

ArcGIS Experience Builder Developer Edition 1.12

Complete Tutorial – Part4

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Overview

In **Part-4**, you will be adding the two custom widgets for Google Earth and Pictometry. They have been preconfigured. You do not have to write any code.

You will learn how to configure this Web App for medium and small screen sizes.

Finally, you will download the ZIP file and deploy the web application to your web server.

If you do not have a web server, you will learn how to deploy your app to the GitHub Pages by creating a free account.

Add the two custom widgets

Download Custom.zip from:

<https://github.com/DavidDas2/exb/>

Unzip custom.zip

 custom.zip	9/4/2023 9:15 PM	Compressed (zipped) Folder	43 KB
--	------------------	----------------------------	-------

C:\Users\David.das\Downloads\custom\Custom\

You will get two fully configured custom widgets for Google Maps and Pictometry.

 get-map-coordinates-class	9/4/2023 9:16 PM	File folder	
 get-map-coordinates-class2	9/4/2023 9:16 PM	File folder	
 Logo.png	9/4/2023 9:16 PM	IrfanView PNG File	11 KB

Navigate to the your-extensions folder.

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\

 simple	9/4/2023 5:34 PM	File folder	
 .gitkeep	9/4/2023 5:05 PM	GITKEEP File	0 KB

There is one sample widget in this folder named simple.

Copy the two custom widgets to the your-extensions folder.

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\

 get-map-coordinates-class	9/14/2023 9:17 AM	File folder
 get-map-coordinates-class2	9/14/2023 9:17 AM	File folder
 simple	9/4/2023 5:34 PM	File folder
 .gitkeep	9/4/2023 5:05 PM	GITKEEP File 0 KB

Examine the contents of **the get-map-coordinates-class** folder

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\get-map-coordinates-class\

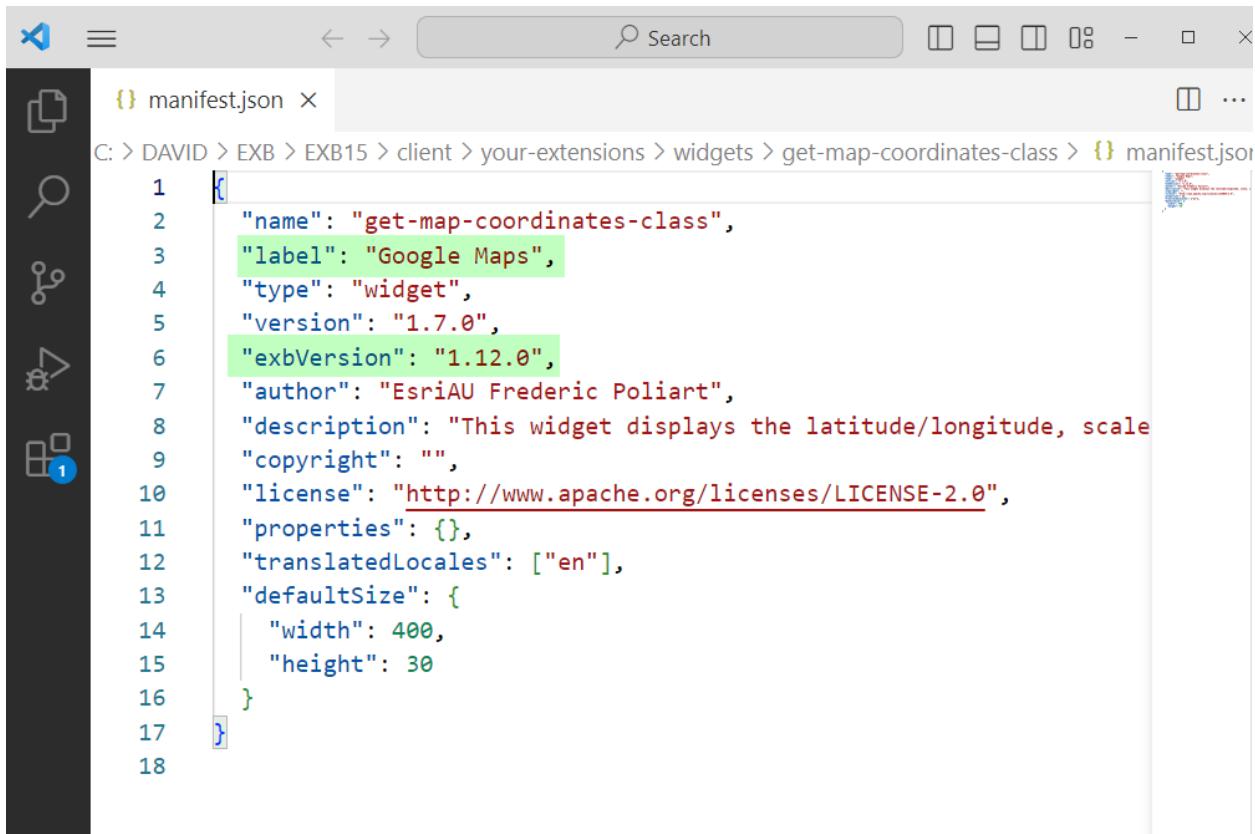
 src	9/14/2023 9:17 AM	File folder
 _infos.google3d..txt	9/4/2023 9:16 PM	Text Document 1 KB
 config.json	9/4/2023 9:16 PM	JSON File 1 KB
 icon.svg	9/4/2023 9:16 PM	SVG Document 5 KB
 icon2.svg	9/4/2023 9:16 PM	SVG Document 3 KB
 manifest.json	9/4/2023 9:16 PM	JSON File 1 KB
 README.md	9/4/2023 9:16 PM	MD File 1 KB

Open manifest.json in Visual Code.

Notice, the label reads “Google Maps”

It is designed for EXB Dev Edition 1.12.0.

This is your fully configured Google Maps Widget.



The screenshot shows a code editor window with a manifest.json file open. The file path is C: > DAVID > EXB > EXB15 > client > your-extensions > widgets > get-map-coordinates-class > manifest.json. The code editor has a dark theme with light-colored syntax highlighting. The manifest.json file contains the following JSON code:

```
1  {
2    "name": "get-map-coordinates-class",
3    "label": "Google Maps",
4    "type": "widget",
5    "version": "1.7.0",
6    "exbVersion": "1.12.0",
7    "author": "EsriAU Frederic Poliart",
8    "description": "This widget displays the latitude/longitude, scale",
9    "copyright": "",
10   "license": "http://www.apache.org/licenses/LICENSE-2.0",
11   "properties": {},
12   "translatedLocales": ["en"],
13   "defaultSize": {
14     "width": 400,
15     "height": 30
16   }
17 }
18
```

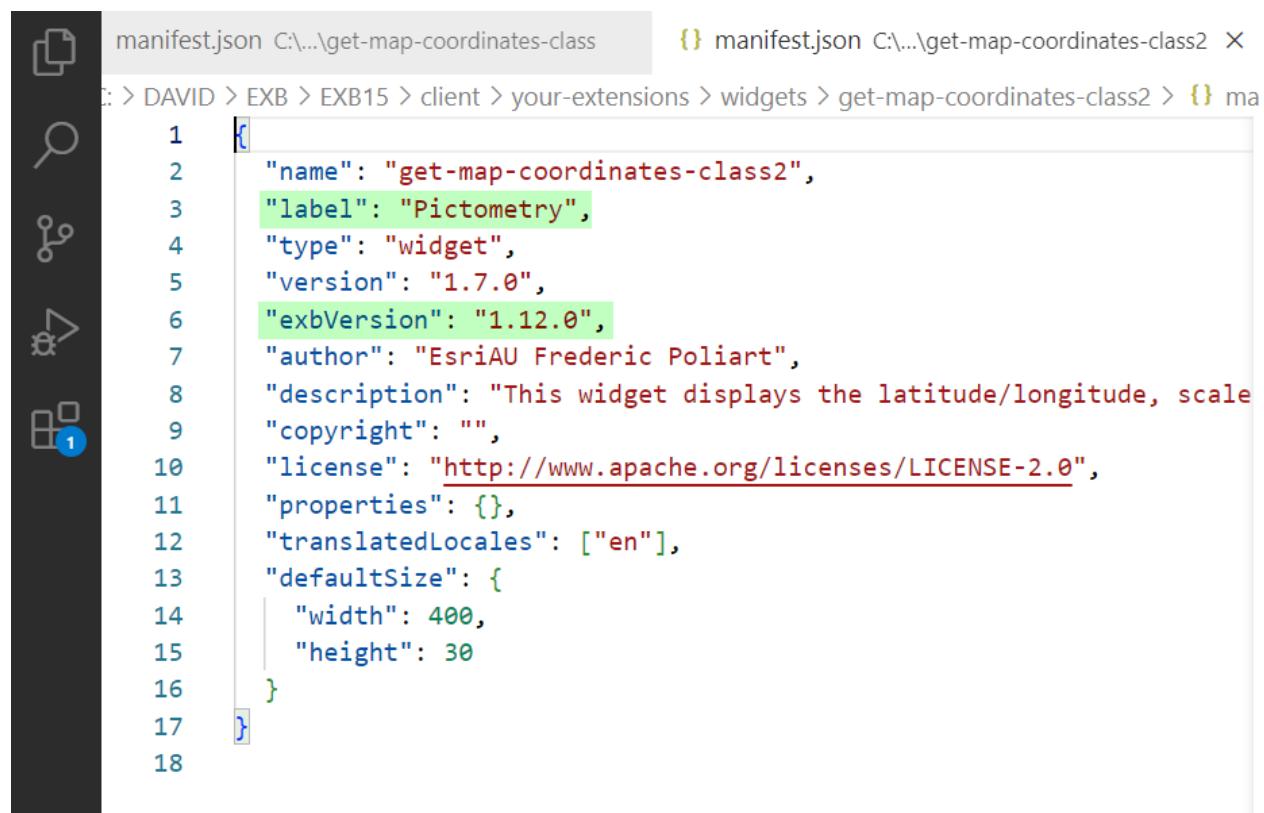
Examine the contents of the get-map-coordinates-class2 folder

C:\DAVID\EXB\EXB15\client\your-extensions\widgets\get-map-coordinates-class2\

src	9/14/2023 9:17 AM	File folder
_infos.google3d..txt	9/4/2023 9:16 PM	Text Document 1 KB
config.json	9/4/2023 9:16 PM	JSON File 1 KB
icon.svg	9/4/2023 9:16 PM	SVG Document 3 KB
manifest.json	9/4/2023 9:16 PM	JSON File 1 KB
README.md	9/4/2023 9:16 PM	MD File 1 KB

Open manifest.json in Visual Code

This is your fully configured Pictometry Widget.



The screenshot shows the Visual Code interface with two tabs open: 'manifest.json' at the top and another tab partially visible. The left sidebar has icons for file operations. The main editor area displays the following JSON code:

```
1 [ { "name": "get-map-coordinates-class2", "label": "Pictometry", "type": "widget", "version": "1.7.0", "exbVersion": "1.12.0", "author": "EsriAU Frederic Poliart", "description": "This widget displays the latitude/longitude, scale and coordinates of a point on a map.", "copyright": "", "license": "http://www.apache.org/licenses/LICENSE-2.0", "properties": {}, "translatedLocales": ["en"], "defaultSize": { "width": 400, "height": 30 } } ]
```

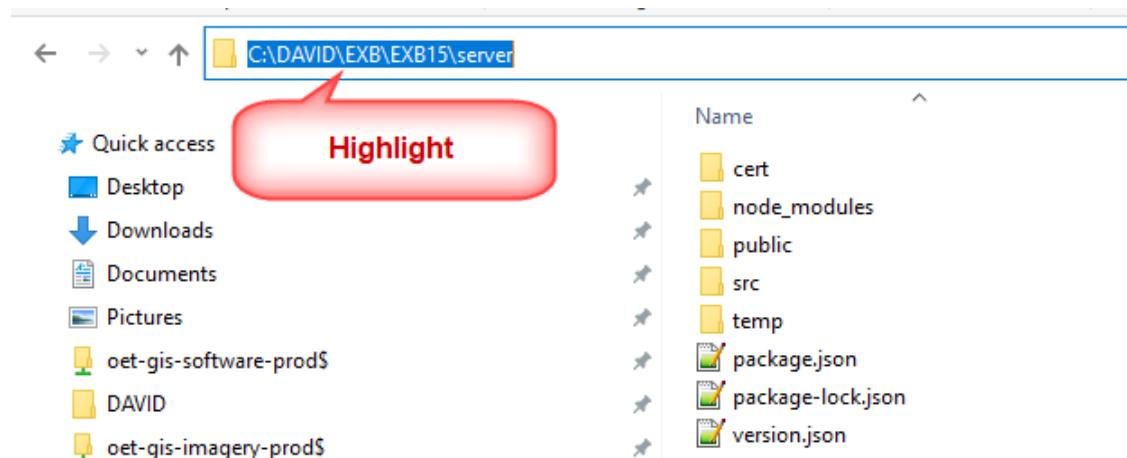
Start a new Experience Builder Session

Navigate to C:\DAVID\EXB\EXB15

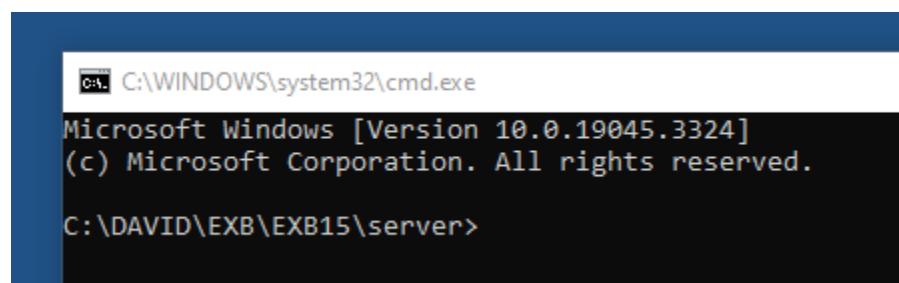
 client	9/4/2023 6:54 PM	File folder
 server	9/4/2023 7:57 PM	File folder
 3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
 readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
 version.json	9/4/2023 4:52 PM	JSON File 1 KB

Open the server folder.

