

# Adapting to a Cloud Based GIS at a Small Liberal Arts Institution



Carol Cady, GIS Specialist  
Dakota Casserly, GIS/GPS Technician  
Shayla Witheral, Donor Relations

St. Lawrence University  
Canton, NY



NY GeoCon 2017



# St. Lawrence University

## General Facts:

---

- Located in Canton, NY
- FTE 2500 Undergrad & Grad

- 1026 Acres

  - ~ 300 Acres Developed

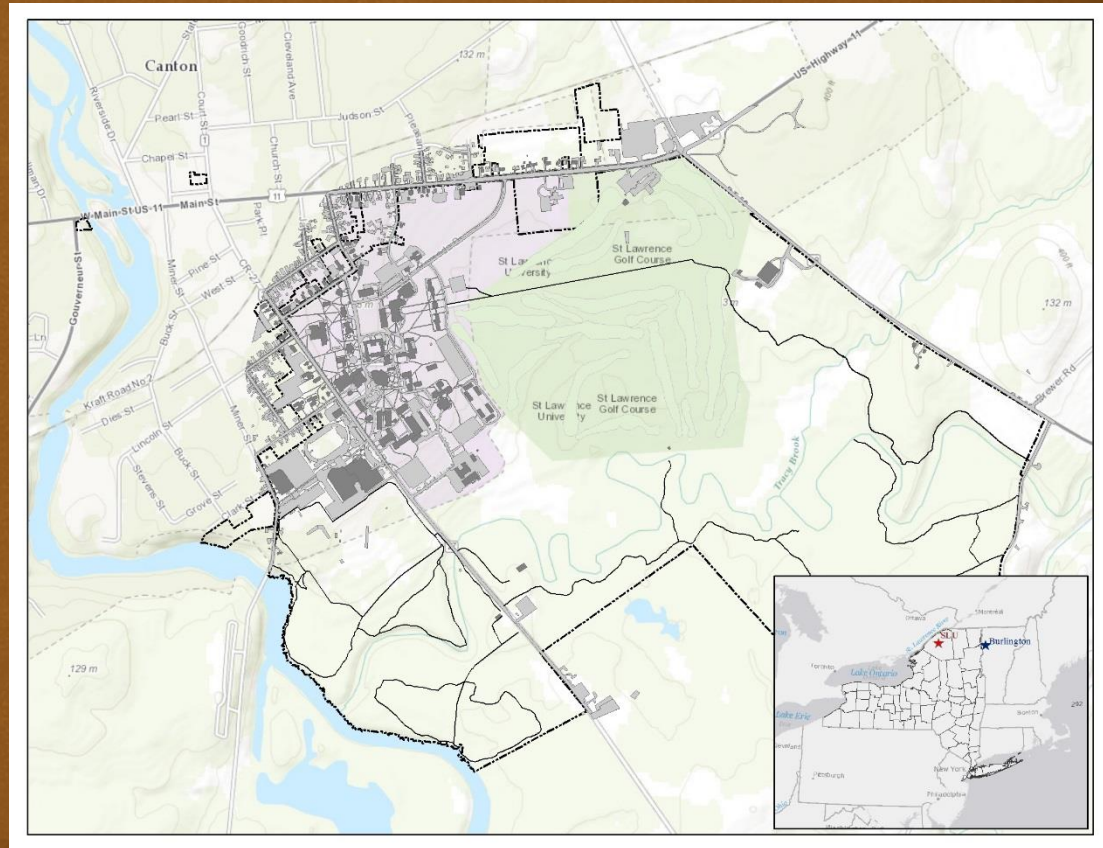
- GIS Program

  - Libraries and Information Technology Dept.

