

Introduction to ArcGIS Online – Part 1

Jan. 19, 2020

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UNIVERSITY

Housekeeping

- **My assistant:** Yun Shen
- **This session is recorded.**
- **Ask questions in Zoom Chat.**

Outline

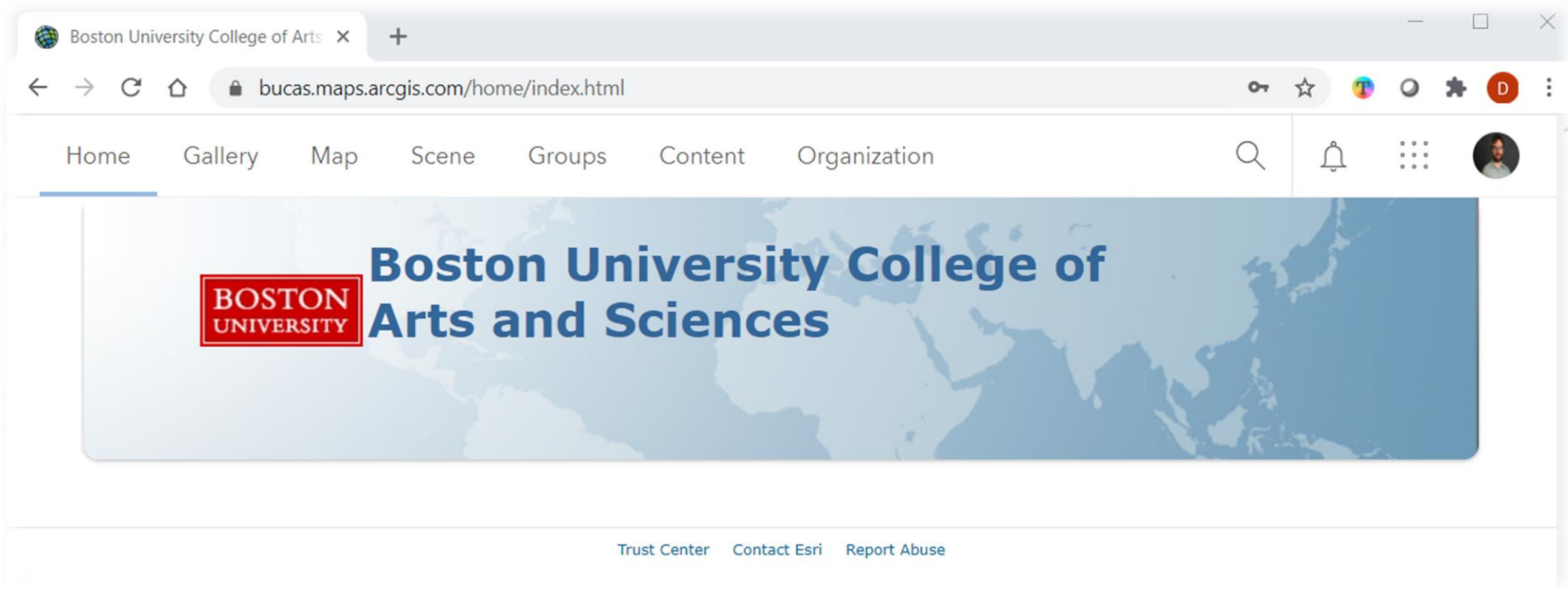
- **Part 1**
 - **ArcGIS Online –What is it?**
 - **General Workflow (Step 1 - 2)**
 - **Health Ranking Data**
 - **[Explore ArcGIS Online](#) (Hands On)**

- **Part 2**
 - **Review Steps 1 and 2**
 - **General Workflow (Step 3 – 4)**
 - **Permissions**
 - **[Create Application/StoryMap](#) (Hands On)**

ArcGIS Online – What is it?