Highlight the path and enter cmd



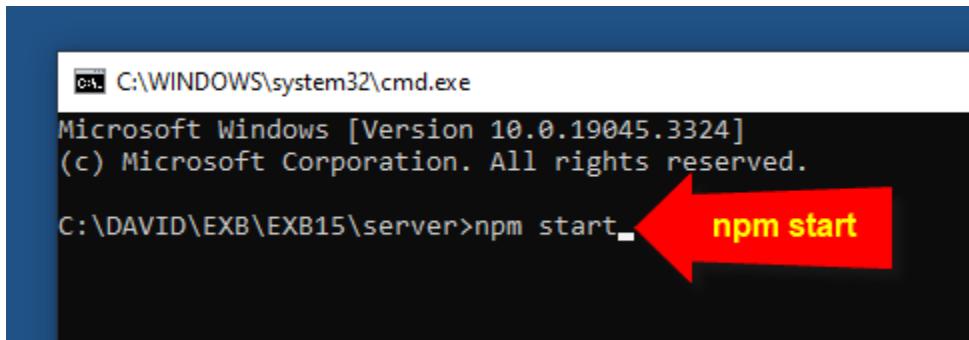
This will open a Command Window with the correct path:



```
C:\> C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\server>
```

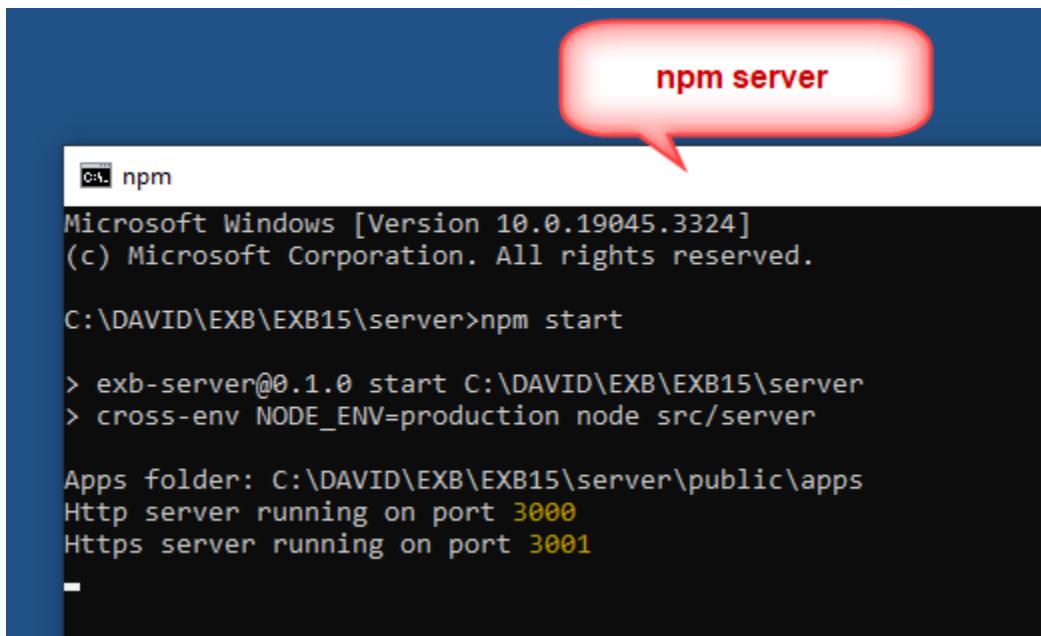
Enter **npm start**



C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\server>npm start

A red arrow points from the text "npm start" back towards the left side of the screen, indicating where the user should type the command.

This starts the npm server process.



npm
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\server>npm start
> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

Apps folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001

A red speech bubble containing the text "npm server" is positioned above the command prompt window.

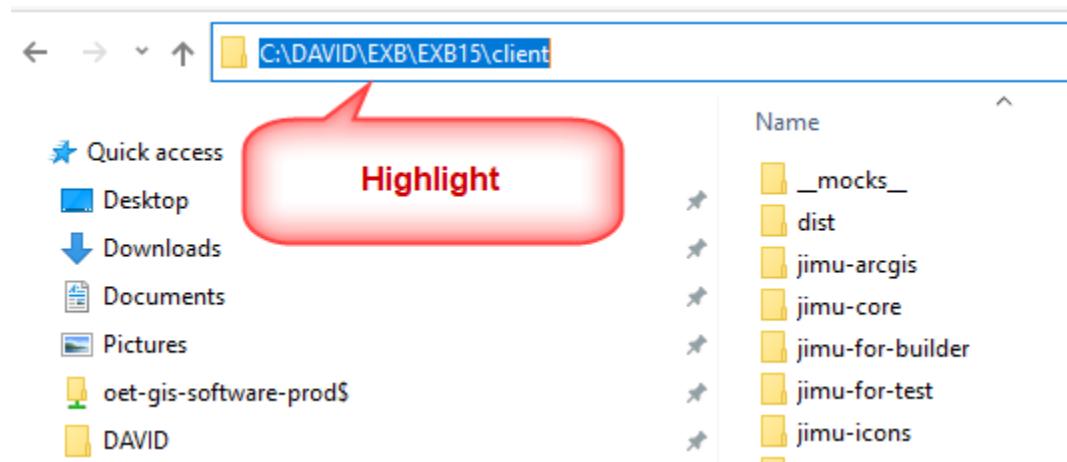
Since you have added custom widgets to the your-extensions folder, you must start the npm client process.

Open the client folder.

C:\DAVID\EXB\EXB15\

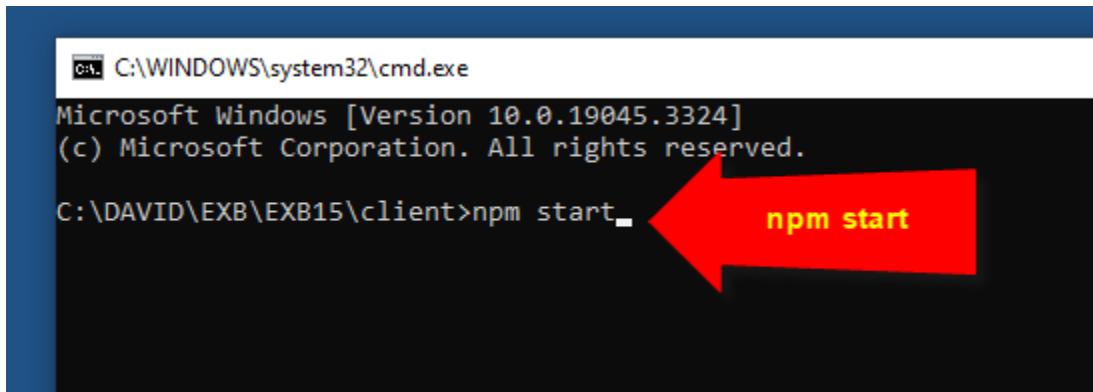
 client	9/4/2023 6:54 PM	File folder
 server	9/4/2023 7:57 PM	File folder
 3rd-party-license.txt	9/4/2023 4:52 PM	Text Document 68 KB
 readme.txt	9/4/2023 4:52 PM	Text Document 1 KB
 version.json	9/4/2023 4:52 PM	JSON File 1 KB

Highlight the path and enter cmd



This will open a Command Window with the correct path.

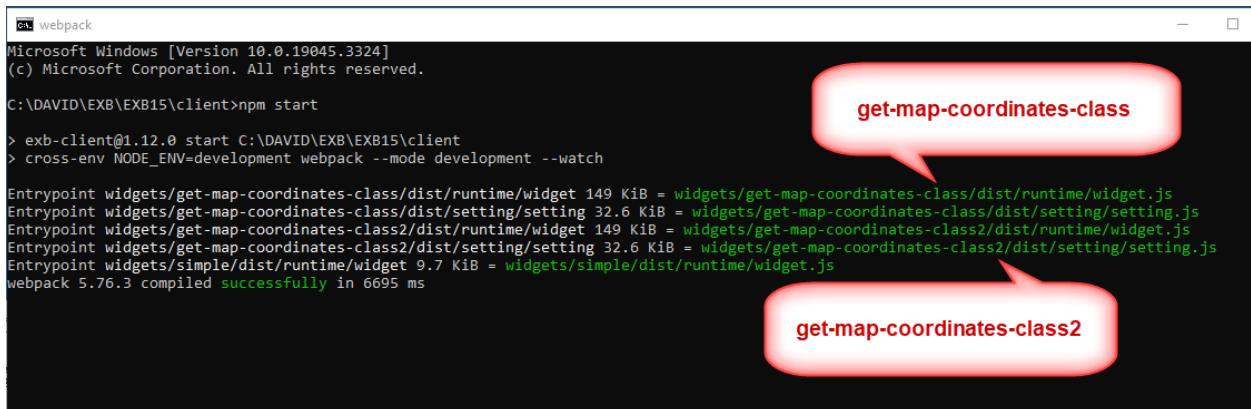
Enter **npm start**



C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\client>npm start -> npm start

A red arrow points from the text "npm start" in the previous slide to the "npm start" command in the screenshot.

Notice, how the npm Client process picks up the two custom widgets you have added.



webpack
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\EXB\EXB15\client>npm start
> exb-client@1.12.0 start C:\DAVID\EXB\EXB15\client
> cross-env NODE_ENV=development webpack --mode development --watch
Entrypoint widgets/get-map-coordinates-class/dist/runtime/widget 149 KiB = widgets/get-map-coordinates-class/dist/runtime/widget.js
Entrypoint widgets/get-map-coordinates-class/dist/setting/setting 32.6 KiB = widgets/get-map-coordinates-class/dist/setting/setting.js
Entrypoint widgets/get-map-coordinates-class2/dist/runtime/widget 149 KiB = widgets/get-map-coordinates-class2/dist/runtime/widget.js
Entrypoint widgets/get-map-coordinates-class2/dist/setting/setting 32.6 KiB = widgets/get-map-coordinates-class2/dist/setting/setting.js
Entrypoint widgets/simple/dist/runtime/widget 9.7 KiB = widgets/simple/dist/runtime/widget.js
webpack 5.76.3 compiled successfully in 6695 ms

get-map-coordinates-class

get-map-coordinates-class2



ment --watch
me/widget 149 KiB = widgets/get-map-coordinates-class/dist/runtime/widget.js
ng/setting 32.6 KiB = widgets/get-map-coordinates-class/dist/setting/setting.js
ime/widget 149 KiB = widgets/get-map-coordinates-class2/dist/runtime/widget.js
ing/setting 32.6 KiB = widgets/get-map-coordinates-class2/dist/setting/setting.js
widgets/simple/dist/runtime/widget.js

get-map-coordinates-class

get-map-coordinates-class2

Open Chrome and enter:

<https://localhost:3001>

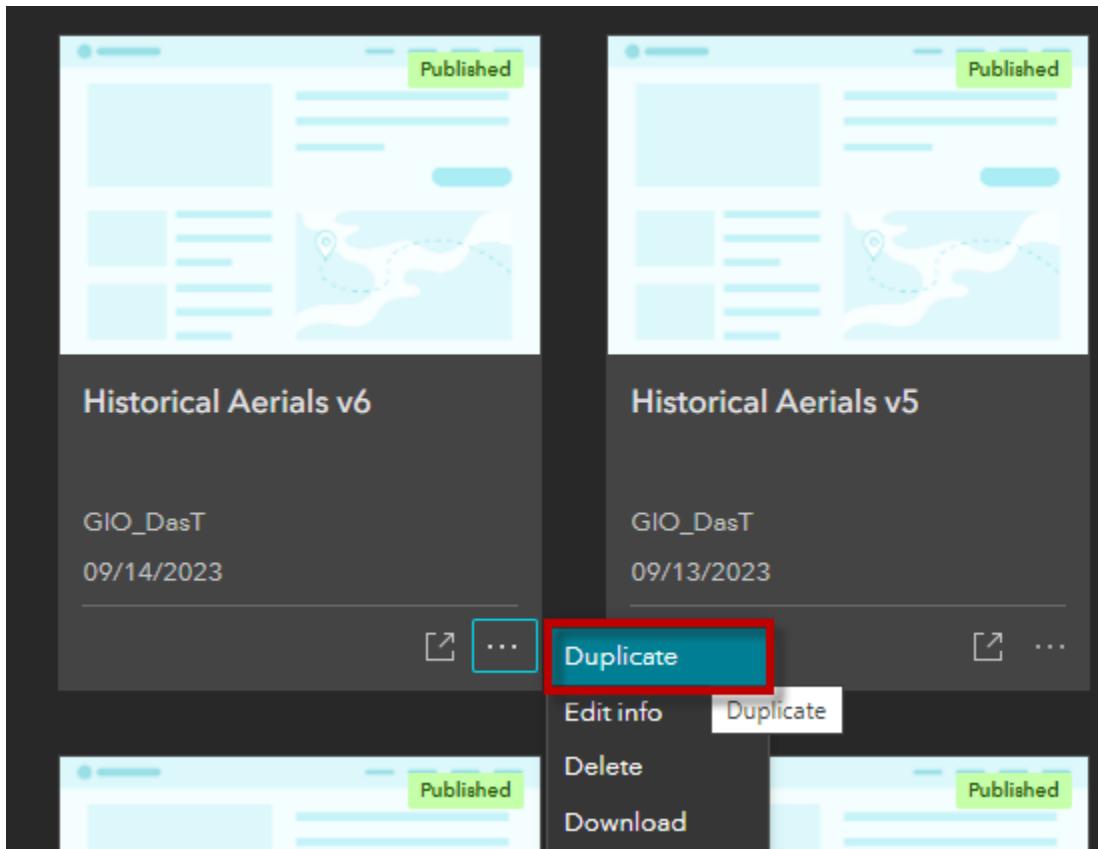
This launches the Experience Builder.

