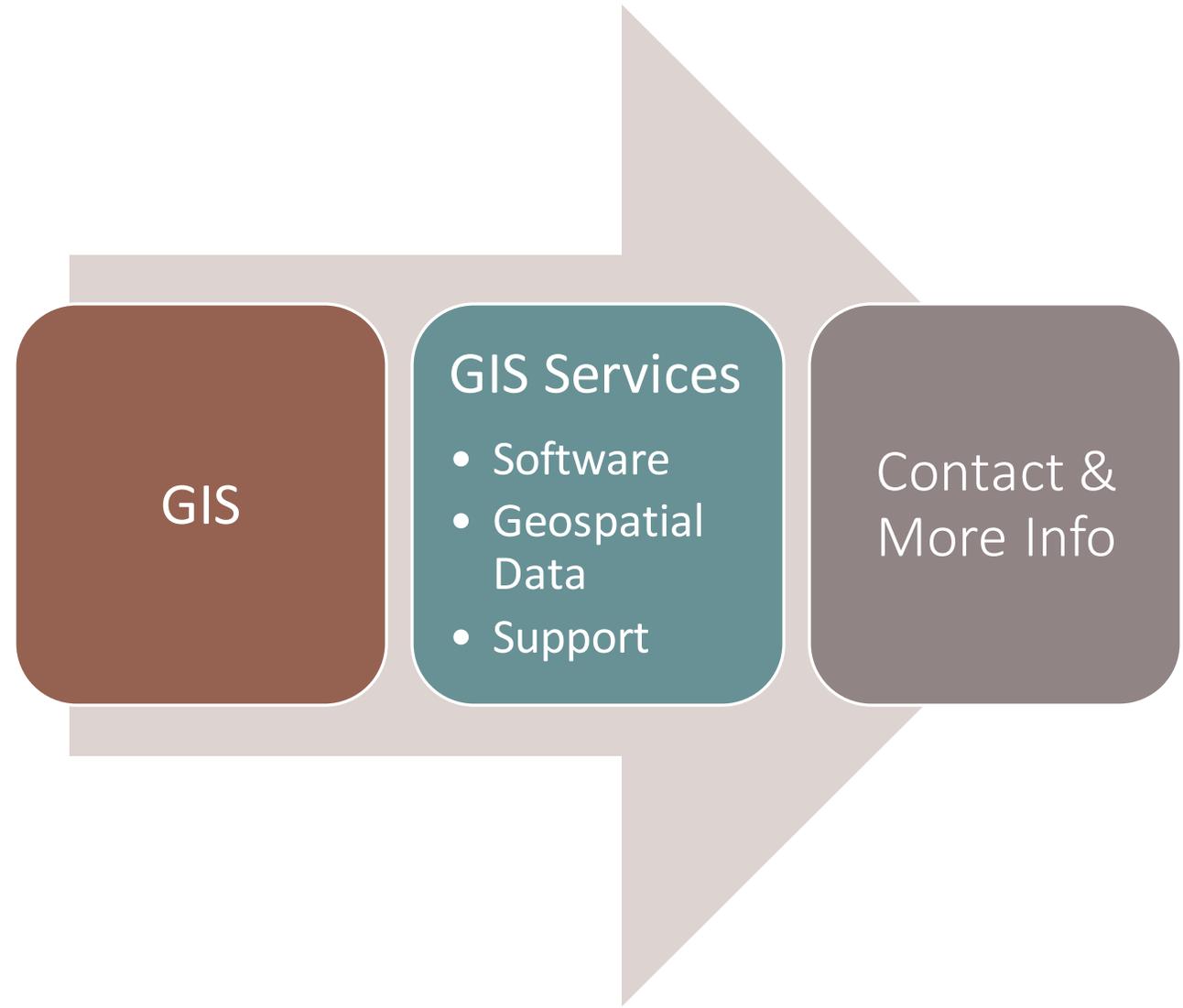
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CHRISTINE HOMUTH  
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SHERMAN CENTRE FOR DIGITAL  
SCHOLARSHIP