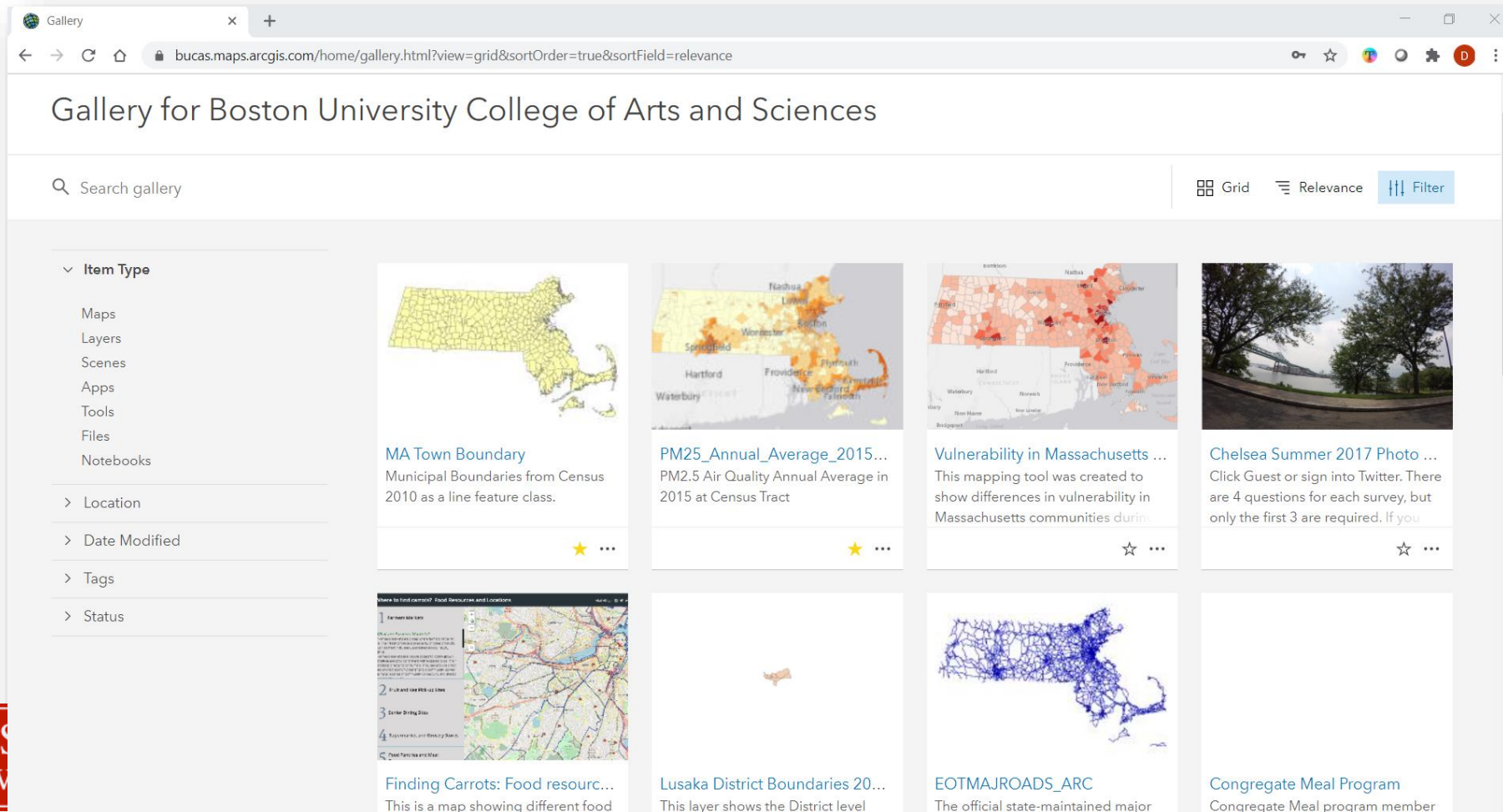
ArcGIS Online – What is it?

- Cloud Platform



ArcGIS Online – What is it?


- Share data and maps with others



ArcGIS Online – What is it?

- Create **Groups** to collaborate or share data with specific audience

Landsat Community



This is a group curated by Esri for sharing maps and applications created using Landsat imagery. These items access World-wide dynamic image services consisting of Landsat 8, as well as GLS Data created using scenes from Landsat 1 through Landsat 7.

owned by [esri](#)

Description


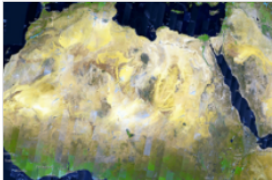
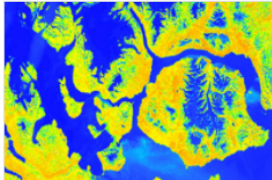
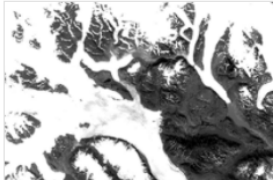
Global Land Survey (GLS) datasets are created by the U.S. Geological Survey (USGS) and the National Aeronautics and Space Administration (NASA) using Landsat images. These global minimal cloud cover, orthorectified Landsat data products support global assessments of land cover, land cover change, and ecosystem dynamics such as disturbance and vegetation health. Landsat represents the world's longest continuously acquired collection of space-based moderate-resolution land remote sensing data change research.

Esri provides a series of Landsat Image Services as dynamic image services allowing customers to explore the important information within this imagery. This includes band combination analysis for visualization (such as Natural Color, Infrared, Vegetative Change, [NDVI](#)) as well as many years of imagery to look at changes over time (1975, 1990, 2000, 2005, 2010).

Members of the Landsat Global Land Survey group have used this imagery in maps and applications to tell stories about how earth is changing over time.