The screenshot shows the ArcGIS Experience Builder (Developer Edition) interface. At the top, there is a navigation bar with the ArcGIS logo, the text "ArcGIS Experience Builder (Developer Edition)", and tabs for "Experiences" (which is highlighted in blue) and "Templates". On the far right of the top bar is a user profile icon. Below the navigation bar, the main area is titled "Recent experiences". It features a search bar labeled "Search" and a toolbar with "Import" (with a downward arrow), "Create new" (with a plus sign), and sorting/filtering options ("Last modified" dropdown, a grid icon, and a list icon). The main content area displays six experience cards arranged in two rows of three. Each card has a thumbnail image, a title, a creator name, and a creation date. The cards are as follows:

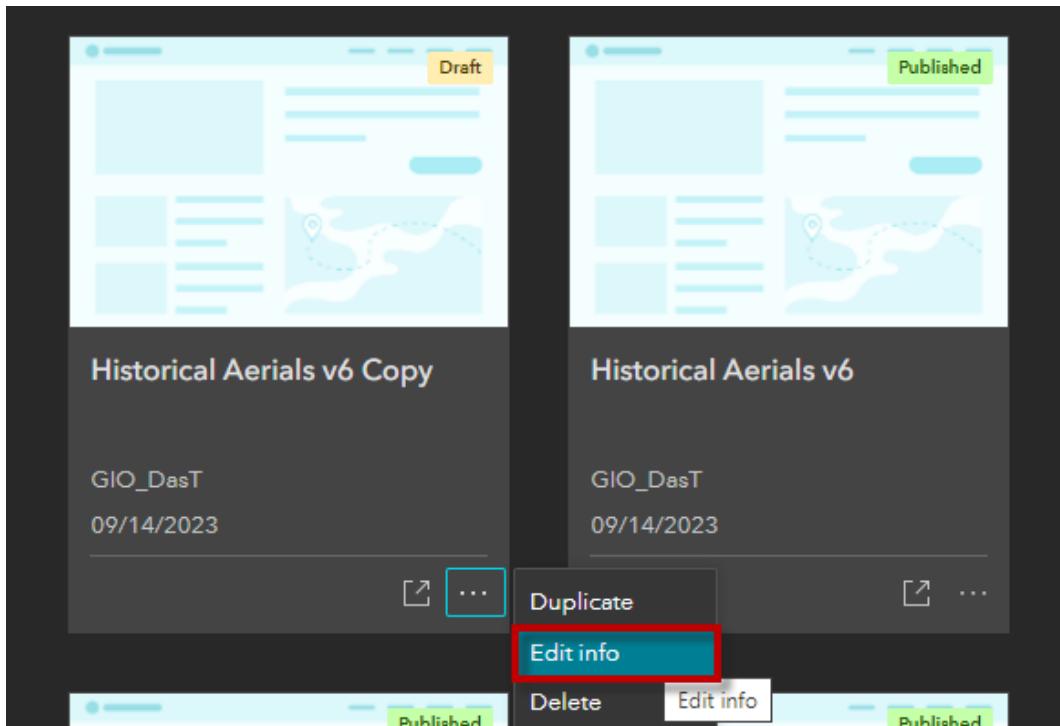
Experience Name	Creator	Created Date
Historical Aerials v6	GIO_DasT	09/14/2023
Historical Aerials v5	GIO_DasT	09/13/2023
Historical Aerials v4	GIO_DasT	09/05/2023
Historical Aerials v1	GIO_DasT	09/05/2023
Historical Aerials v2	GIO_DasT	09/05/2023
Historical Aerials v3	GIO_DasT	09/05/2023

Create Historical Aerials v7

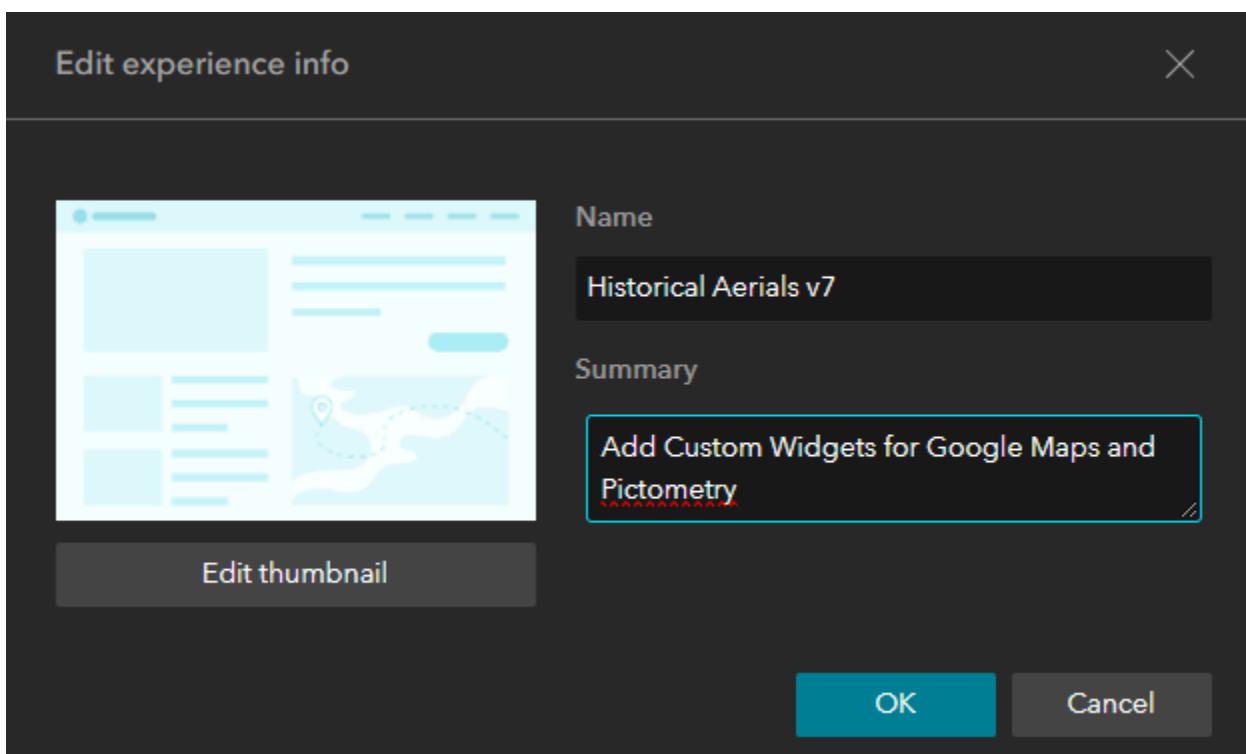
Duplicate Historical Aerials v6 to create Historical Aerials v7



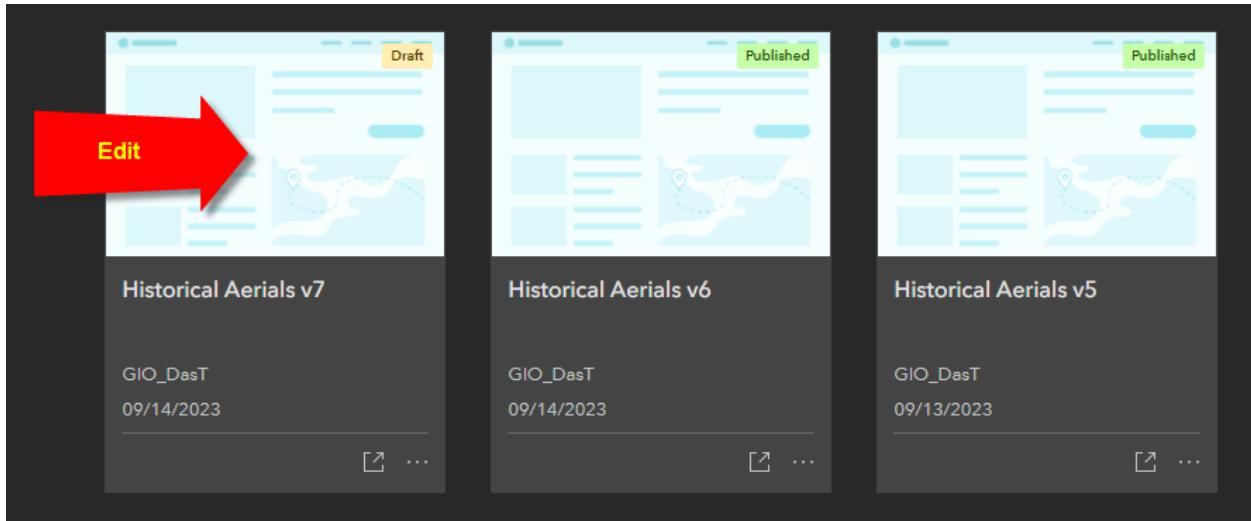
Edit Info



Name = Historical Aerials v7

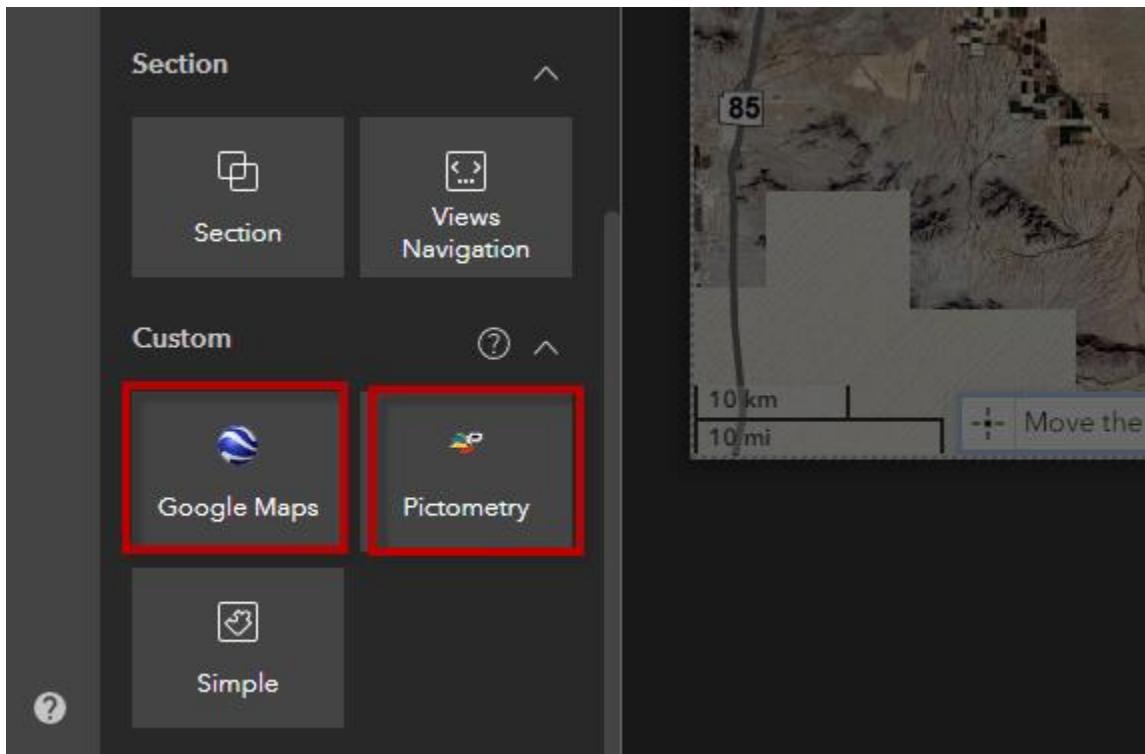


Edit Historical Aerials v7



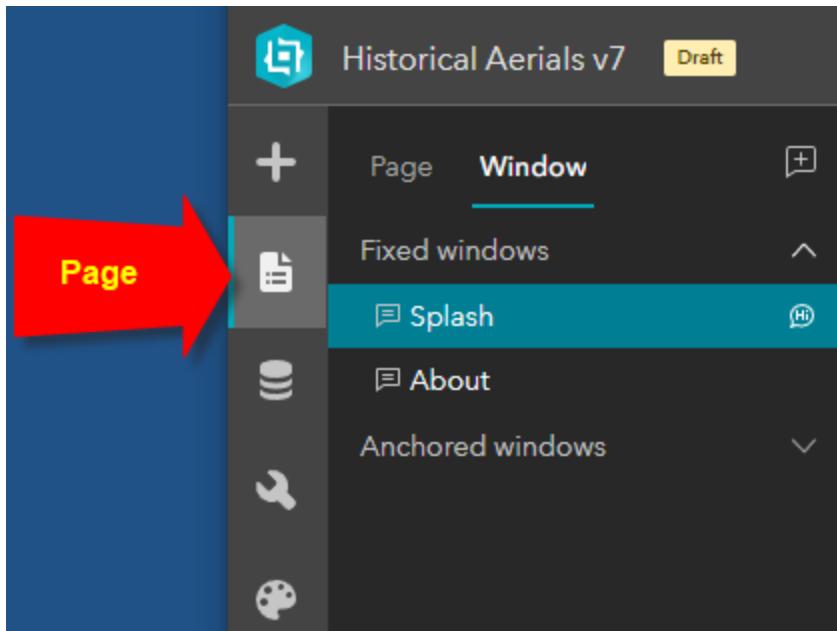
Scroll down.

Your two custom widgets will appear under the Custom Category.

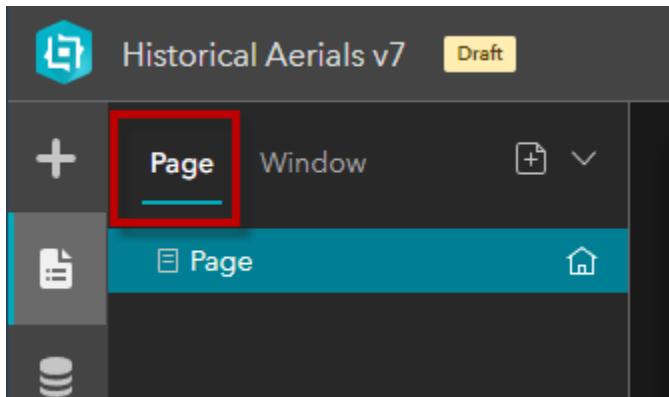


Remember, every time you add Custom Widgets, you must restart the npm Client process.