<https://discover.mcmaster.ca/map/>

# Overview

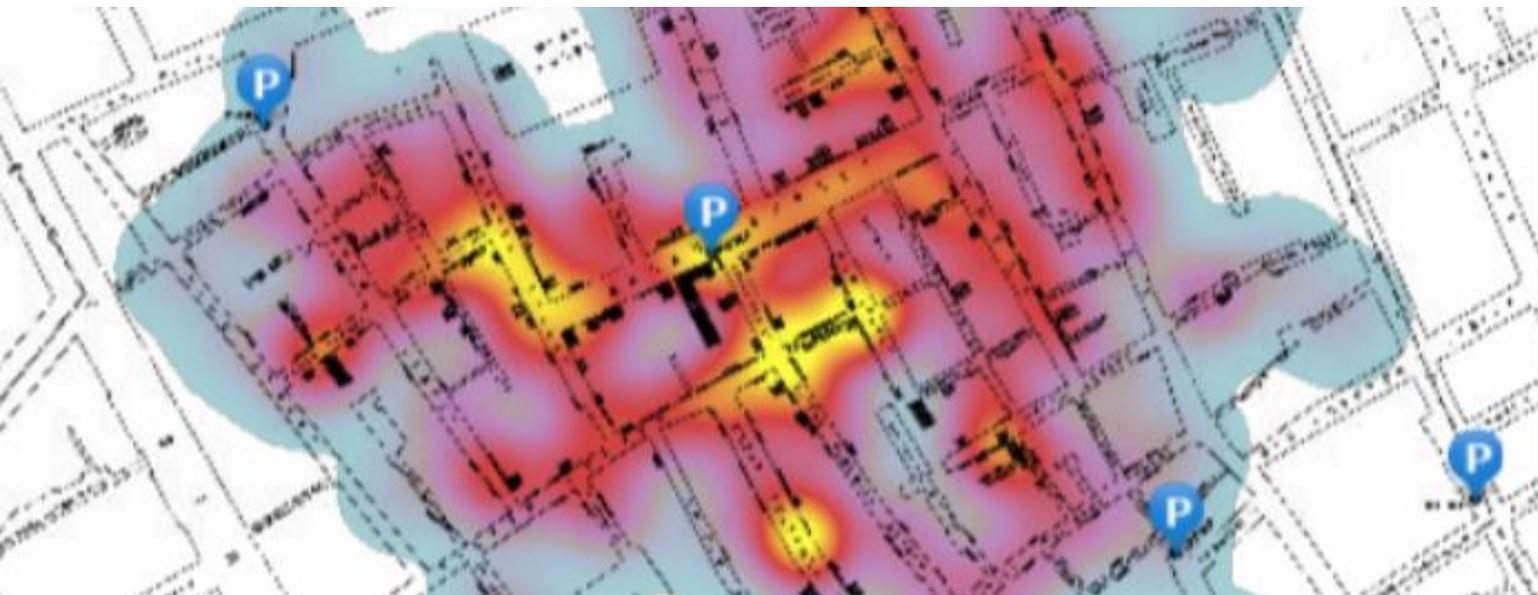