Recently added content

[View All Group Content](#)

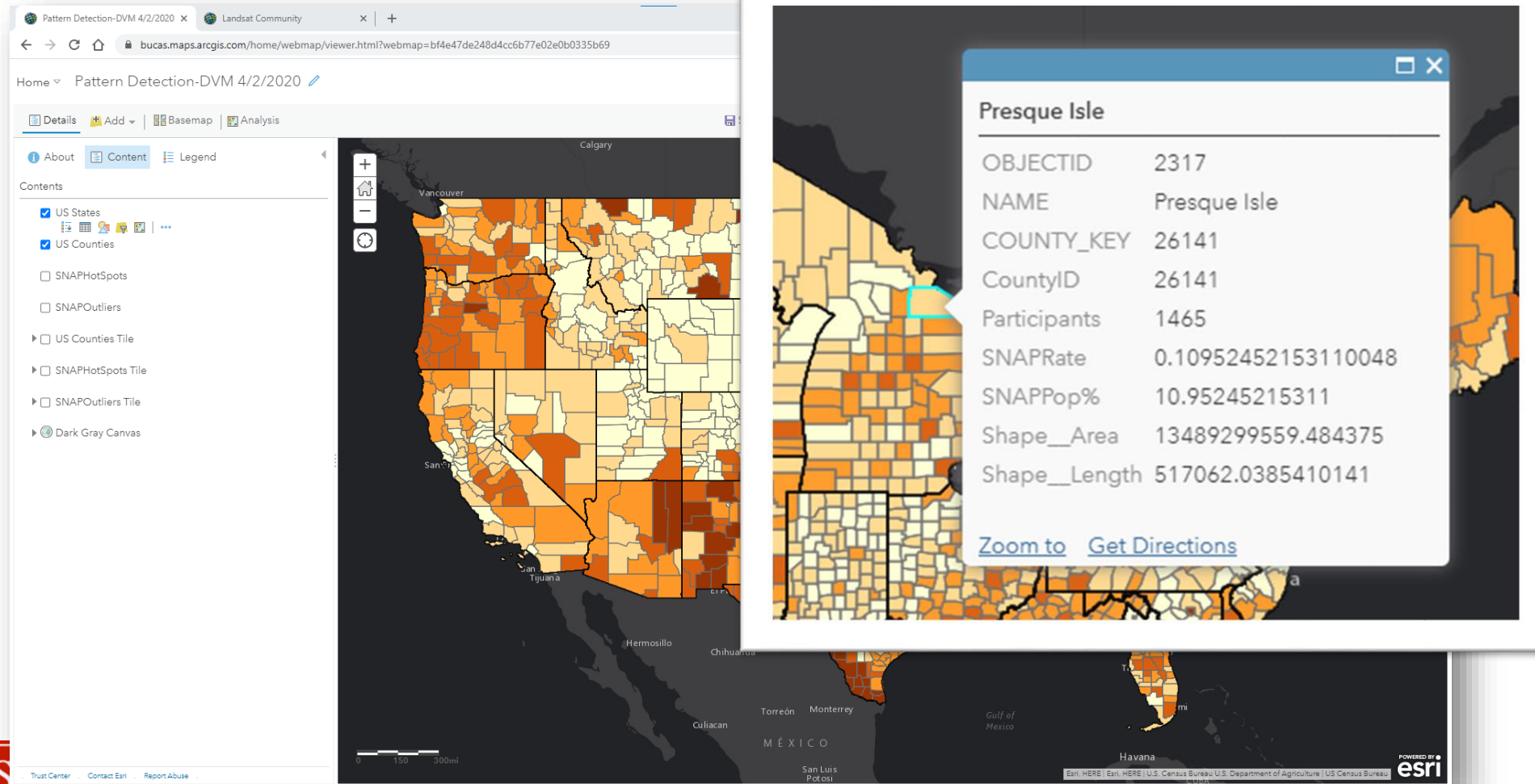
 <p>Landsat Explorer App by Esri Created: Jan 9, 2018 Updated: Jun 1, 2020 View Count: 5,458</p>	 <p>Landsat 8 Views by Esri Created: Dec 6, 2013 Updated: Dec 19, 2019 View Count: 179,055</p>	 <p>Landsat Arctic Imagery: NDSI... by esri Created: Jun 23, 2016 Updated: Dec 19, 2019 View Count: 1,010</p>	 <p>Landsat Arctic Imagery: Panc... by esri Created: Jun 23, 2016 Updated: Dec 19, 2019 View Count: 371</p>
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Additional Reading:

<https://doc.arcgis.com/en/arcgis-online/share-maps/share-content-with-collaboration-participants.htm>