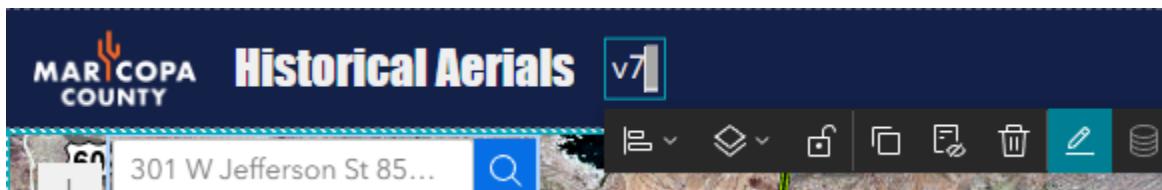
Open the Page Tab



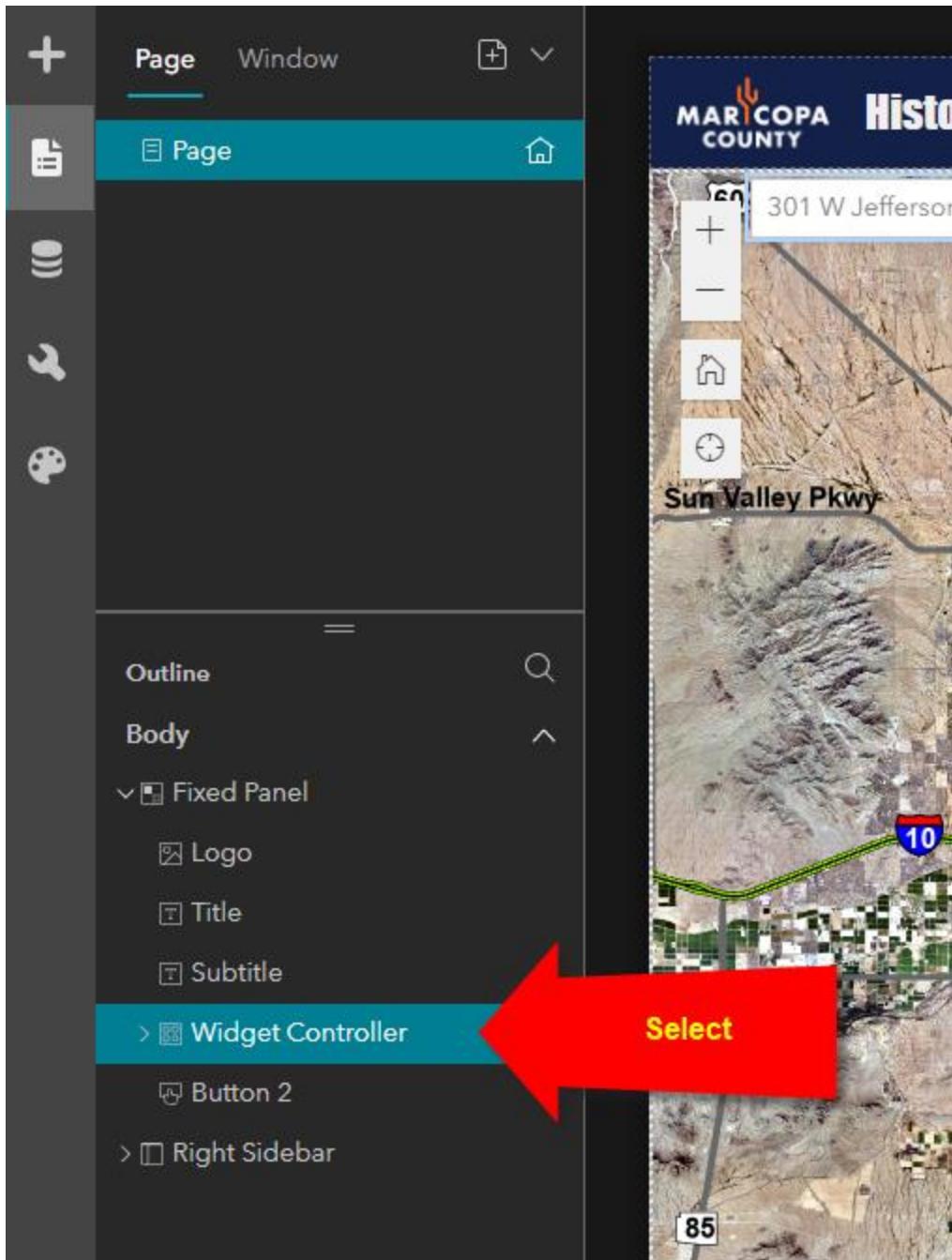
Open Page



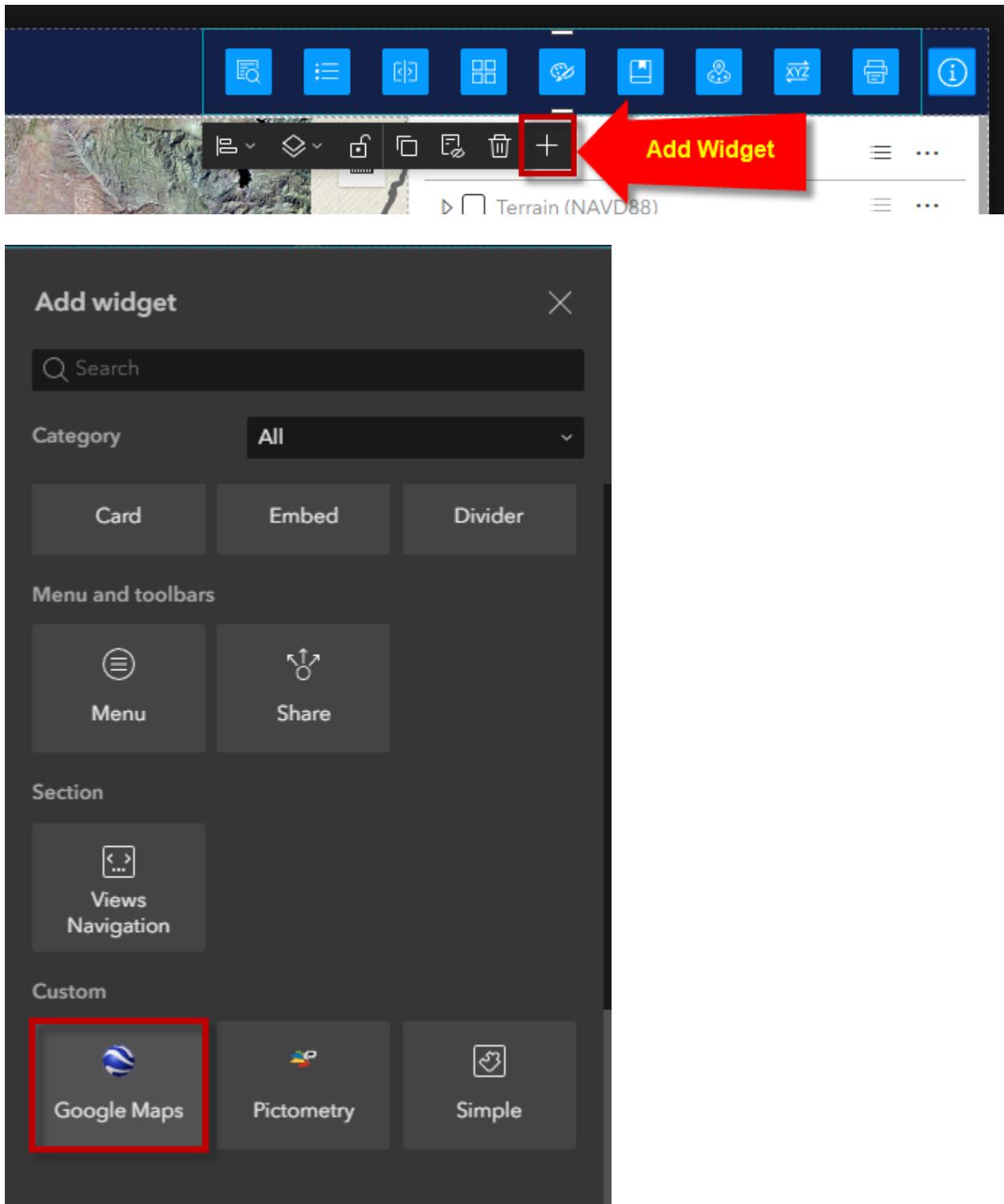
Edit the Subtitle to read v7



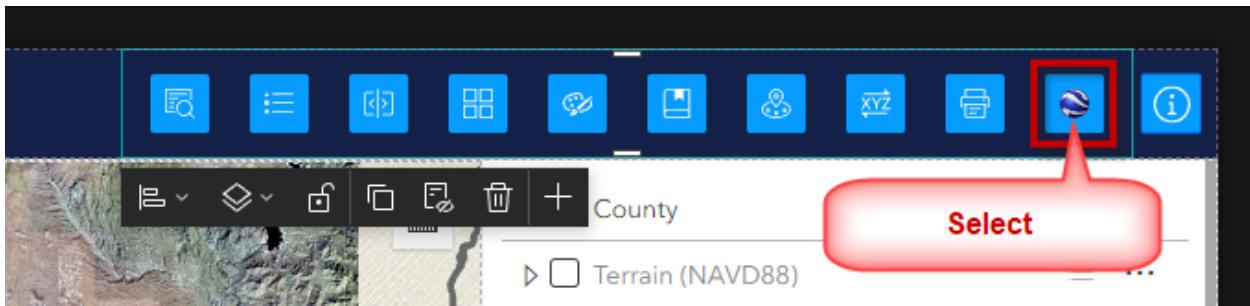
Select the Widget Controller from the Page Outline.



Add the Google Maps Custom Widget

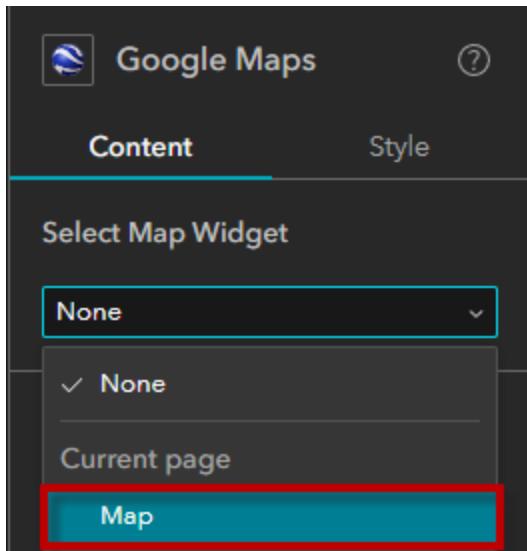


Select the Google Maps Widget



The screenshot shows the "Google Maps" settings panel. On the left is a preview window with the placeholder text "please select a map". On the right, the "Content" tab is selected, showing a dropdown menu currently set to "None", which is highlighted with a red box. Below the dropdown are five settings: "Show Zoom" (on), "Show Scale" (on), "Show Tilt" (on), and "Show Rotation" (off).

Select Map Widget = **Map**

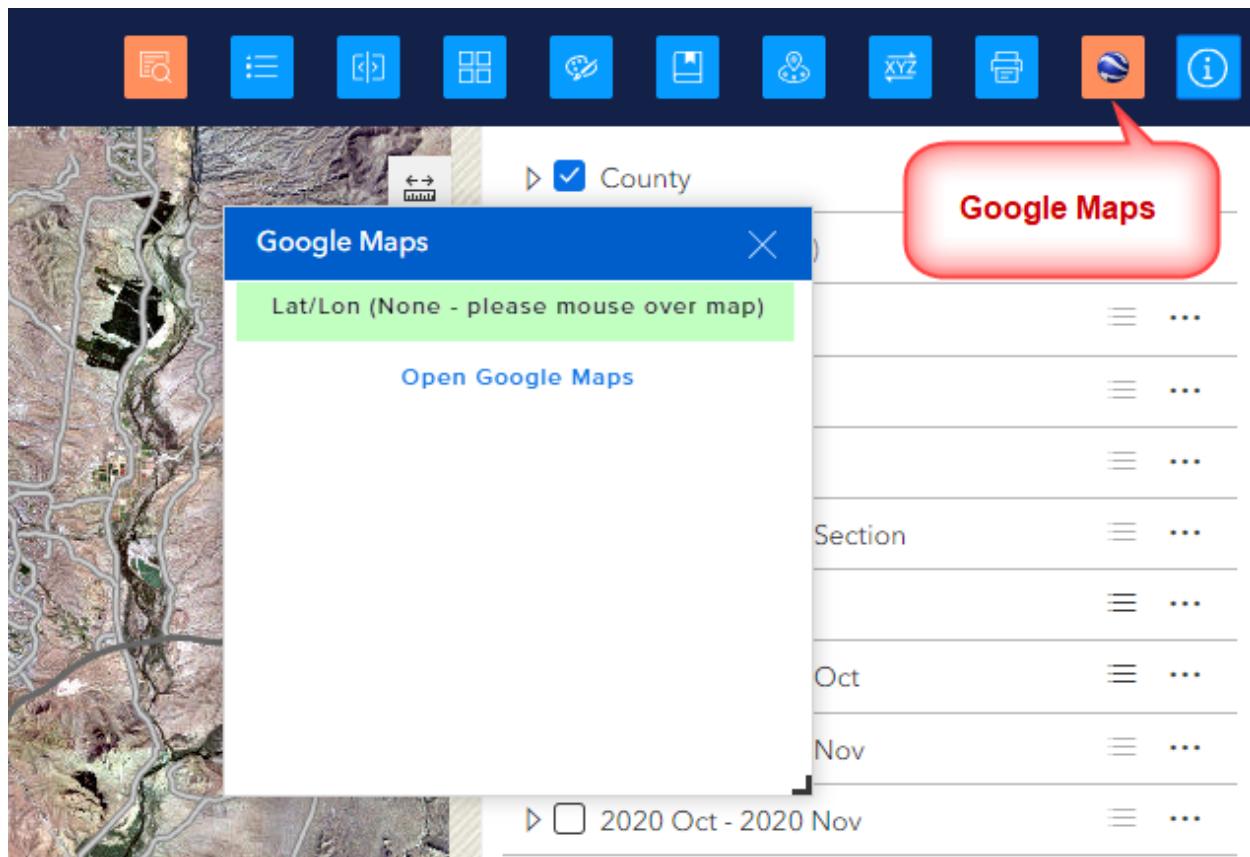


The image shows a "Google Maps" widget on the left and its configuration panel on the right. The widget interface includes a toolbar with icons for search, location, zoom, print, and info, and a main area with the text "Lat/Lon (None - please mouse over map)" and a "Open Google Maps" button. The configuration panel on the right has tabs for "Content" and "Style", with "Content" selected. It shows the "Select Map Widget" dropdown with "Map" selected. Below it are "Settings" for "Show Zoom", "Show Scale", "Show Tilt", and "Show Rotation", each with a toggle switch set to off.