  - Primarily Academic

  - 1.5 FT Employees

  - Student Technicians



# Cloud Based Related Projects

## ArcGIS Online (AGOL)

- REST Endpoints
- AGOL in the Classroom
- Mapping the Laurentian Legacy
- Story Maps
- Faculty and Staff Support
- Nature Up North (Ash Tree mapping)

## ArcGIS Pro

## Portal for ArcGIS

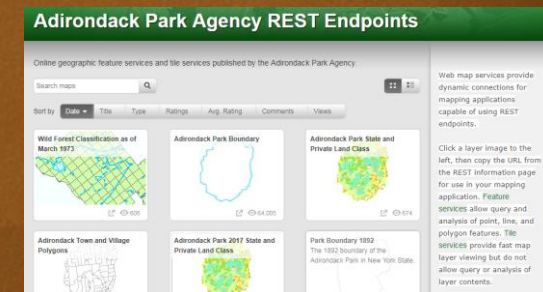
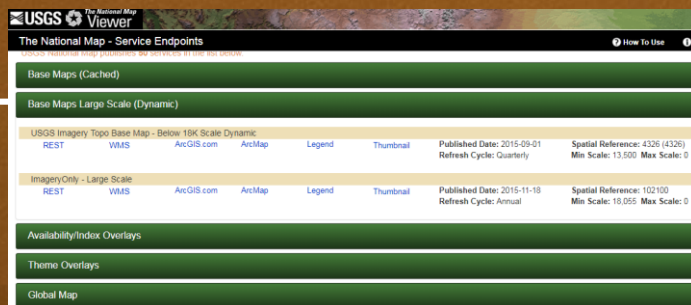
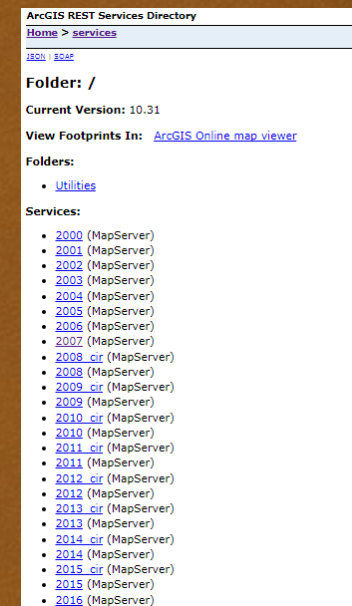
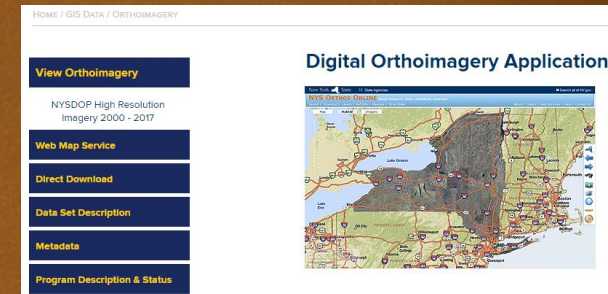
## Geographic Data Visualization

\*\*Student help\*\*



# Rest Services

- What is it?
  - Representational state transfer is a particular design for information to be shared via a url on the web
  - Access and serve all sorts or geographic data
- How do we use?
  - Primarily for basemaps, some feature services
  - USGS and NYS orthoimagery (vis NYS GIS Clearinghouse)
  - Alleviate data storage concerns
  - Response time