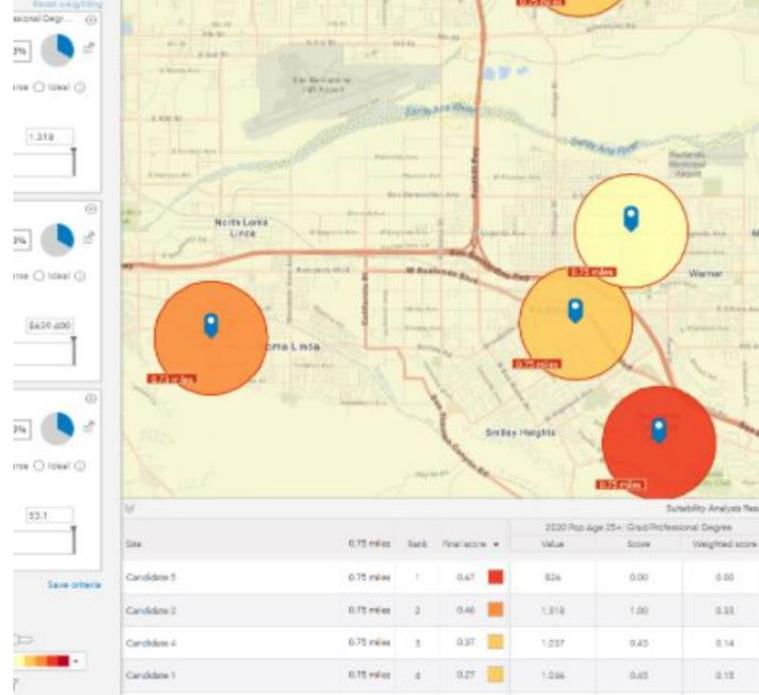
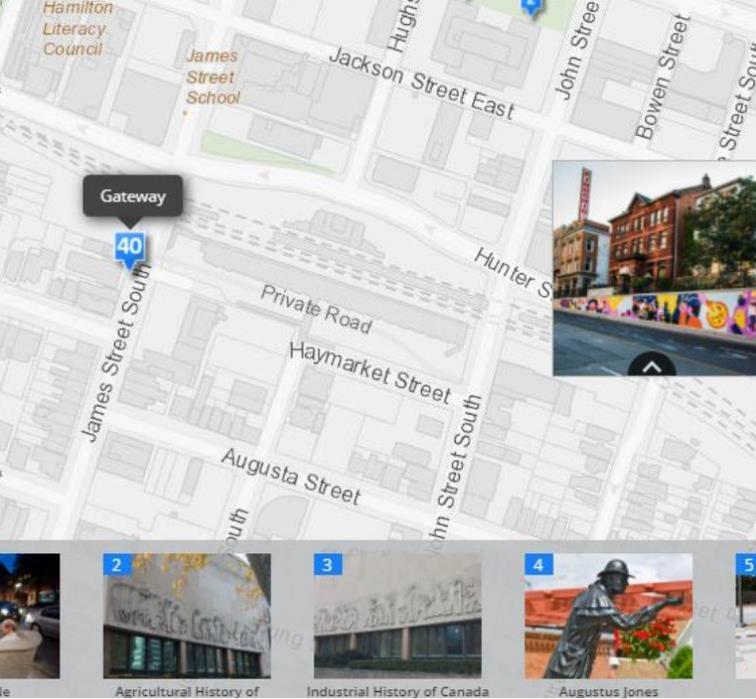