Save, Publish, View Published Item

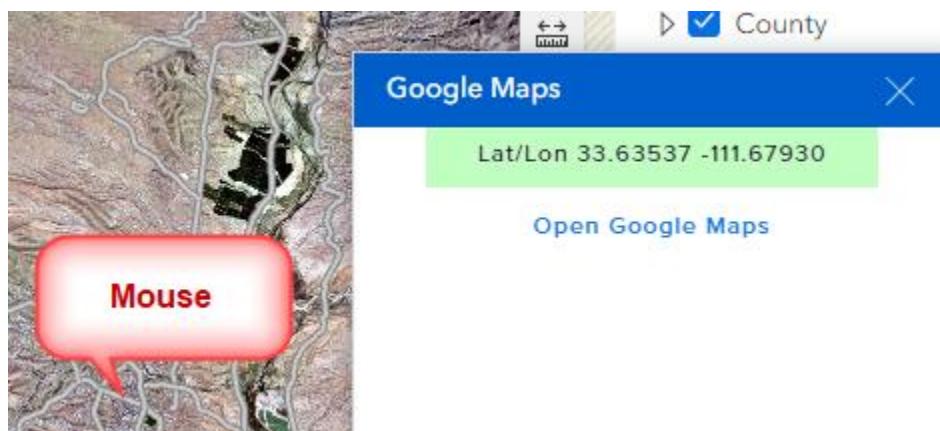
<https://localhost:3001/experience/6/>

Open the Google Maps Widget.

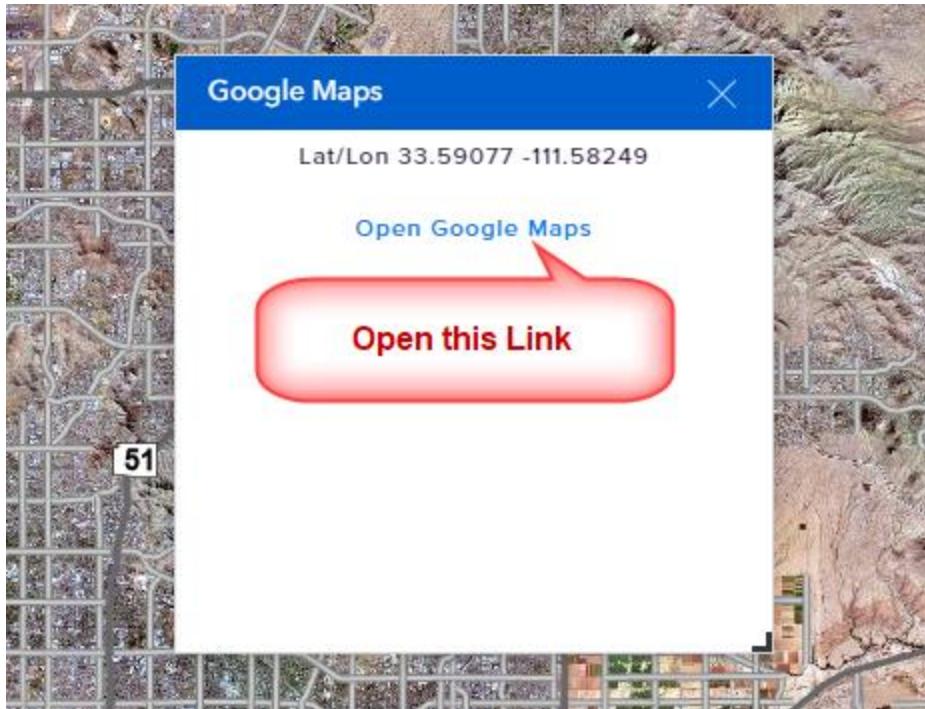


Notice, it has not picked up the Lat/Lon values yet.

Simply move your mouse over the map. The widget will begin to track the map coordinates.



Open the Google Maps Link



This will launch a separate Google Maps window.

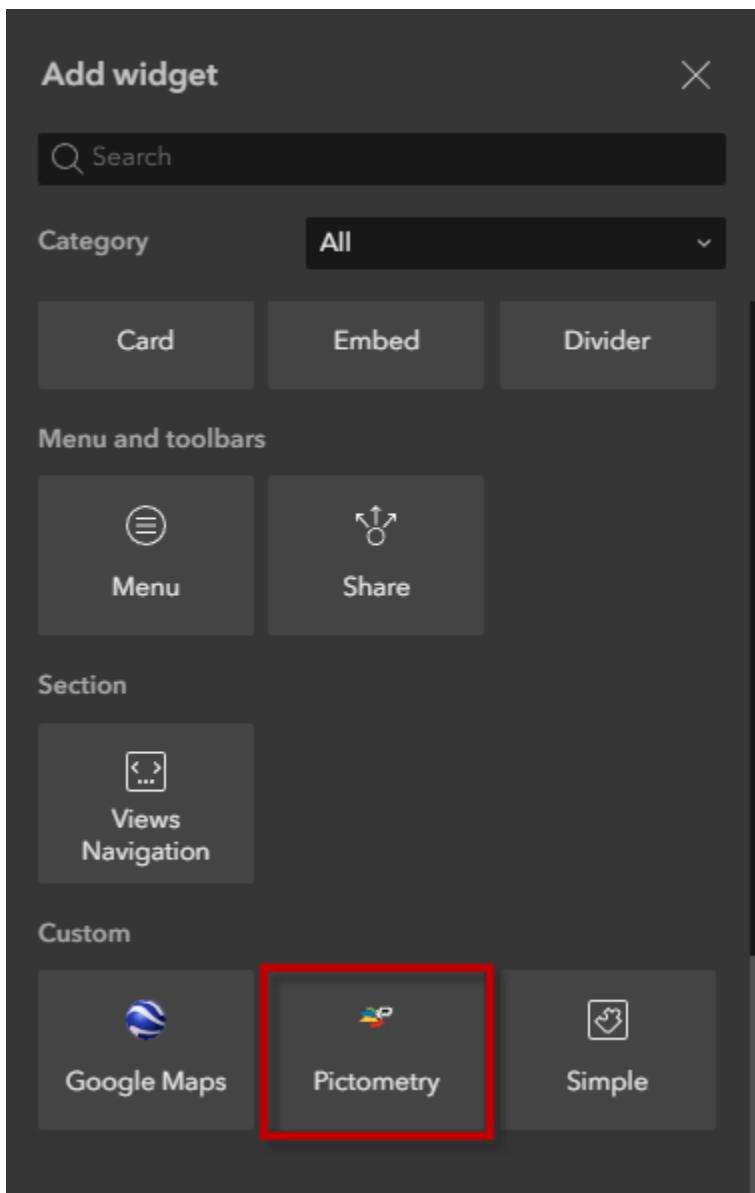
<https://www.google.com/maps/@33.44737,-112.07515,66956m/data=!3m1!1e3?entry=ttu>

To learn how to use the Google Maps Widget, open the User Guide.

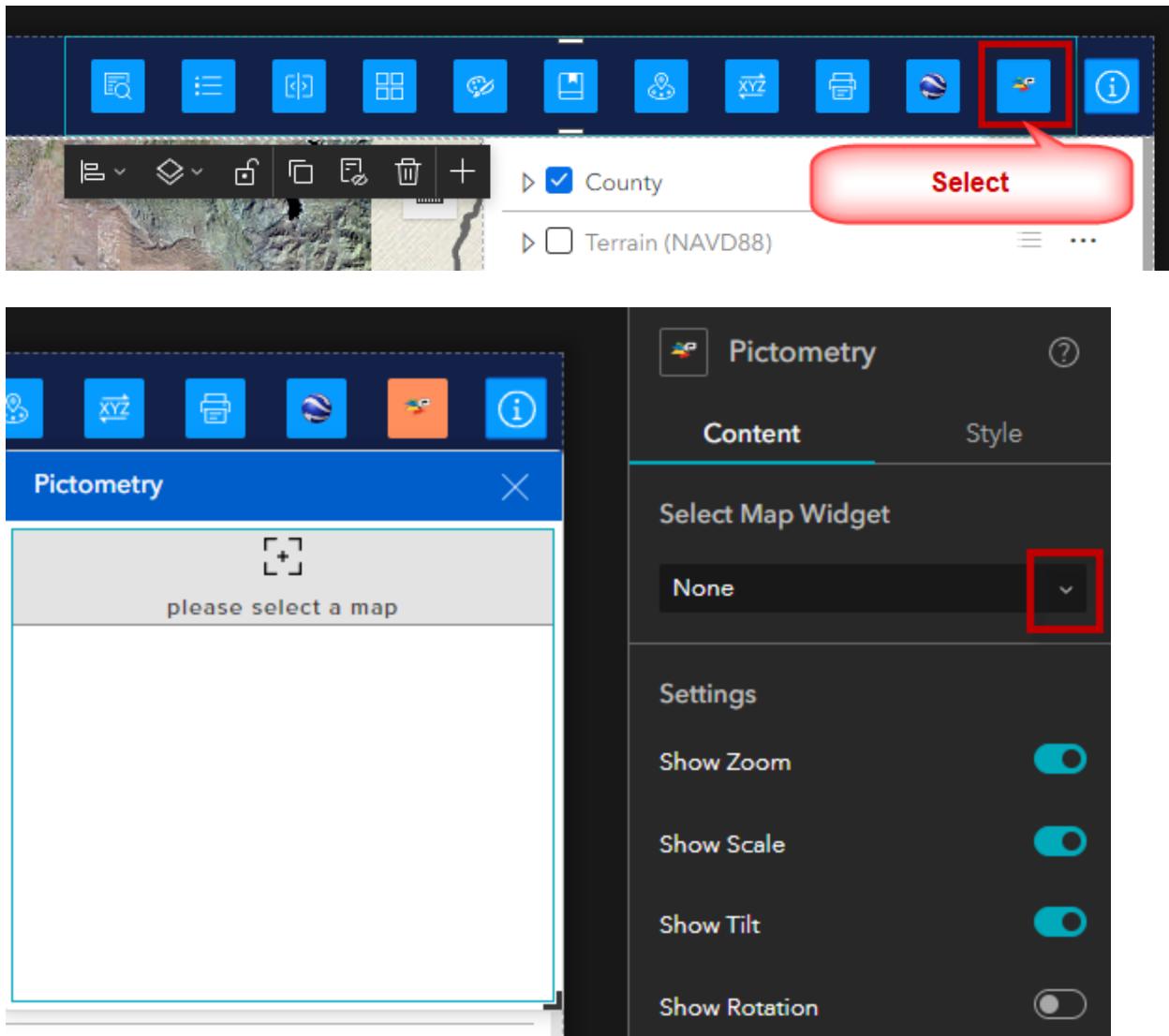
https://daviddas2.github.io/HistoricalAerials/help/google_maps_widget.htm

The screenshot shows the "Historical Aerial Photography Web Application User Guide" page. The left sidebar contains a navigation menu with various tools and widgets listed under categories like "Navigation Tools", "Query Widget", and "Google Maps Widget". The "Google Maps Widget" item is highlighted. The main content area has a title "Google Maps Widget" and a sub-section titled "Google Maps Widget" which contains the text: "The Google Maps Widget launches a separate Google Maps window." Below this is a "Refresh the Web App." button. To the right is a map interface titled "Historical Aerial Photography" showing satellite imagery of a region with roads labeled 10, 17, 60, 101, 87, etc. On the right side of the map is a legend and a list of map layers. The "County" layer is checked. Other layers listed include "Terrain (NAVD88)", "Parcel (Current)", "Zip Code", "City", "Township Range Section", "Street", and several historical aerial photography layers from 2015 to 2022. At the bottom of the map interface, there is a note about Esri and a copyright notice. Below the map interface, there is another section titled "Turn off all the Map Layers." with a screenshot showing the map with no layers turned on.

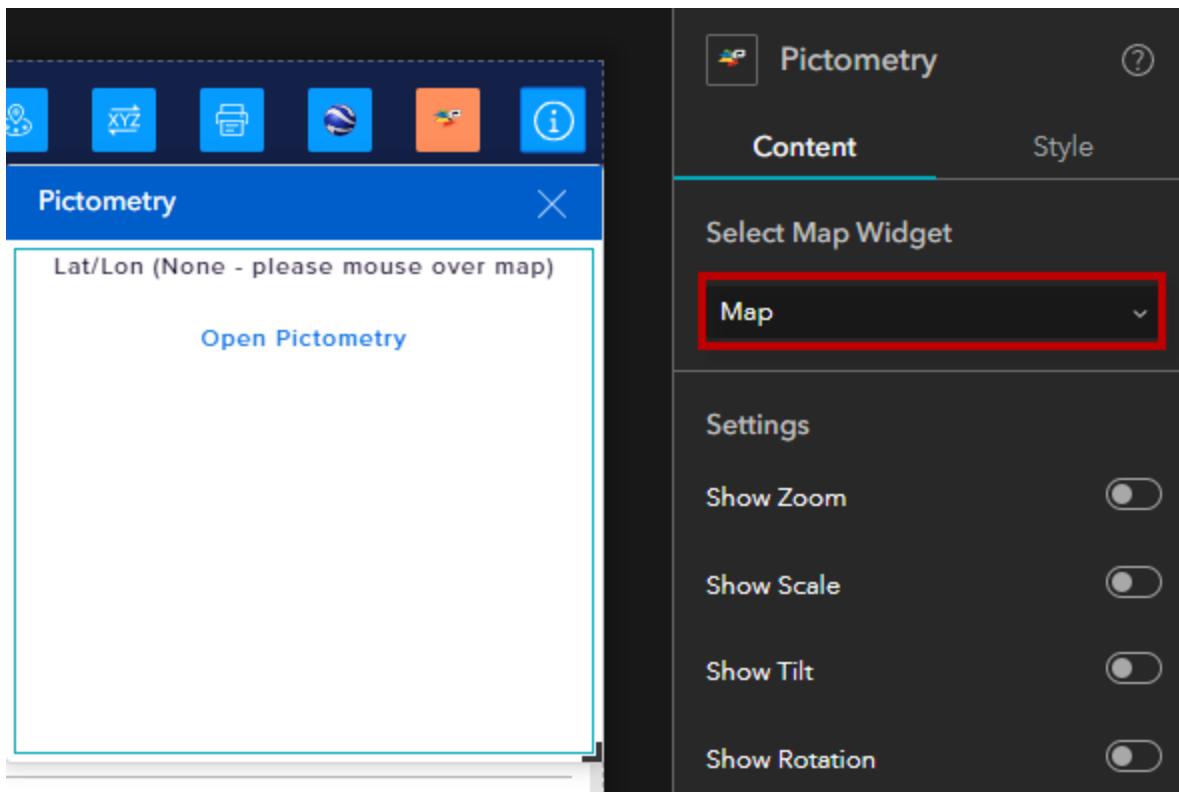
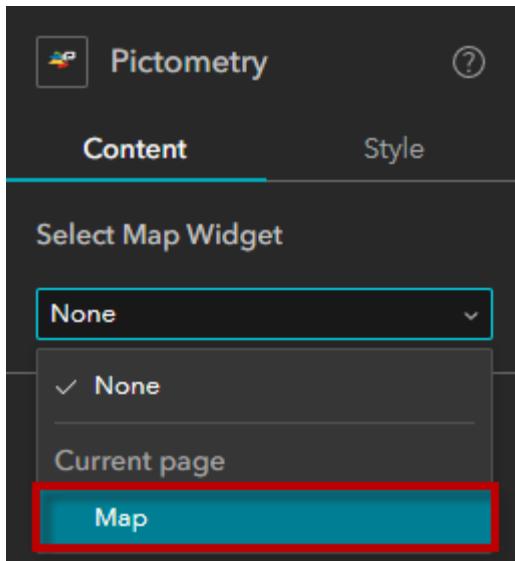
Add the Pictometry Custom Widget



Select the Pictometry Widget.