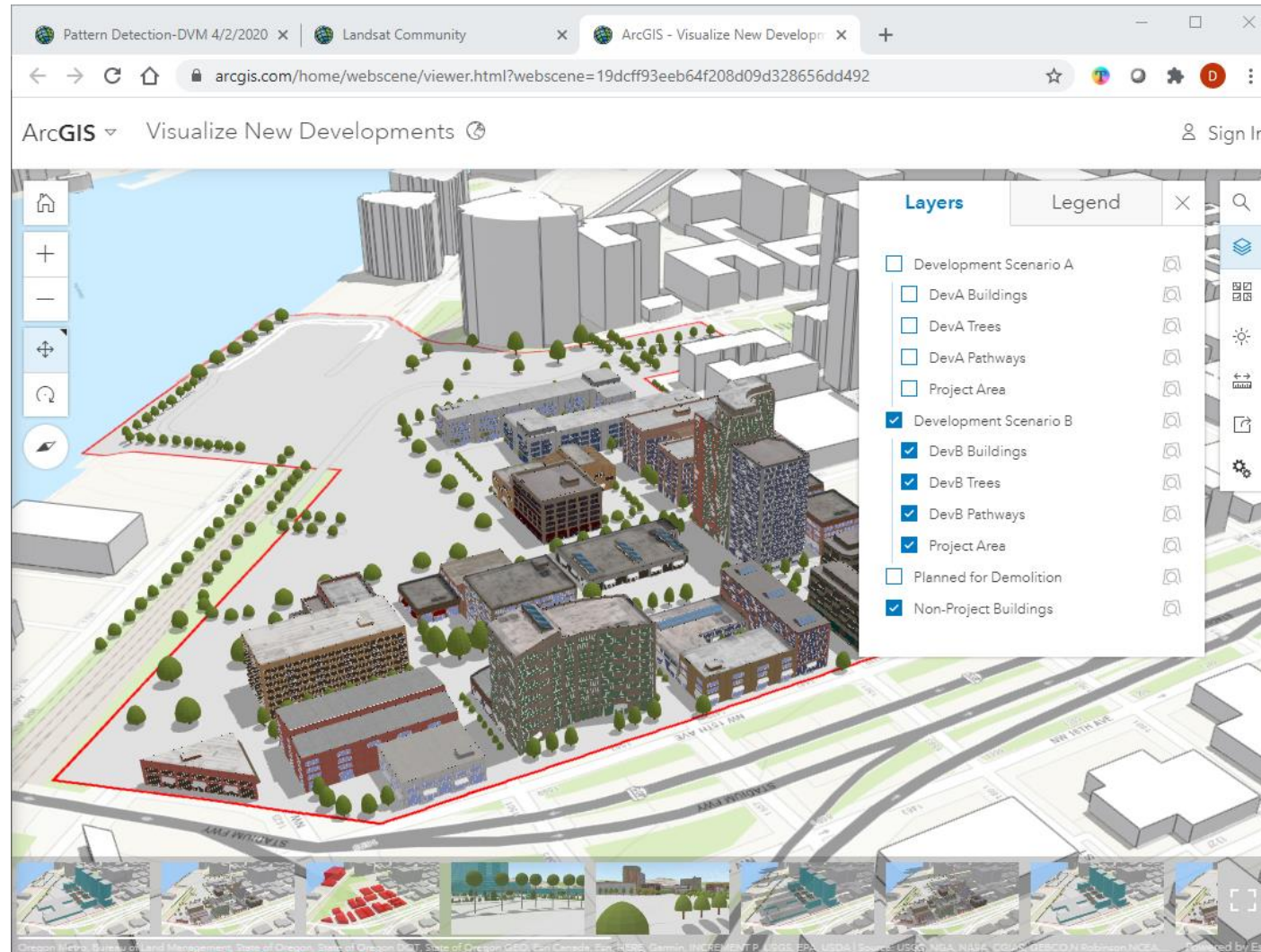
ArcGIS Online – What is it?

- Import Data and Explore Data in **Web Map**.



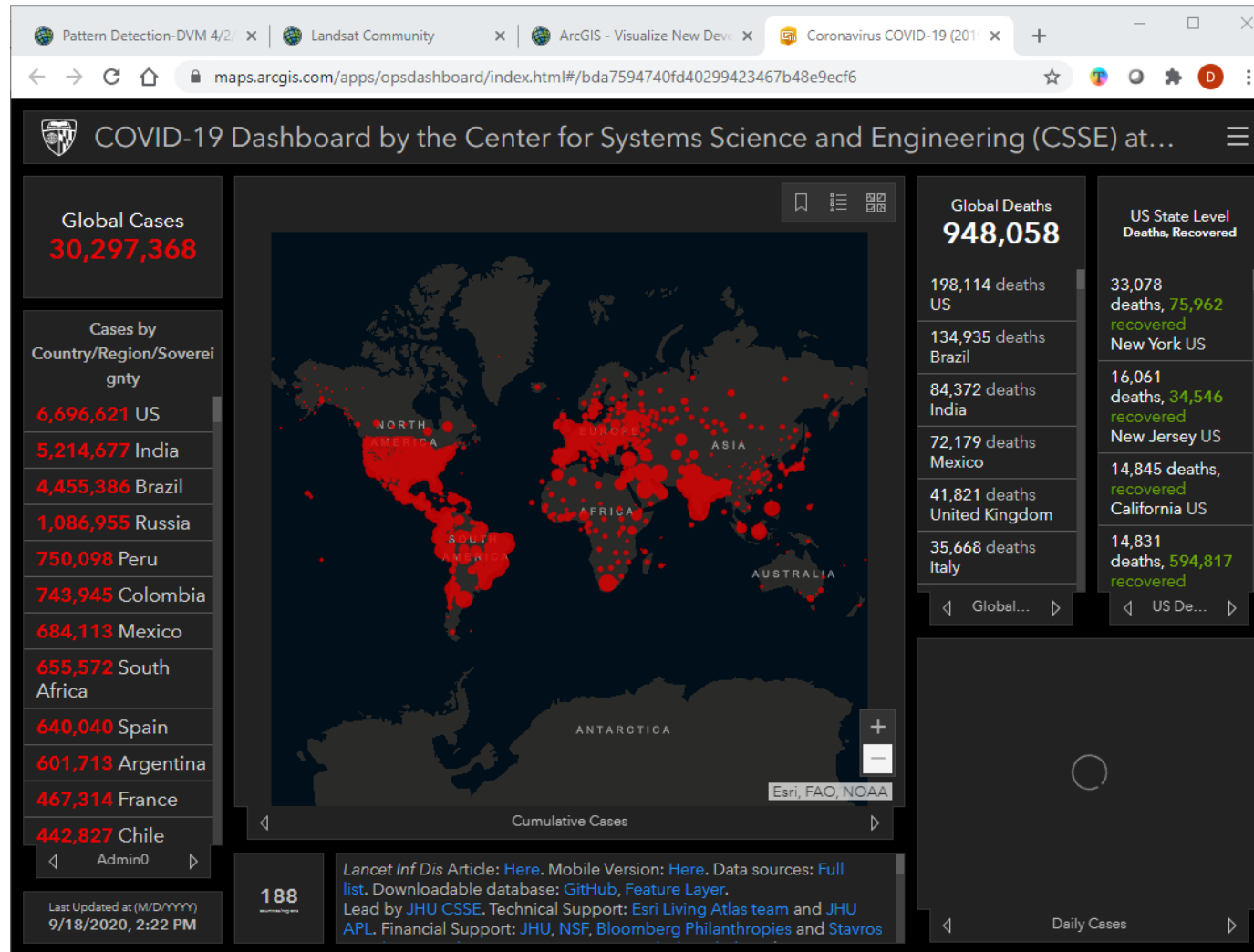
ArcGIS Online – What is it?