# AGOL in the Classroom

## Intro GIS

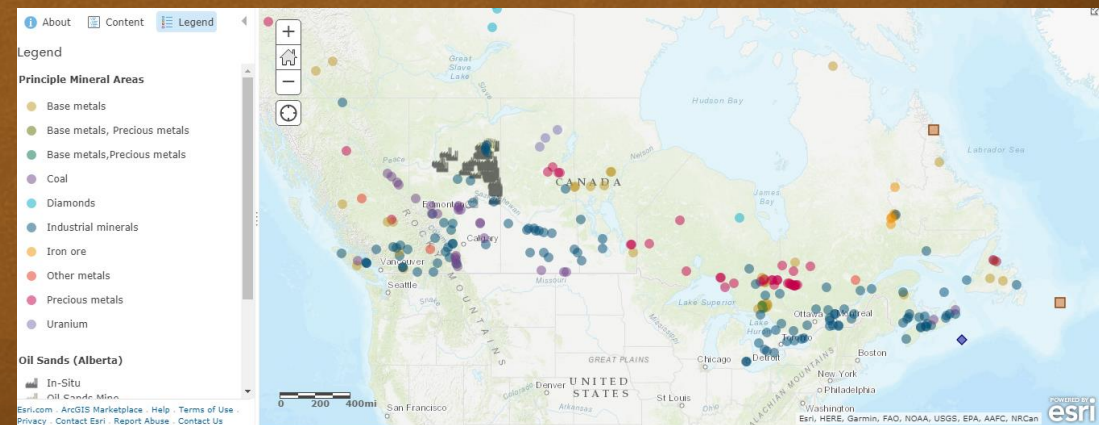
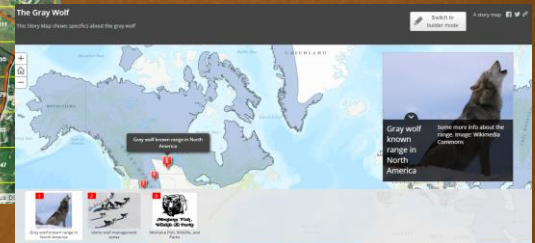
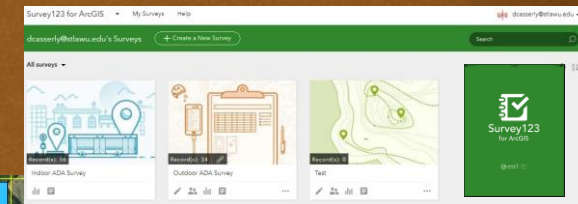
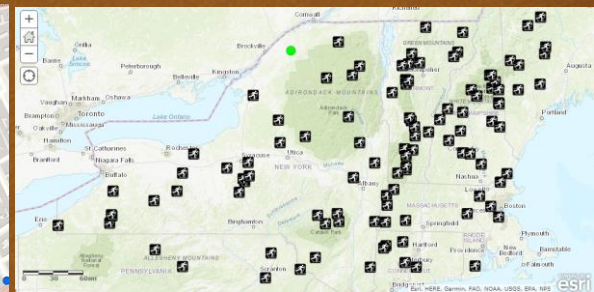
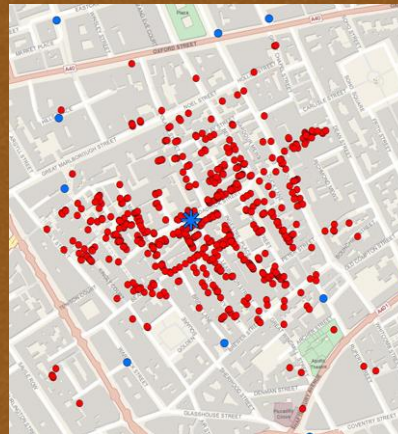
- Jon Snow
- Network Analyst
  - Proximity Tools
- Survey123