Select Map Widget = **Map**



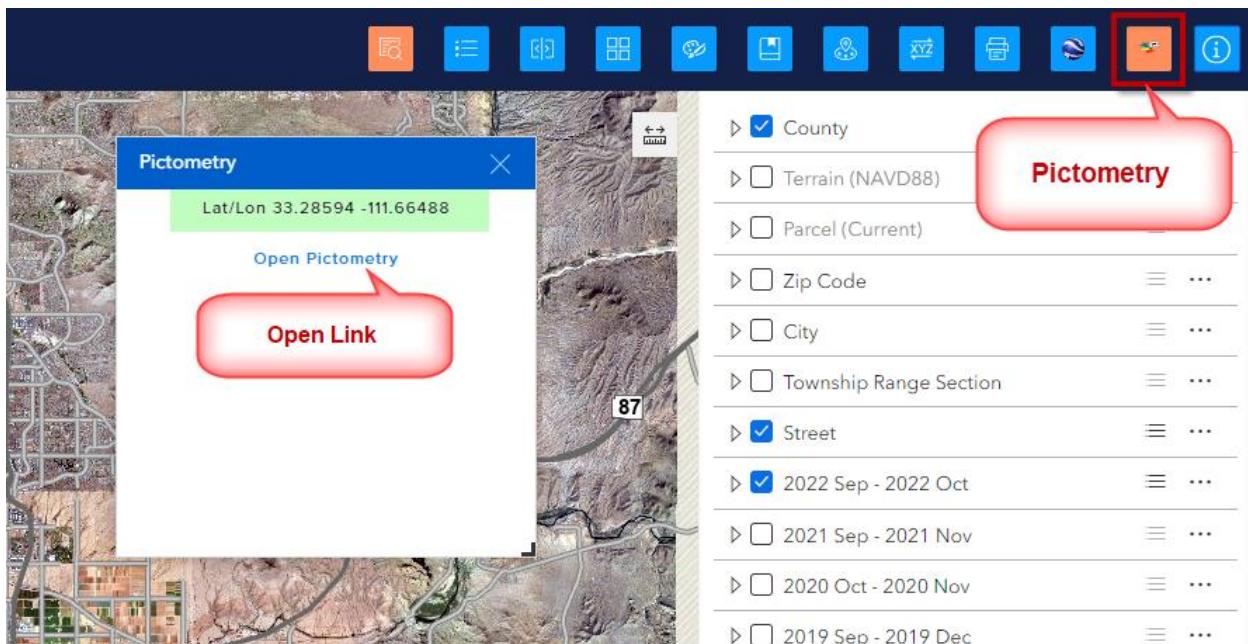
Save, Publish, View Published Item

<https://localhost:3001/experience/6/>

Open the Pictometry Widget.

Move your mouse over the map until you see a Lat/Lon readout.

Open the Pictometry Link.



This will open a separate Pictometry Window.

<https://gis.maricopa.gov/pictometry/default.aspx?&qlat=33.44737&qlong=-112.07515>

To learn how to use the Pictometry Widget, open the User Guide.

https://daviddas2.github.io/HistoricalAerials/help/pictometry_widget.htm

The screenshot shows the "Historical Aerial Photography Web Application User Guide". The left sidebar contains a navigation menu with various links, including "Pictometry Widget" which is currently selected and highlighted in grey. The main content area is titled "Pictometry Widget" and contains the following text:

Pictometry Widget

Pictometry Widget

Close the Google Maps Widget.

Open the Pictometry Widget.

You will see this note:

Lat/Lon (None – please mouse over the map).

Below this text is a screenshot of the application interface. It shows a map with several parcels outlined in yellow. A toolbar above the map includes icons for zoom, layers, print, and other functions. One icon, which looks like a camera or aerial view, is highlighted with a red box and labeled "Pictometry" with a red callout bubble. To the right of the map, there is a legend with checkboxes for "County", "Terrain", and "Parcel (Current)", where "Parcel (Current)" is checked. At the bottom of the interface, there is a small window titled "Pictometry" with the text "Lat/Lon (None - please mouse over map)" and a button labeled "Open Pictometry".

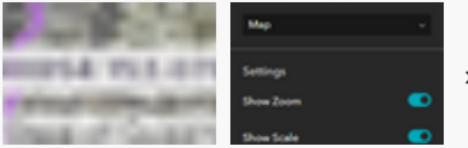
Code Changes for the Google Maps Widget

The Google Maps Widget was created from the Enhanced EXB Coordinate Widget authored by Frederic Poliart, ESRI Australia.

<https://community.esri.com/t5/experience-builder-custom-widgets/gh-p/eb-custom-widgets>

 **Enhanced ExB Coordinate widget** 

Hi, I have created an Enhanced Coordinate Widget display, with quick-link to Google3D. Very simple (just drag&drop and link to the map) Works with 2D maps and 3D scenes. Shows Zoom level, Scale, Optionally shows Tilt (3D) and rotation. Can customize background color. How to use download ... View more



POST By [FredericPoliart_EsriAU](#) • Occasional Contributor • yesterday

Labels : [custom widgets](#) [Experience Builder](#)

<https://community.esri.com/t5/experience-builder-custom-widgets/enhanced-exb-coordinate-widget/m-p/1302310>

[Home](#) > [All Communities](#) > [User Groups](#) > [Experience Builder Custom Widgets](#) > [Questions](#)
› Enhanced ExB Coordinate widget

Enhanced ExB Coordinate widget

525 2 06-22-2023 05:25 PM

Labels : [custom widgets](#) [Experience Builder](#)



by [FredericPoliart_EsriAU](#)
Occasional Contributor

Post Options ▾

These were the code changes made to create the Google Maps Widget.

Edit manifest.json

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Google Maps Widget\get-map-coordinates-class\

src	7/27/2023 1:27 PM	File folder
_infos.google3d..txt	6/23/2023 10:14 AM	Text Document 1 KB
config.json	6/23/2023 10:14 AM	JSON File 1 KB
icon.svg	7/27/2023 12:24 PM	SVG Document 5 KB
icon2.svg	7/27/2023 12:27 PM	SVG Document 3 KB
manifest.json	6/23/2023 10:14 AM	JSON File 1 KB
README.md	6/23/2023 10:14 AM	MD File 1 KB

Label = Google Maps

Exb Version = 1.12.0

```
1  {
2    "name": "get-map-coordinates-class",
3    "label": "Google Maps",
4    "type": "widget",
5    "version": "1.7.0",
6    "exbVersion": "1.12.0",
7    "author": "EsriAU Frederic Poliart",
8    "description": "This widget displays the latitude/longitude, scale, zoom , tilt & ink to G0ogle3D.",
9    "copyright": "",
10   "license": "http://www.apache.org/licenses/LICENSE-2.0",
11   "properties": {},
12   "translatedLocales": ["en"],
13   "defaultSize": {
14     "width": 400,
15     "height": 30
16   }
17 }
18 }
```

Change icon.svg

📁 src	7/27/2023 1:27 PM	File folder	
📄 _infos.google3d..txt	6/23/2023 10:14 AM	Text Document	1 KB
📝 config.json	6/23/2023 10:14 AM	JSON File	1 KB
🌐 icon.svg	7/27/2023 12:24 PM	SVG Document	5 KB
🌐 icon2.svg	7/27/2023 12:27 PM	SVG Document	3 KB
📝 manifest.json	7/27/2023 1:48 PM	JSON File	1 KB
📝 README.md	6/23/2023 10:14 AM	MD File	1 KB



This is icon2.svg



Edit widget.tsx

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Google Maps Widget\get-map-coordinates-class\src\runtime

assets	7/27/2023 1:27 PM	File folder
translations	7/27/2023 1:27 PM	File folder
widget.tsx	6/23/2023 10:14 AM	TSX File 10 KB

Examine Line 142

```
141           // Altitude will be incorrect/inaccurate
142           Google3dUrl : "https://www.google.com/maps/place/@"+ this.
143           state.latitude +","+ this.state.longitude +",251a,35y,"+this.
           state.rotation+"h,"+this.state.tilt+"t/data=!3m1!1e3";
           })
```

This is how the Google3D URL is constructed.

```
Google3dUrl : "https://www.google.com/maps/place/@"+ this.state.latitude +","+
this.state.longitude +",251a,35y,"+this.state.rotation+"h,0t/data=!3m1!1e3";
```

This is repeated in Line 148, 199, 207

If you want to change this Widget to make it work for Pictometry, you would have to change these 3 lines as well.

Edit widget.tsx

Before:

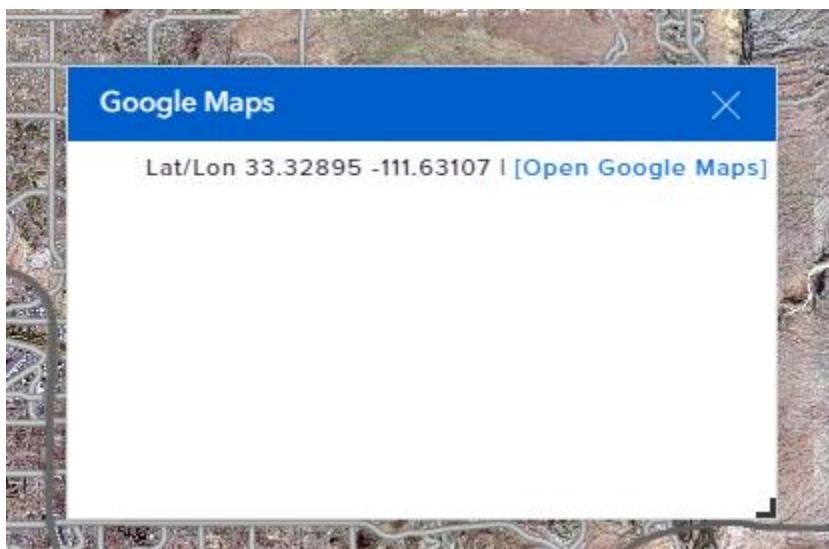
```
275
276
277     /* Only show the data once the MapView is ready */
278     <p align="right"> {this.state.mapViewReady === true ? allSections : defaultMessages.
279     latLonWillBeHere} | <a href={this.state.Google3dUrl} target="_google3d">[Link]</a></p>
280     </div>
281   }
282   return (
283     content
284   );
285 }
286 }
```

Link

After:

```
275
276
277     /* Only show the data once the MapView is ready */
278     <p align="right"> {this.state.mapViewReady === true ? allSections : defaultMessages.
279     latLonWillBeHere} | <a href={this.state.Google3dUrl} target="_google3d">[Open Google Maps]</a></p>
280     </div>
281   }
282   return (
283     content
284   );
285 }
286 }
```

Open Google Maps



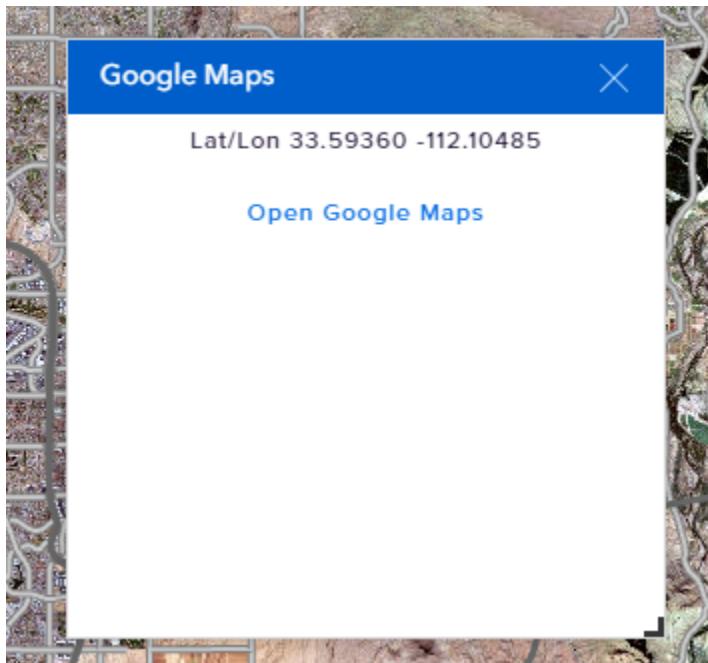
Center the Paragraph.

```
<p align="center">
```

Add 2 line breaks.

```
<br/><br/>
```

```
275
276
277     /* Only show the data once the MapView is ready */
278     <p align="center"> {this.state.mapViewReady === true ? allSections :
279         defaultMessages.latLonWillBeHere} <br/><br/> <a href={this.state.Google3dUrl}
280         target="_google3d">Open Google Maps</a></p>
281     </div>
282   )
283   return (
284     content
285   );
286 }
```



Edit defaults.ts

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Google Maps Widget\get-map-coordinates-class\src\runtime\translations\



Change Widget Label = Google Maps

```
1  export default {
2    _widgetLabel: "Google Maps",
3    latLon: "Lat/Lon",
4    zoom: "Zoom",
5    latLonWillBeHere: "Lat/Lon (None - please mouse over map)"
6  };
7
```

Note: This is just for your reference. You do not have to change any code. This has already been done for you.

Code Changes for the Pictometry Widget

The Pictometry Widget is a copy of the Google Maps Widget with the following changes.