- Show data in 3D using **Scenes**



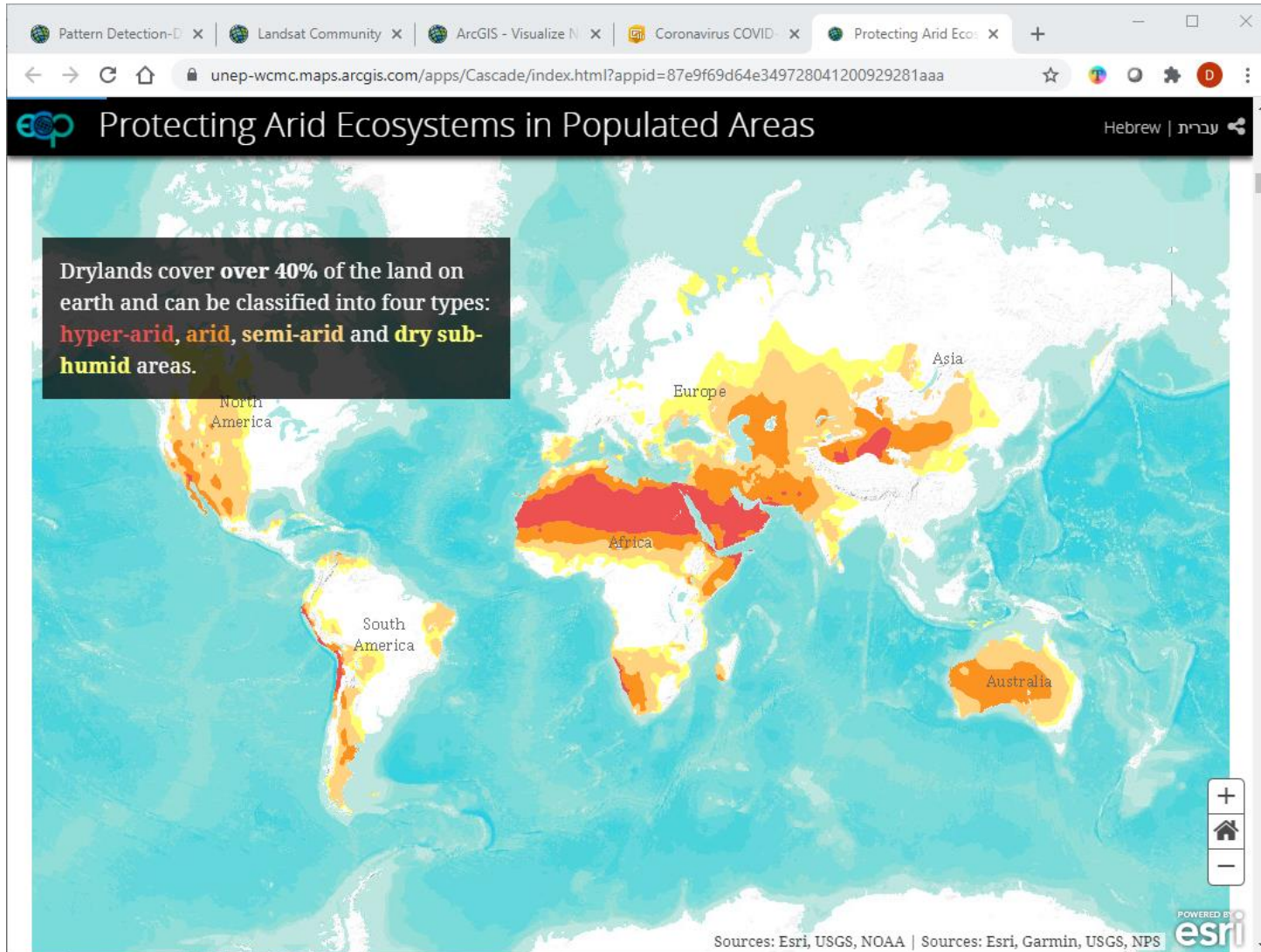
ArcGIS Online – What is it?