GIS

# GIS

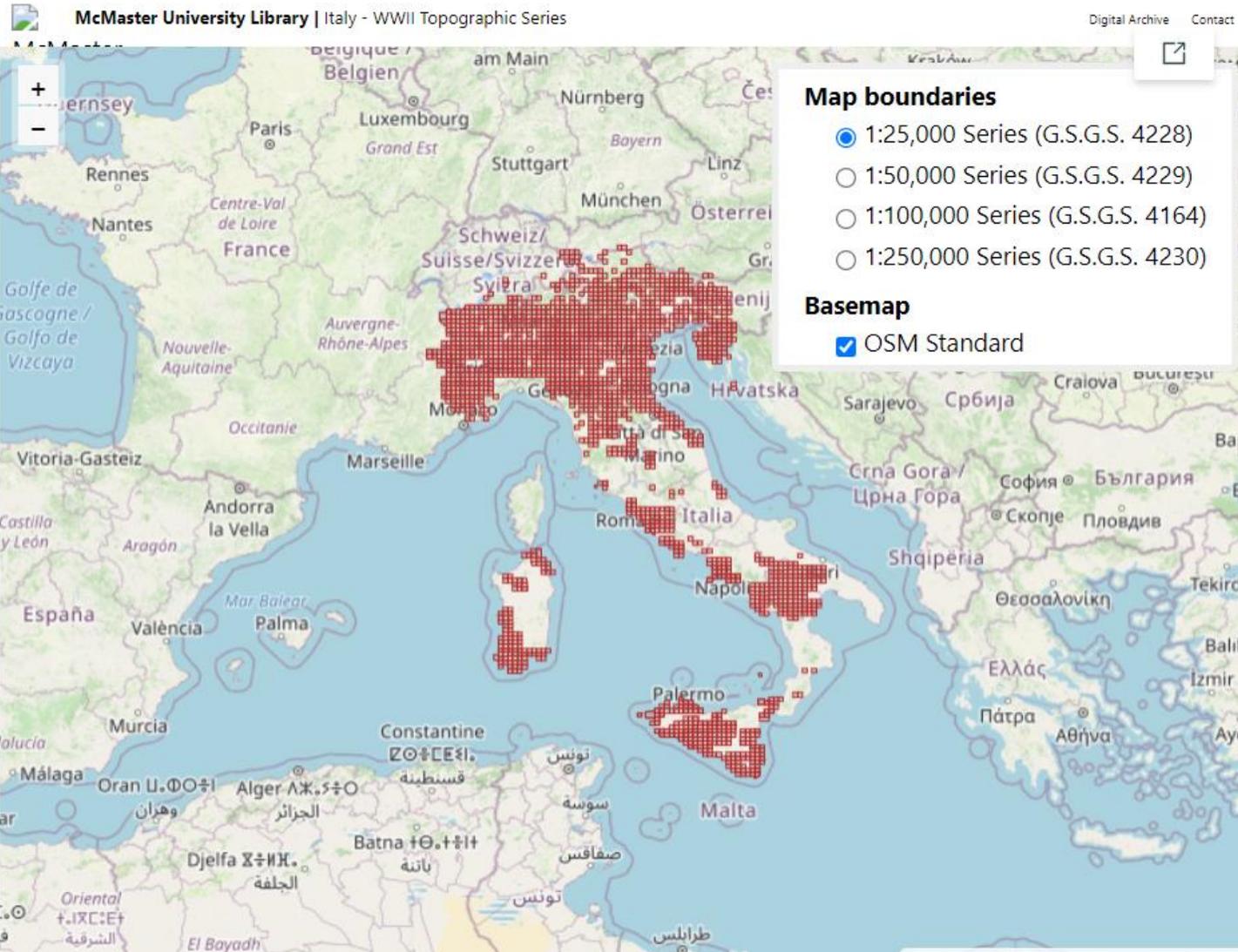
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- **Geographic Information Systems**
- Digital or computer-based mapping
- Integrates hardware, software, and data for capturing, managing, analyzing and displaying all forms of **geographically referenced information** (data with a location)
- Allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends



# GIS

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# Library Projects

## Map Warper

Georeferencing historic maps and air photos

## Web Map Indexes

<https://library.mcmaster.ca/maps/ww2/italy-ww2topos/>

## Community-Engaged Research Partnerships Storymap

<http://arcg.is/1PySD1>

Collaboration with the Faculty of Social Sciences



SOFTWARE

# Esri / ArcGIS

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## Desktop

- ArcGIS Desktop (ArcGIS Pro)

## Cloud

- ArcGIS Online
- App Builders
  - Instant Apps
  - Web App Builder
- Apps
  - Business Analyst Web App
  - City Engine
  - Community Analyst
  - GeoPlanner
  - Insights
  - StoryMaps

# QGIS

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- One of several free and open-source software
- Functional desktop application
- Compatible with Windows, Mac, Linux operating systems
- Responsive to the user community
  
- See <https://www.osgeo.org/projects/> for more open-source desktop and web mapping applications