Copy get-map-coordinates-class to create get-map-coordinates-class2

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Pictometry Widget\

These are your files:

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Pictometry Widget\get-map-coordinates-class2\

 src	7/27/2023 1:27 PM	File folder	
 _infos.google3d..txt	7/26/2023 9:36 AM	Text Document	1 KB
 config.json	7/26/2023 9:36 AM	JSON File	1 KB
 icon.svg	7/27/2023 12:19 PM	SVG Document	3 KB
 manifest.json	7/27/2023 11:52 AM	JSON File	1 KB
 README.md	7/26/2023 9:36 AM	MD File	1 KB

Edit manifest.json

Change the name = get-map-coordinates-class2

Change the label = Pictometry

Exb Version = 1.12.0

```
1  {
2    "name": "get-map-coordinates-class2",
3    "label": "Pictometry",
4    "type": "widget",
5    "version": "1.7.0",
6    "exbVersion": "1.12.0",
7    "author": "EsriAU Frederic Poliart",
8    "description": "This widget displays the latitude/longitude, scale, zoom , tilt & ink to Google3D.",
9    "copyright": "",
10   "license": "http://www.apache.org/licenses/LICENSE-2.0",
11   "properties": {},
12   "translatedLocales": ["en"],
13   "defaultSize": {
14     "width": 400,
15     "height": 30
16   }
17 }
18
```

Change the icon.svg

 src	7/27/2023 1:27 PM	File folder	
 _infos.google3d..txt	7/26/2023 9:36 AM	Text Document	1 KB
 config.json	7/26/2023 9:36 AM	JSON File	1 KB
 icon.svg	7/27/2023 12:19 PM	SVG Document	3 KB
 manifest.json	7/27/2023 11:52 AM	JSON File	1 KB
 README.md	7/26/2023 9:36 AM	MD File	1 KB



Edit widget.tsx

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Pictometry Widget\get-map-coordinates-class2\src\runtime\

assets	7/27/2023 1:27 PM	File folder
translations	7/27/2023 1:27 PM	File folder
widget.tsx	7/27/2023 11:31 AM	TSX File 10 KB

Edit Line 142

```
141           // Altitude will be incorrect/inaccurate
142           Google3dUrl : "//gis.maricopa.gov/pictometry/default.aspx?" +
143             "&qlat=" + this.state.centroidlatitude + "&qlong=" + this.state.
144               centroidlongitude ;
145 }
```

Google3dUrl : "//gis.maricopa.gov/pictometry/default.aspx?" + "&qlat=" +
this.state.centroidlatitude + "&qlong=" + this.state.centroidlongitude ;

Do the same for Line 149

```
148           // Altitude will be incorrect/inaccurate
149           Google3dUrl : "//gis.maricopa.gov/pictometry/default.aspx?" +
150             "&qlat=" + this.state.centroidlatitude + "&qlong=" + this.state.
151               centroidlongitude ;
152 }
```

Do the same for Line 199

Do the same for Line 207

```
206     height: this.getAltitude(this.setState.zoom).toString();  
207     Google3dUrl : "//gis.maricopa.gov/pictometry/default.aspx?" +  
208         "&qlat=" + this.state.centroidlatitude + "&qlong=" + this.state.  
209             centroidlongitude ;  
210     })
```

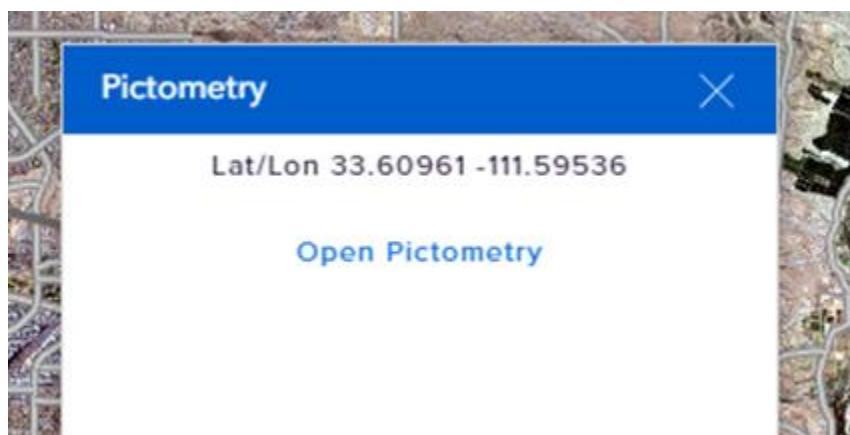
Edit **widet.tsx**

Before:

```
275      /* Only show the data once the MapView is ready */
276      <p align="right"> {this.state.mapViewReady === true ? allSections : defaultMessages.
277      latLonWillBeHere} | <a href={this.state.Google3dUrl} target="_google3d">[Link]</a></p>
278      </div>
279    )
280  }
281  return (
282    content
283  );
284}
285
286}
```

After:

```
275      /* Only show the data once the MapView is ready */
276      <p align="center"> {this.state.mapViewReady === true ? allSections : defaultMessages.
277      latLonWillBeHere} <br/><br/> <a href={this.state.Google3dUrl}
278      target="_google3d">Open Pictometry</a></p>
279      </div>
280    )
281  return (
282    content
283  );
284}
285
```



Edit default.ts

C:\DAVID\EXB\Experience Builder Docs\Custom Widgets\Pictometry Widget\get-map-coordinates-class2\src\runtime\translations



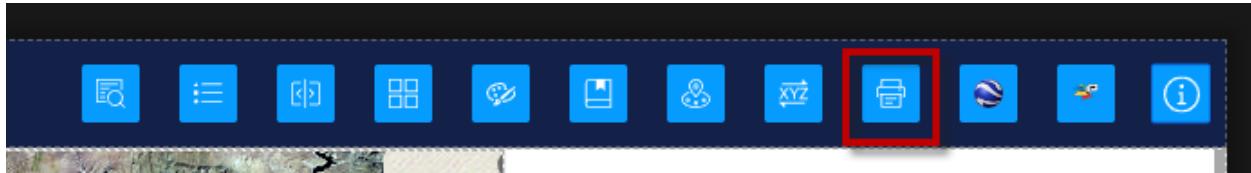
Change Widget Label = Pictometry

```
1  export default {
2      _widgetLabel: "Pictometry",
3      latLon: "Lat/Lon",
4      zoom: "Zoom",
5      latLonWillBeHere: "Lat/Lon (None - please mouse over map)"
6  };
7
```

Note: This is just for your reference. You do not have to change any code. This has already been done for you.

Reorder the Widgets in the Widget Controller

Before:



After:

Drag the Print Widget to the right of the Pictometry Widget.



Save, Publish, View Published Item.

<https://localhost:3001/experience/6/>

MARICOPA COUNTY Historical Aerials v7

301 W Jefferson St 85...

Query

- Parcel >
- Subdivision >
- ZIP Code >
- City >
- Township, Range, Section >

County

Terrain (NAVD88)

Parcel (Current)

Zip Code

City

Township Range Section

Street

2022 Sep - 2022 Oct

2021 Sep - 2021 Nov

2020 Oct - 2020 Nov

2019 Sep - 2019 Dec

2018 Sep - 2018 Dec

2017 Sep - 2017 Nov

2016 Sep - 2016 Dec

2015 Nov - 2016 Feb

2014 Sep - 2014 Nov

2013 Sep - 2013 Nov

2012 Oct - 2012 Dec

10 km | 10 mi

-111.892507 33.809842 Degree

Go back to the Home Page.

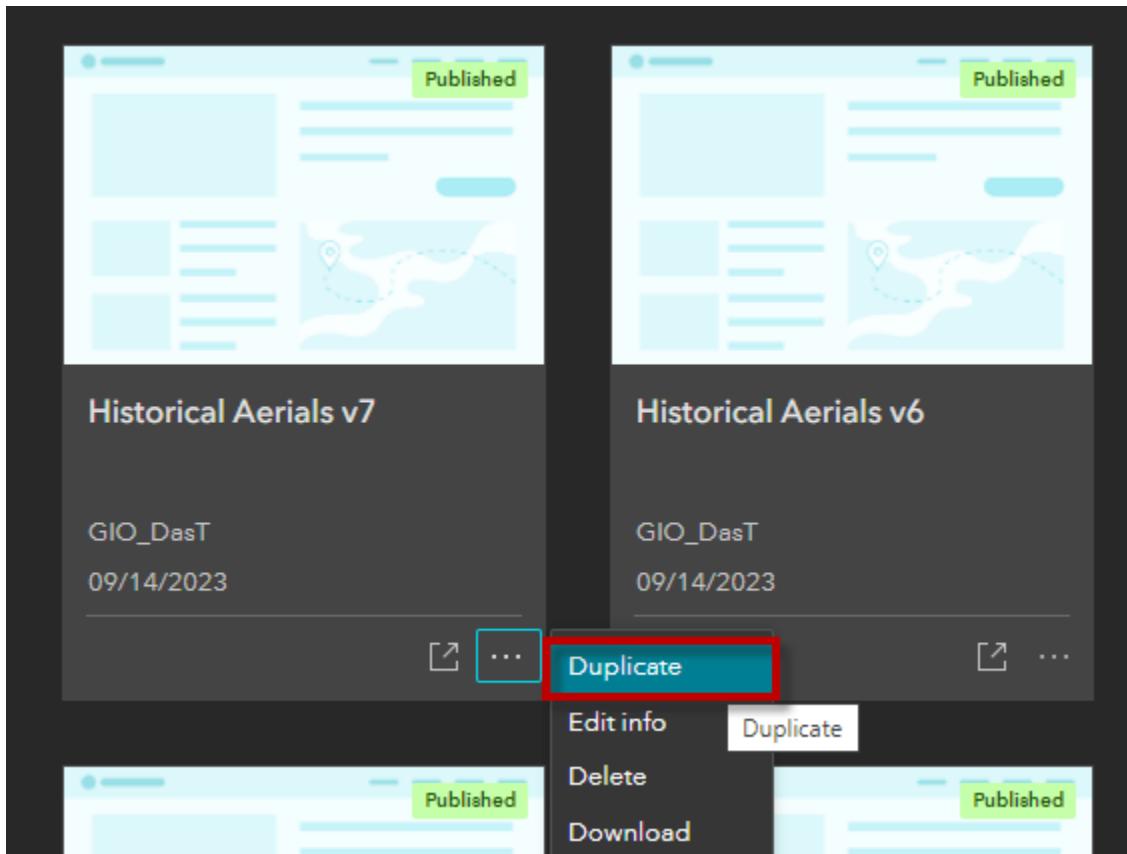
The screenshot shows the ArcGIS Experience Builder interface in Developer Edition mode. The top navigation bar includes the ArcGIS logo, the text "ArcGIS Experience Builder (Developer Edition)", the "Experiences" tab (which is selected), and a "Templates" tab. A user profile icon is also present in the top right corner. Below the navigation, there's a search bar labeled "Search" and a toolbar with "Import" and "Create new" buttons. The main area displays a grid of six experience cards, each showing a thumbnail, the title, the author, and the last modified date. All experiences listed are titled "Historical Aerials" and are marked as "Published".

Experience Version	Author	Last Modified
Historical Aerials v7	GIO_DasT	09/14/2023
Historical Aerials v6	GIO_DasT	09/14/2023
Historical Aerials v5	GIO_DasT	09/13/2023
Historical Aerials v4	GIO_DasT	09/05/2023
Historical Aerials v1	GIO_DasT	09/05/2023
Historical Aerials v2	GIO_DasT	09/05/2023