Create Applications (Apps) to share your findings.



ArcGIS Online – What is it?

Create Story Maps.



ArcGIS Online – What is it?

Searching Living Atlas

The screenshot shows the ArcGIS Living Atlas search interface in a web browser. The browser tabs include "Pattern Detection-DVM 4/2/2020", "Landsat Community", "ArcGIS - Visualize New Developm...", "Coronavirus COVID-19 (2019-nC...", "Protecting Arid Ecosystems in Po...", and "Living Atlas of the World | ArcGIS". The address bar shows "livingatlas.arcgis.com/en/browse/#d=2".

The search bar at the top contains the text "Search Living Atlas for maps, apps, and more" and a search icon. Below the search bar is a "Search Examples" link.

The navigation bar features icons for "All", "Trending", "Basemaps", "Imagery", "Boundaries", "People", "Infrastructure", and "Environment". The "All" tab is selected.

Filters include "All content types", "All time", "All regions", "Esri-only content", and "Authoritative-only content". The "Sort by" dropdown is set to "Relevance".

The search results show 8774 Results. The first six results are:

- World Imagery**: Tile Layer By esri. This layer presents low-resolution satellite imagery for the world and high-resolution satellite and aerial imagery, typically within 3-5 years of currency, for most of the world. (Authoritative)
- Active Hurricanes, Cyclones and Typhoons**: Feature Layer By esri_livefeeds2. This layer describes the observed path, forecast track, and intensity of tropical cyclone activity (hurricanes, typhoons, cyclones) from the National Hurricane Center (NHC) and Joint Typhoon Warning Center (JTWC). (Authoritative)
- World Traffic Service**: Map Image Layer By esri. This map service presents historical and near real-time traffic information for different regions in the world. The data is updated every 5 minutes. This map service requires an ArcGIS Online organizational subscription. (Subscriber, Authoritative)
- USA Current Wildfires**: Feature Layer By esri_livefeeds2. This layer shows wildfires that have been updated within the past 7 days in the United States from IRWIN and NIFC information. (Authoritative)
- USA Weather Watches and Warnings**: Feature Layer By esri_livefeeds2. A live data feed from the National Weather Service containing official weather warnings, watches, and advisory statements for the United States. (Authoritative)
- Sentinel-2 Views**: Imagery Layer By esri. Sentinel-2, 10m Multispectral, Multitemporal, 13-band images with visual renderings and indices. This Imagery Layer is sourced from the Sentinel-2 on AWS collections and is updated daily with new imagery. This layer is in beta.

ArcGIS Online – What is it?

Lesson Gallery

<https://learn.arcgis.com/en/gallery/>

Story Map Gallery:

<https://storymaps-classic.arcgis.com/en/gallery/#s=0>

ArcGIS Online – What is it?

- Cloud Platform for storing data, images, layers, and applications.
- Share data and maps with others
- Create interactive map applications

- Commercial/Paid service
- Funded by CAS IT
- Each account allocated “credits”

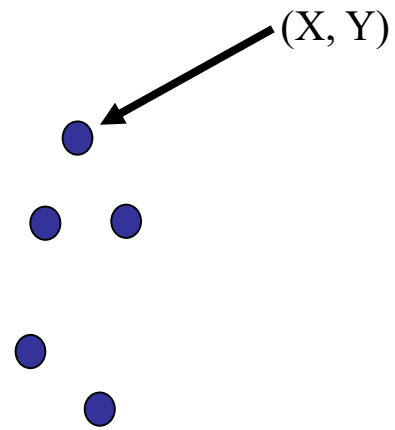
Credits by capability:

https://doc.arcgis.com/en/arcgis-online/administer/credits.htm#ESRI_SECTION1_709121D2C7694DCAB9B8592F36F7A5BA