## Environmental Studies

- Collector and web maps
  - Ecology, Recreation
- Story maps

## General intro

- Global Studies,  
Government, Biology,  
First Year Program
  - Web maps

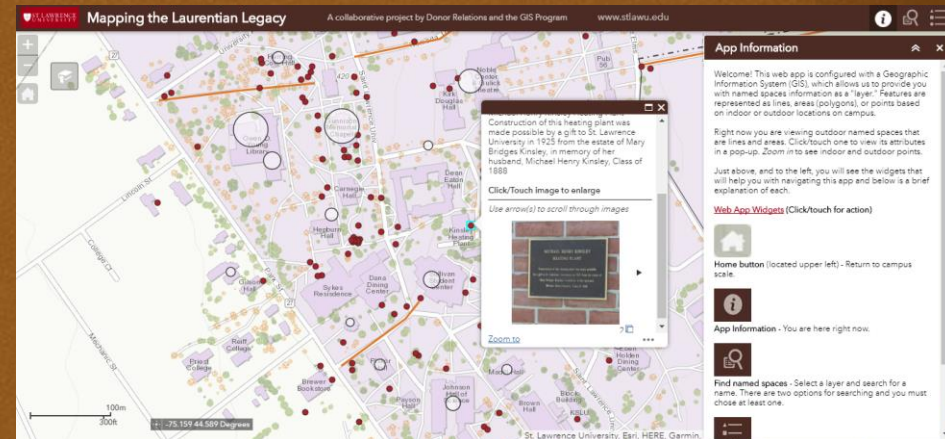




# Mapping the Laurentian Legacy

## Project Flow:

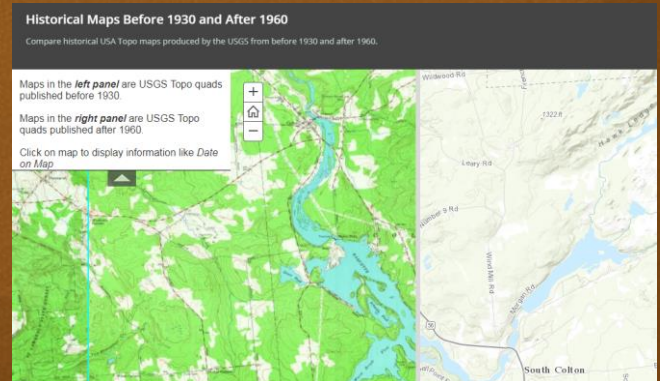
- Use existing Donor Relations data
- GPS all named spaces location
- Web map and Collector to collect and edit
- Serve up dynamic public web app