# Access to GIS Software

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- Library workstations

<https://library.mcmaster.ca/services/computers-software>

- Remote Computer Access

<https://library.mcmaster.ca/labstats/remotecomnect.html>

- Esri Education Institution Agreement

<https://library.mcmaster.ca/services/gis>

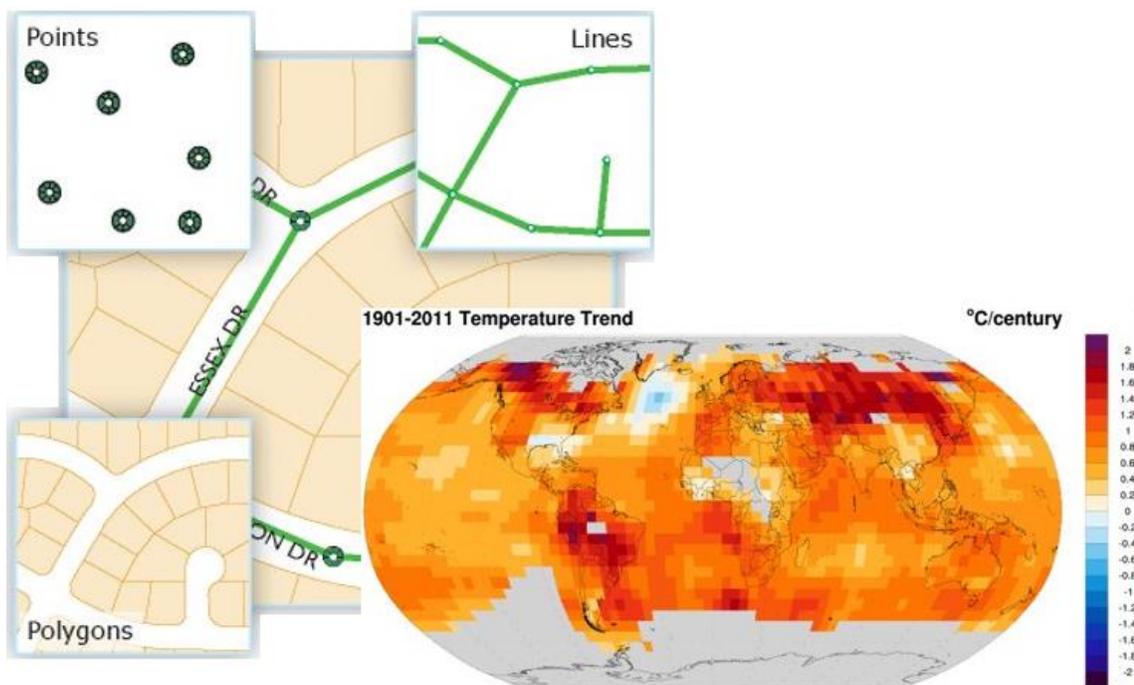
[ArcGIS Software Request Form](#)

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# GEOSPATIAL DATA

# Geospatial Data

- Vector and raster data models used to represent the real world
- Data collection - GPS units, surveys, tablets, phones, crowdsourced
- Multiple datasets are stacked or layered
- Tabular data can also be "joined" to spatial data and displayed on a map



# Geospatial Data

<https://library.mcmaster.ca/collections/geospatial-data>

Scholars GeoPortal

McMaster University Library

Open Data Portals

Contact Us!

Data  Place or address

Anywhere  ?

Downloadable content only

**Browse by...**

**Subject category** ?

- Census and administrative boundaries (249)
- Transportation networks (172)
- Inland water resources (105)
- Environment and conservation (103)
- Geological and geophysical (56)
- Imagery, base maps, and land cover (49)
- Land use and planning (36)
- Utility and communication networks (35)
- Cultural, society, and demographic (23)
- Agriculture and farming (21)
- Human health and disease (21)
- Biologic and ecologic (20)
- Facilities and structures (20)
- Business and economic (18)
- Elevation and derived products (14)
- Locations and geodetic networks (11)
- Military and intelligence (9)
- Atmosphere, climatology, and meteorology (2)

**Keywords** ?



The map displays a geographical view of Canada and its surroundings. Key features include the Rocky Mountains running through the western part of the country, the Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) in the east, and Hudson Bay to the northeast. Major cities like Vancouver and Seattle are marked in the southwest. The map also shows the Gulf of Alaska to the west and Davis Strait to the east. The word 'CANADA' is prominently displayed in the center of the landmass.