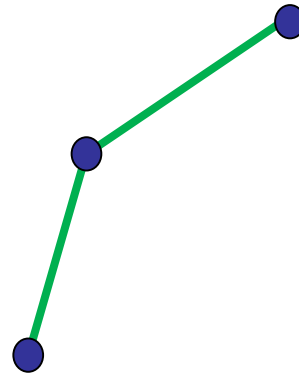
Step 1 – Find/Upload Layers

Step 1 – Find/Upload Layers

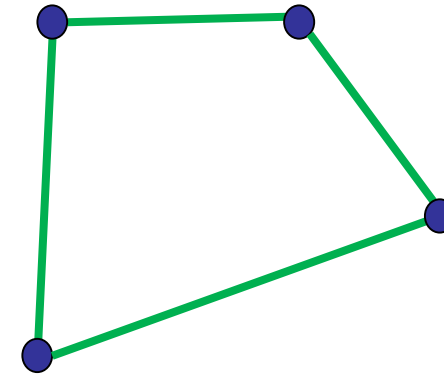
Vector Data



Points



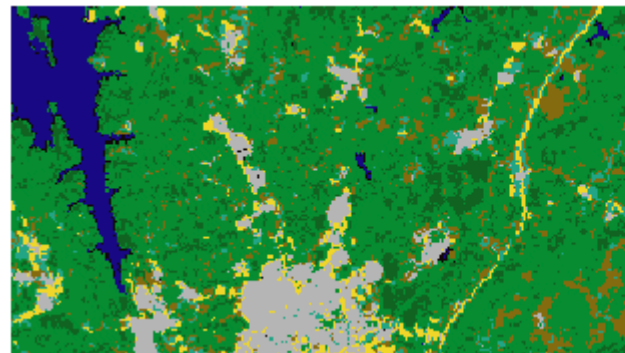
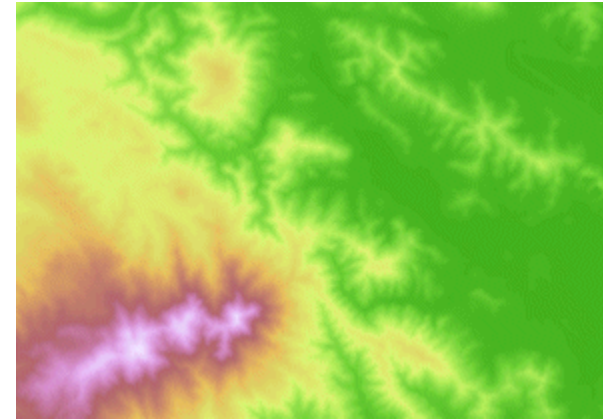
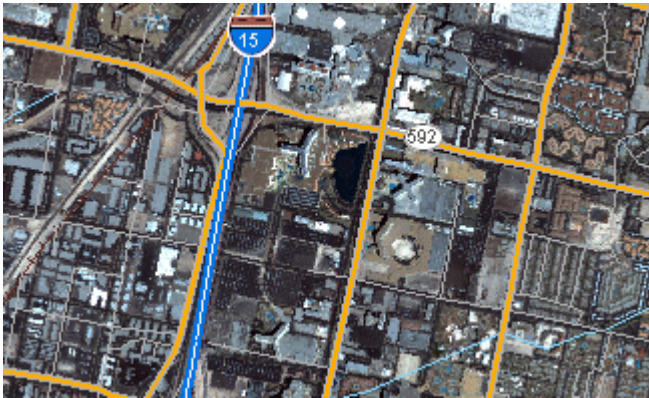
Polylines



Polygon

Step 1 – Find/Upload Layers

Raster Data



- | | |
|----------------------------|-------------------|
| ■ Agriculture | ■ Grass |
| ■ Bare ground | ■ Pine |
| ■ Water | ■ Shadow |
| ■ Deciduous | ■ Urban/Developed |
| ■ Deciduous/
Pine mixed | |




Step 1 – Find/Upload Layer

- Find existing data shared by others on ArcGIS Online
 - Upload your data to ArcGIS Online
 - Create maps in ArcGIS Pro and upload it to ArcGIS Online
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- In general, the data needs to be either already available in ArcGIS Online platform or you need to upload data to it.