  - Advanced design via HTML, Arcade, clustering
- Better coordination with facilities
- New Spaces
- Longevity





# Story Maps

- AGOL
- Our GIS Server (Data and web)
- Data
  - Hosted Feature Layers
  - Server based CSV file(s)
- Design and editing
  - Students
  - Faculty and Staff





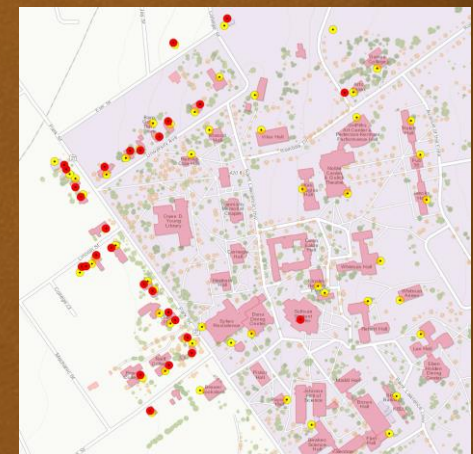
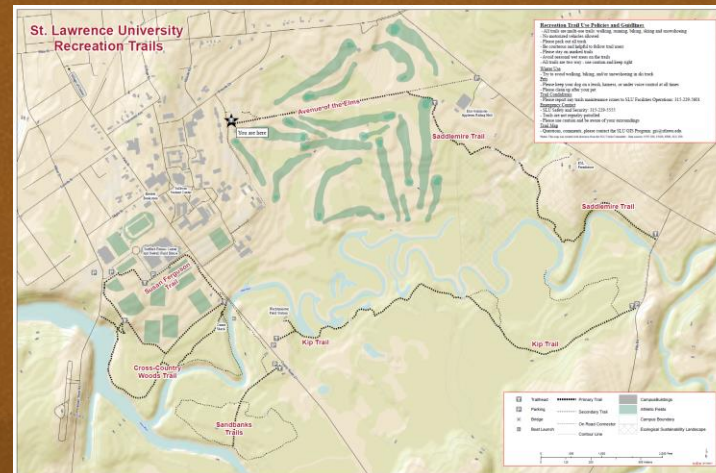
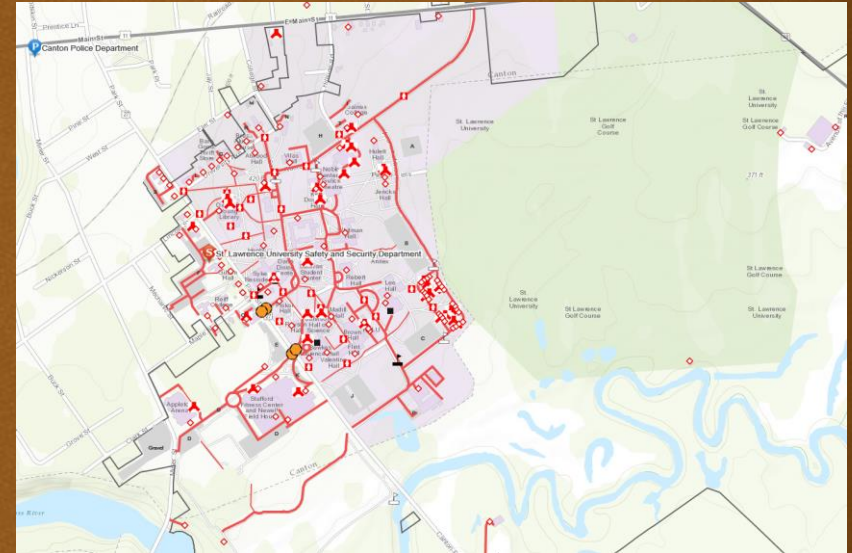
# Faculty and Staff Support