# Scholars GeoPortal

[geo.scholarsportal.info](http://geo.scholarsportal.info)

- Ontario Council of University Libraries (OCUL) service
- Access to open and restricted\* geospatial data for Ontario and Canada
- Search, view, download, share, and export (PDF, JPG, e.g.) capabilities
- Login for off-campus access

\* *Restricted = McMaster community for teaching and research purposes*

# McMaster University Library

<https://library.mcmaster.ca/maps/geospatial/>

- Local geospatial data
- Restricted data that can't be made available online
- Example datasets
  - City of Hamilton parcel/land use data, tree inventory, licensed data not available through open data portal
  - Teranet Ontario parcel boundaries
  - Large imagery datasets
- Data Request Form

Greater Toronto and Hamilton Area (GTHA) Boundary	Ontario Ministry of Natural Resources	2012	
Hamilton Digital Orthophotos	City of Hamilton, Information Technology Services, GIS Services.	Select years between 1999 and 2014	
Hamilton Parcel/Land Use Data	Teranet Inc. and The City of Hamilton, Dept. of Planning and Economic Development.	Select years between 2009 and 2018	
Hamilton Street Railway (HSR) Bus Routes	City of Hamilton	2007 -	
Hamilton Tree Inventory	City of Hamilton, Ontario	2009 / 2016	
Hamilton Vector Data Set	City of Hamilton, Information Technology Services, GIS Services.	2003 - 2018	
Ontario Parcel Boundaries	Teranet Inc.	2009 - 2016	

# Open Data Portals

Open Hamilton (City of Hamilton)

<https://open.hamilton.ca/>

Ontario GeoHub (Province of Ontario)

<https://geohub.lio.gov.on.ca/>

Open Data and Open Maps  
(Government of Canada)

<https://open.canada.ca/en>



## Explore Open Data by Category



All data



Business & Economy



City Services



Census & Demographics



Culture & Tourism



Environment



Health & Safety



Infrastructure



Parking & Transportation



Parks & Recreation

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# SUPPORT AND RESOURCES

# Support and Resources

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**CONSULTATIONS**



**INSTRUCTION /  
WORKSHOPS**



**ONLINE MODULES AND  
RESOURCES**

# Consultations

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- Individual or group
- Finding and analyzing geospatial data
- Assistance with GIS software
  - ArcGIS software and licenses
  - Getting started with GIS
  - Analysis
  - Troubleshooting
  - ...

**DMDS**

Do More with Digital Scholarship and DASH workshop

McMaster University **DASH**

# Story Maps

Thurs, March 3, 2022  
1:30pm - 3:30pm



McMaster University **Library**

Register for this virtual event at:  
[u.mcmaster.ca/scds-events](https://u.mcmaster.ca/scds-events)

Lewis & Ruth  
**Sherman Centre**  
for Digital Scholarship

# Instruction and Workshops

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- In-class instruction sessions
- Workshops geared to specific programs or areas of research
- Sherman Centre for Digital Scholarship (SCDS) workshop series:
  - Do More with Digital Scholarship
  - Data Analysis Support Hub (DASH)

# Online Modules and Resources

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## SCDS Online Learning

- <https://scds.ca/online-learning/>
  - Introduction to GIS (QGIS)
  - Introduction to GIS (ArcGIS Online)
  - Introduction to the ArcGIS Business Analyst Web App (BAO)
  - Introduction to ArcGIS StoryMaps

## QGIS Resources

- [LinkedIn Learning](#)
- [Tutorials](#)
- [Documentation](#)

## Esri

- [Learn ArcGIS](#)
- [Webinars, conferences, and events](#)
- [Online documentation](#)



# Questions?

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[libgis@mcmaster.ca](mailto:libgis@mcmaster.ca)

<https://library.mcmaster.ca/services/gis>