Step 1 – Find/Upload Layers

Feature Layer

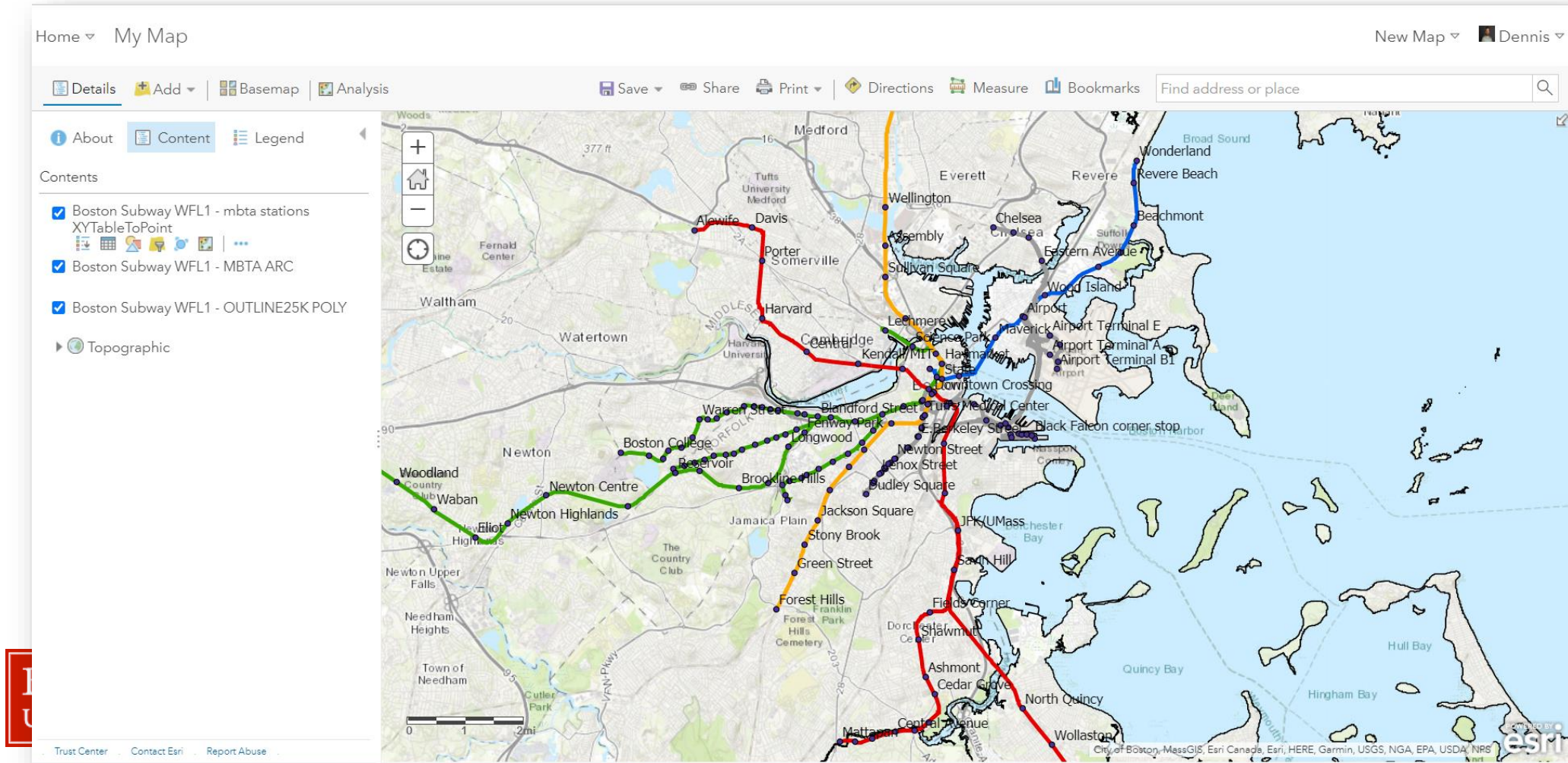
The screenshot shows the ArcGIS Online interface. At the top, there is a navigation bar with tabs: 'My Content', 'My Favorites', 'My Groups', 'My Organization', and 'Living Atlas'. Below the navigation bar is a search bar containing the text 'boston subway_W'. To the right of the search bar are icons for 'Table', 'Date Modified', and 'Filter'. Below the search bar, it says '1 - 1 of 1 in milechin_bucas'. Below this is a table with the following columns: 'Title' and 'Modified'. The table contains one row with the following data: 'Boston Subway_WFL1', 'Feature Layer (hosted)', a user icon, a star icon, and 'Feb 5, 2020'.

<input type="checkbox"/>	Title	Modified
<input type="checkbox"/>	 Boston Subway_WFL1	Feature Layer (hosted)   ... Feb 5, 2020




Step 2 – Web Map

Step 2 – Web Map

- Import Layer into Web Map



- **Saved Web Map**

<input type="checkbox"/>	 Boston Subway	Web Map		☆ ... Sep 21, 2020
<input type="checkbox"/>	 Boston Subway_WFL1	Feature Layer (hosted)		☆ ... Feb 5, 2020

Step 2 – Web Map

- Geographic Coordinate System – WGS 1984
- Projection – WGS 1984 Web Mercator

Country	Area (mi ^2)
Africa	11,730,000
Greenland	836,300

How does ArcGIS Online
measure distance?



Health Ranking Data

Health Ranking Data

- Assembled by University of Wisconsin Population Health Institute
 - <https://www.countyhealthrankings.org/>
 - “The CHR&R program provides data, evidence, guidance, and examples to build awareness of the multiple factors that influence health and support community leaders working to improve health and increase health equity. The Rankings are unique in their ability to measure the health of nearly every county in all 50 states, and are complemented by guidance, tools, and resources designed to accelerate community learning and action. “
- Data
 - <https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>
- We will focus on two attributes:
 - **Life Expectancy** - Average number of years a person is expected to live.
 - **Frequent physical distress** - Percentage of adults reporting 14 or more days of poor physical health per month.

Explore ArcGIS Online

Explore ArcGIS Online

- Objectives:
 - Upload csv file to ArcGIS online
 - Find US County layer in Living Atlas
 - Learn how to use Map Viewer
 - Execute a Join analysis – (join CSV file with US County Layer)
- Products
 - GIS layer containing health ranking data by county for New England
 - One “working” web map showing New England layer.
 - A second production web map we will use for Applications in Part II.

<https://bucas.maps.arcgis.com/>

Username: <bu_username>_bucas

Example: milechin_bucas

[Hands On Instructions](#)

Questions

Email me at:
help@scc.bu.edu