Individual web maps and apps for both

- Faculty across campus
- Safety and Security

Facilities

- Underground infrastructure
- Recreational assets
- Energy Master Plan









# ArcGIS Pro

What is it?

Edit and geoprocess hosted feature layers

- AGOL has improved editing capabilities



The screenshot displays the ArcGIS Pro interface. The main map area shows a campus map with various buildings and streets. The 'Contents' pane on the left lists the layers: 'Map', 'SS\_EmergencyAccess', 'LoadingDocLocations\_1', 'EmergencyServicesAccessLocations\_1', and 'Topographic'. The 'Table' pane at the bottom shows a data table with the following columns: OBJECTID, Comment, BuildName, Address, Aspect, Doors, FDhCoCenn, Lat\_DD, Long\_DD, Lat\_DMS, Long\_DMS, and GlobalID. The table contains 17 rows of data.

| OBJECTID | Comment | BuildName                | Address               | Aspect | Doors             | FDhCoCenn | Lat_DD     | Long_DD           | Lat_DMS          | Long_DMS | GlobalID                      |
|----------|---------|--------------------------|-----------------------|--------|-------------------|-----------|------------|-------------------|------------------|----------|-------------------------------|
| 1        |         | Brown Hall               | NE                    | Double |                   | 44.58863  | -75.159932 | 44° 35' 19.068" N | 75° 9' 35.754" W |          | {c1c267c0-1b09-4b2d-af38-0}   |
| 2        |         | Java Barn SW sprink...   | Block Building        | SW     | Single            | 44.588541 | -75.159917 | 44° 35' 18.748" N | 75° 9' 34.260" W |          | {031f4d0bc-3b09-4c14-b99c-7}  |
| 3        |         | Java Barn SW Java en...  | Block Building        | SW     | Single            | 44.588338 | -75.159915 | 44° 35' 18.016" N | 75° 9' 33.554" W |          | {4e6020a2-1c09-4d7e-b516-f7}  |
| 4        |         | Java Barn SW KSLU su...  | Block Building        | SW     | Single            | 44.588333 | -75.159937 | 44° 35' 18.215" N | 75° 9' 33.730" W |          | {643f9eaf-7706-4f0a-b304-af}  |
| 5        |         | Flint Hall SW Sing dr    | Flint Hall            | SW     | Single            | 44.587719 | -75.159785 | 44° 35' 15.789" N | 75° 9' 35.225" W |          | {8b957e07-c051-4acc-ae8b-0}   |
| 6        |         | Facilities NW dr sing... | Facilities Operations | NW     | Single and Garage | 44.586892 | -75.157999 | 44° 35' 12.612" N | 75° 9' 27.355" W |          | {0824801e-1a4b-4620-a15b-7}   |
| 7        |         | Steiner 604 SW Sing dr   | Steiner Townhouse 504 | SW     | Single            | 44.588761 | -75.15692  | 44° 35' 19.541" N | 75° 9' 24.813" W |          | {9884b559-c273-444c-ba8c-2}   |
| 8        |         | Steiner 603 SW Sing dr   | Steiner Townhouse 603 | SW     | Single            | 44.588692 | -75.158058 | 44° 35' 19.291" N | 75° 9' 24.880" W |          | {9ea4365a-cf59-4d44-af6c-58}  |
| 9        |         | Steiner 602 SW Sing dr   | Steiner Townhouse 602 | SW     | Single            | 44.588637 | -75.156798 | 44° 35' 19.094" N | 75° 9' 24.474" W |          | {74a11336-8758-4acc-ac74-5f}  |
| 10       |         | Steiner 601 SW Sing dr   | Steiner Townhouse 601 | SW     | Single            | 44.588552 | -75.156713 | 44° 35' 18.787" N | 75° 9' 24.167" W |          | {f7a96cfa-6c93-4070-bafe-df}  |
| 11       |         | Steiner 504 SE Sing dr   | Steiner Townhouse 504 | SE     | Single            | 44.588439 | -75.156424 | 44° 35' 18.379" N | 75° 9' 23.125" W |          | {1170568a-7506-4a3a-a74b-8}   |
| 12       |         | Steiner 503 SE Sing dr   | Steiner Townhouse 503 | SE     | Single            | 44.588485 | -75.156309 | 44° 35' 18.545" N | 75° 9' 22.712" W |          | {5a216bb8-4c6a-42a3-8822-0}   |
| 13       |         | Steiner 502 SE Sing dr   | Steiner Townhouse 502 | SE     | Single            | 44.588528 | -75.15621  | 44° 35' 18.699" N | 75° 9' 22.357" W |          | {c90e3d45-01e1-4464-9a8c-3}   |
| 14       |         | Steiner 501 SE Sing dr   | Steiner Townhouse 501 | SE     | Single            | 44.588558 | -75.156099 | 44° 35' 18.889" N | 75° 9' 21.957" W |          | {7e8d788d-454b-401a-af0b-2}   |
| 15       |         | Steiner 404 NE Sing dr   | Steiner Townhouse 404 | NE     | Single            | 44.588811 | -75.156178 | 44° 35' 19.721" N | 75° 9' 22.241" W |          | {36900a75-4e45-4192-b017-2}   |
| 16       |         | Steiner 403 NE Sing dr   | Steiner Townhouse 403 | NE     | Single            | 44.588888 | -75.156266 | 44° 35' 19.996" N | 75° 9' 22.557" W |          | {d4e389552-6812-4949-acf2-af} |
| 17       |         | Steiner 402 NE Sing dr   | Steiner Townhouse 402 | NE     | Single            | 44.588957 | -75.156322 | 44° 35' 20.244" N | 75° 9' 22.761" W |          | {3d91af3a-1d44-49d7-a87e-3}   |



# Portal for ArcGIS

What is it?

In our organization:

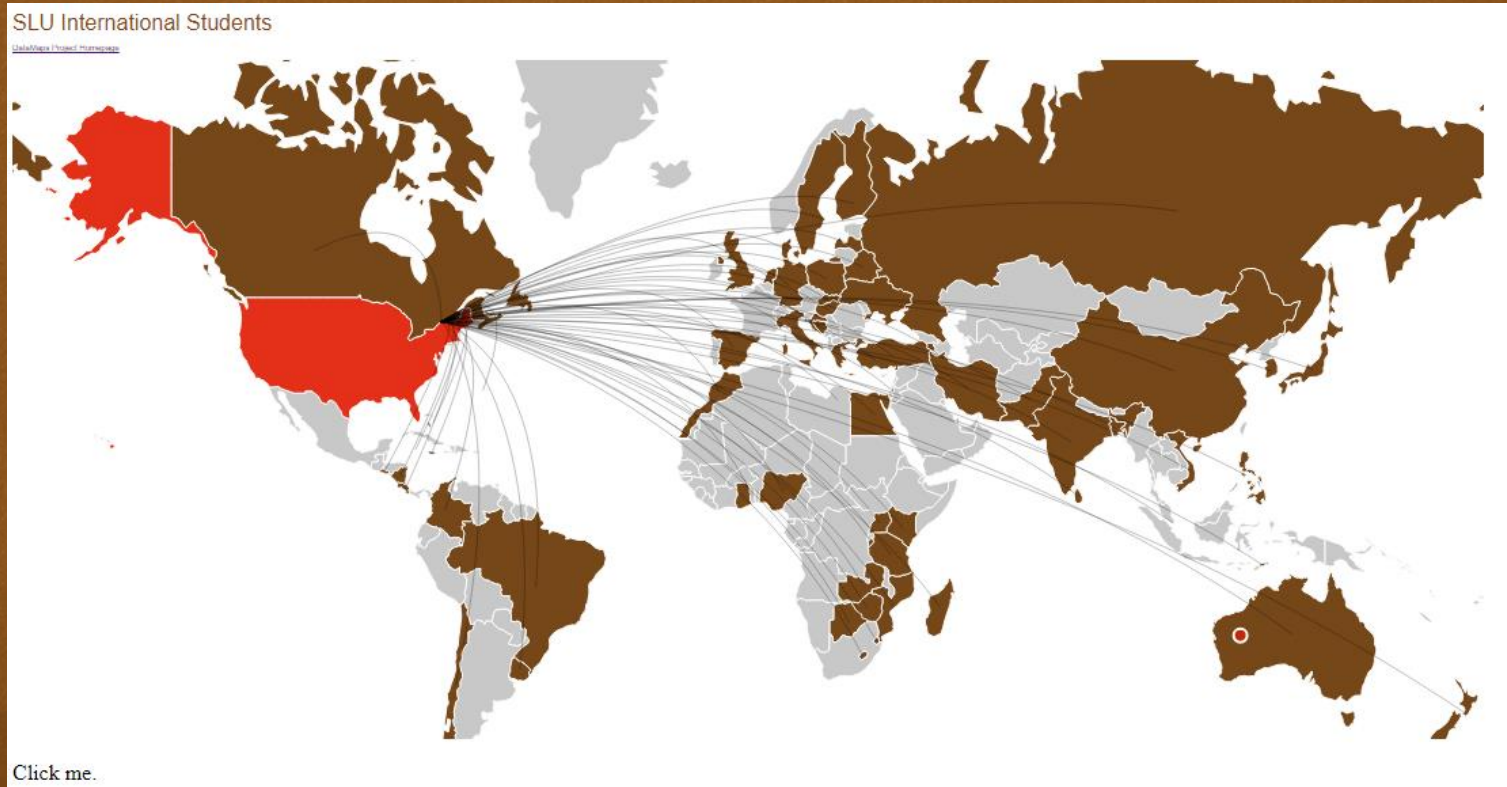
- Primarily to use for internal needs
- Licensing issues
- Upgrading the software issues



# Geographic Data Visualization

In our organization:

- Student led project
- Using tabular data with town and country
- Using java script to create appealing geographic based visuals





# Wrap Up

## Cloud based examples

- (REST)

## Use across campus

- Instruction, Apps,  
Support

## Admin and Management

- Kind of a bear

## Going Forward

- Continued campus  
support
- Portal



# Questions