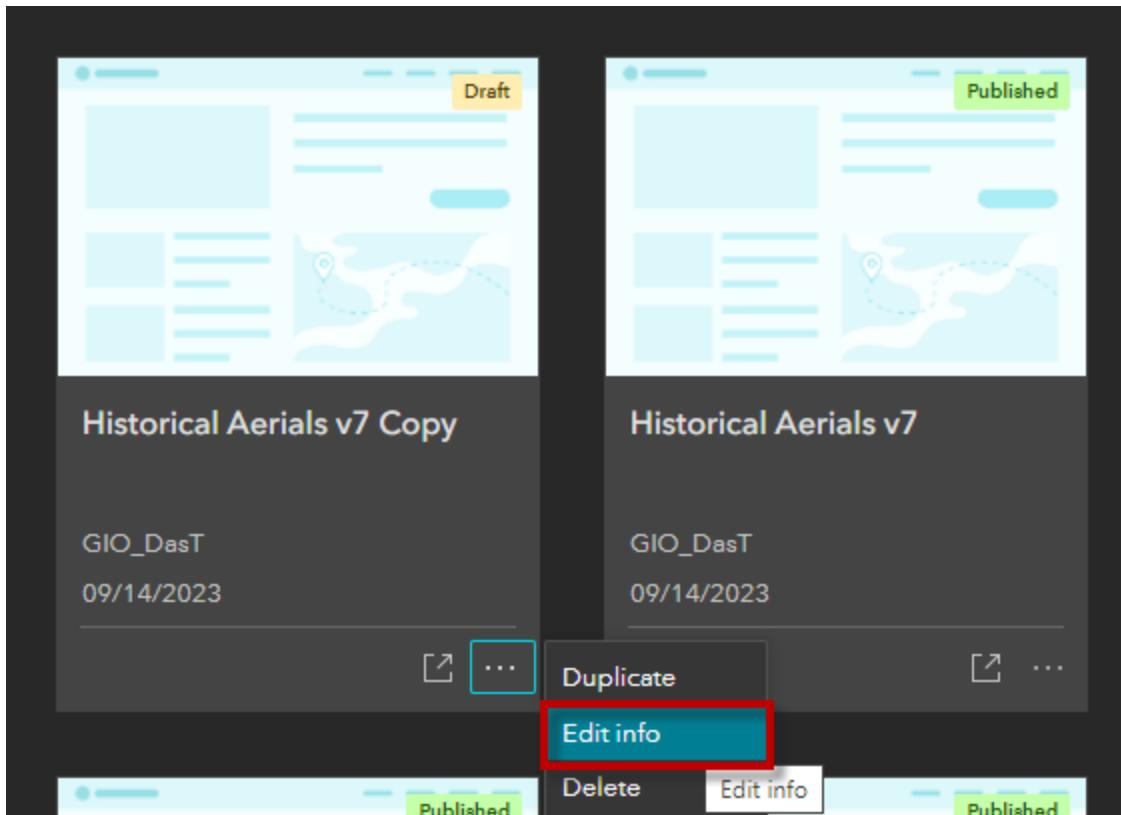
https://localhost:3001/builder/?id=4

Create Historical Aerials v8

Duplicate Historical Aerials v7 to create Historical Aerials

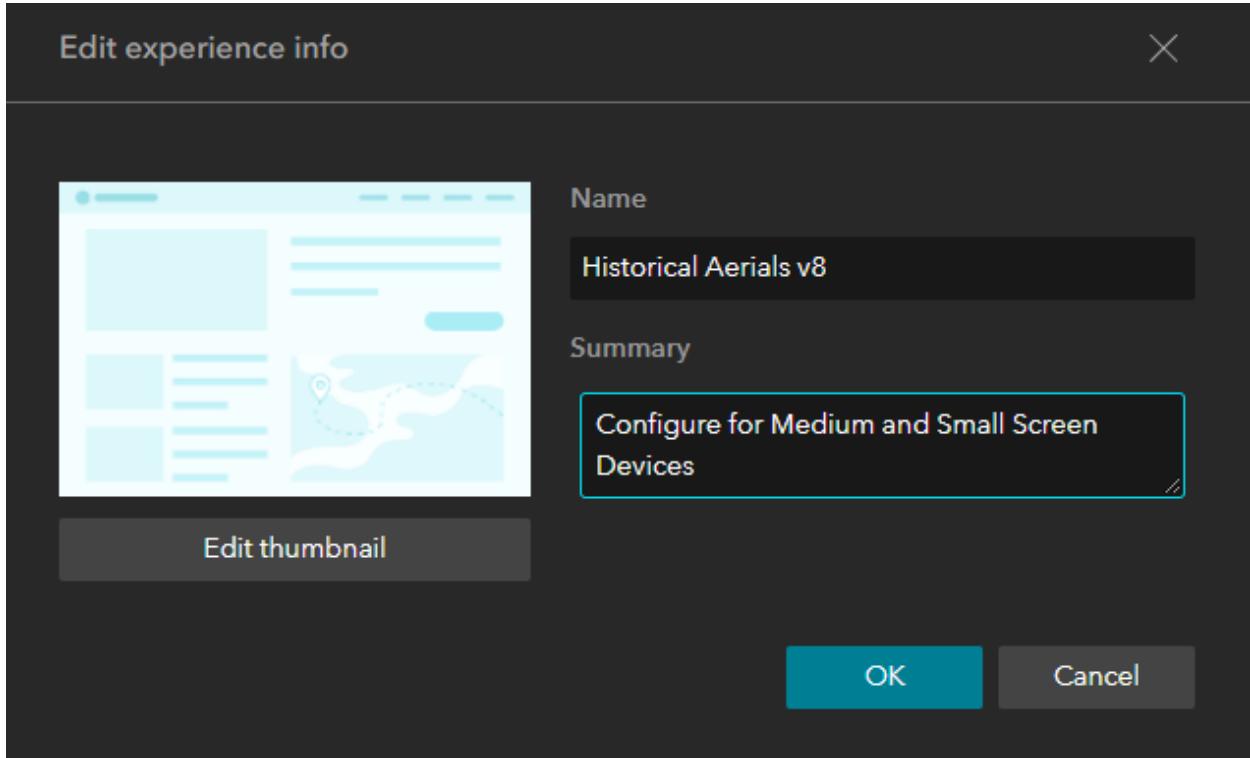


Edit Info

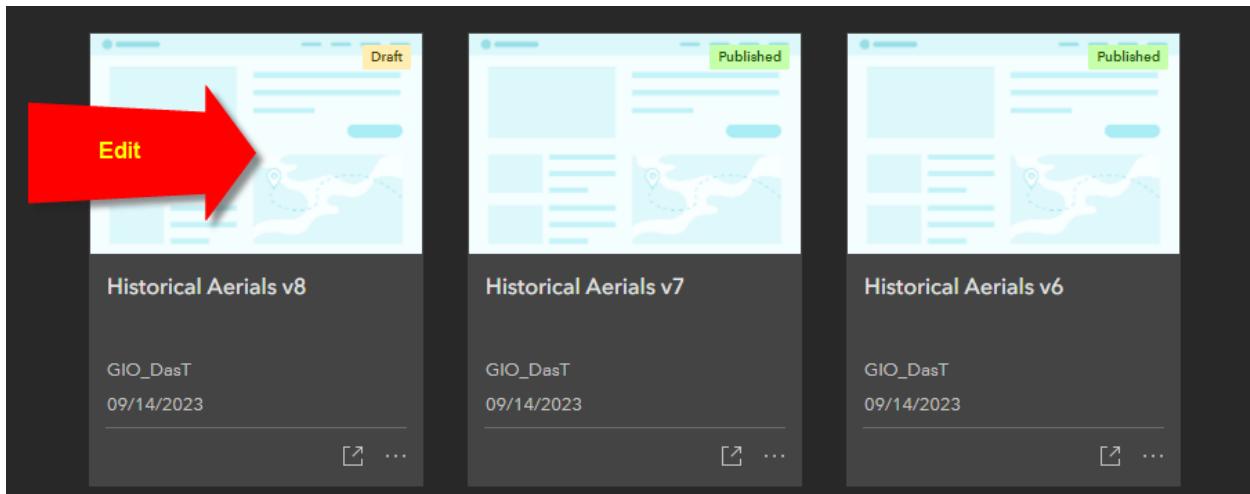


Name = Historical Aerials

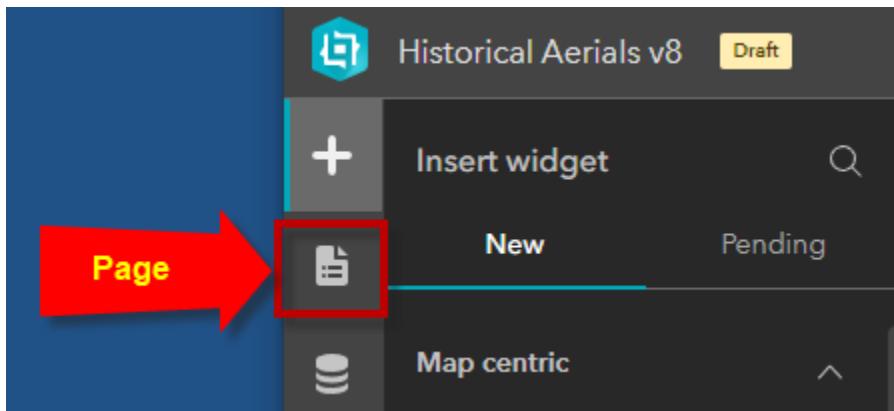
Summary = Configure for Medium and Small Screen Devices



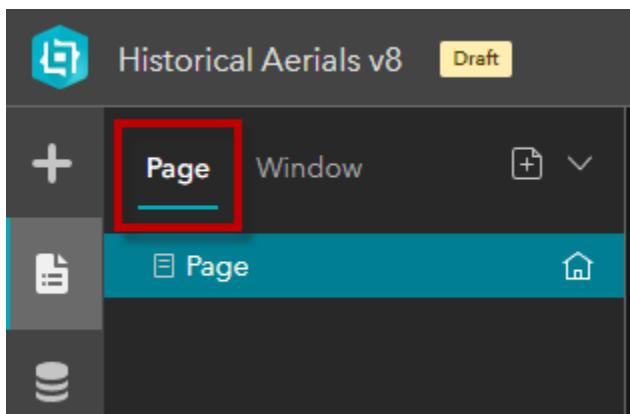
Edit Historical Aerials v8



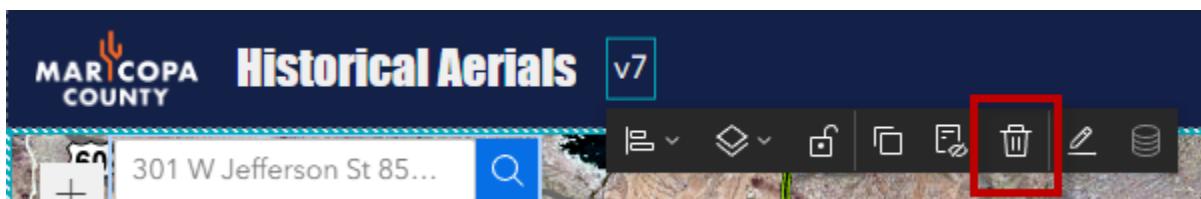
Open the Page Tab



Open Page

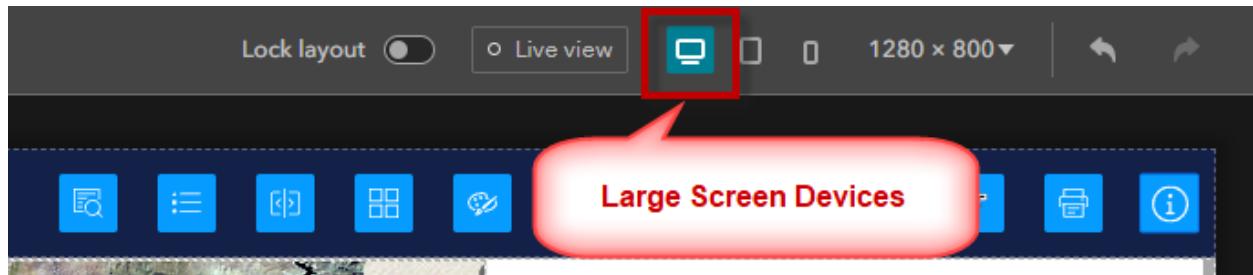


Delete the Subtitle



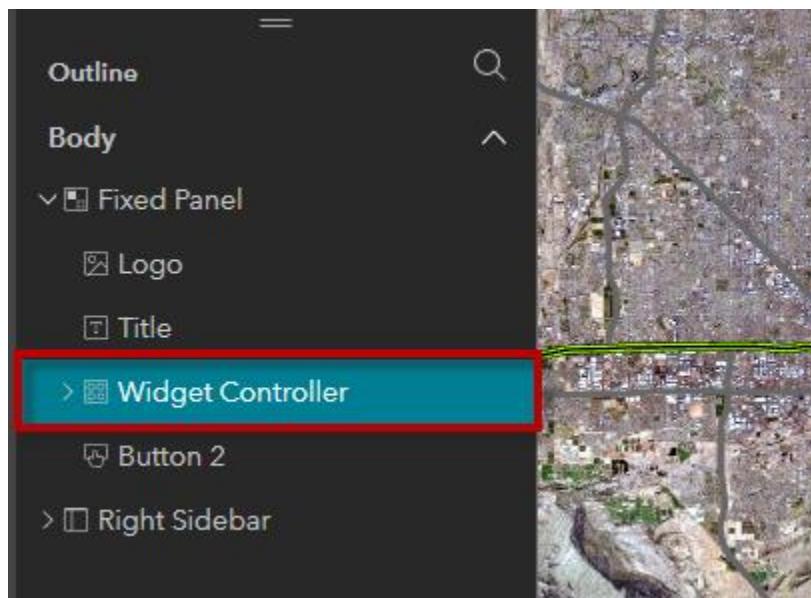
Configure the App for Large Screen Devices.

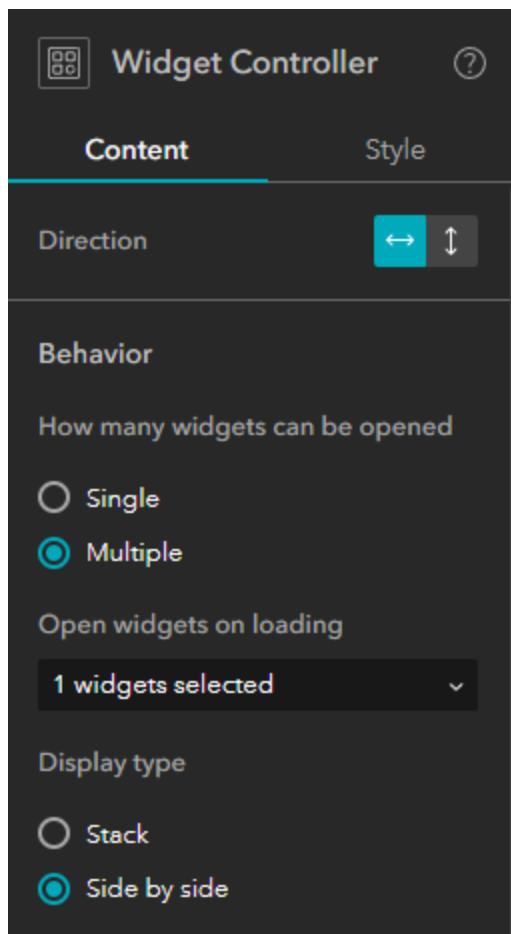
So far, you have configured your app for large screen devices.



The Query Widget is open by default.

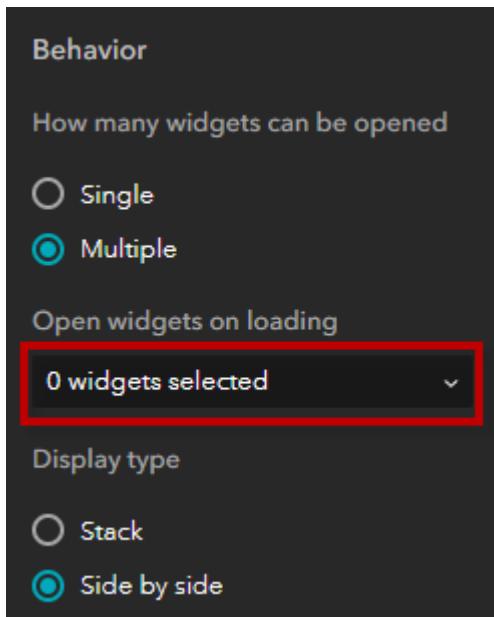
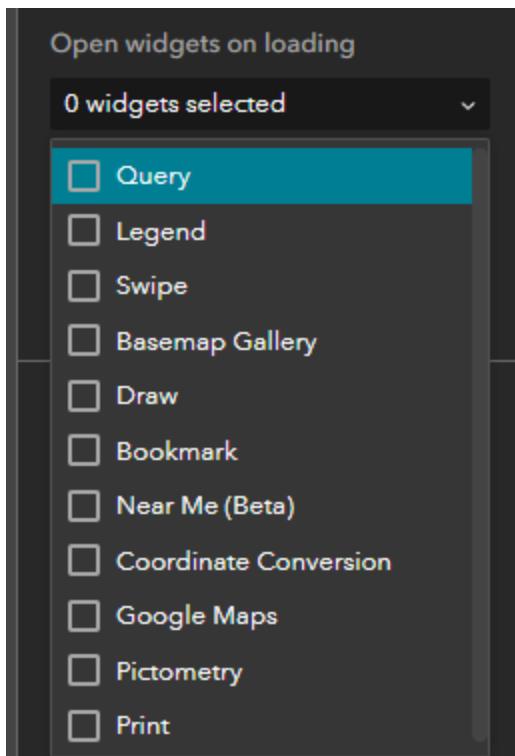
Select the Widget Controller from the Page Outline.



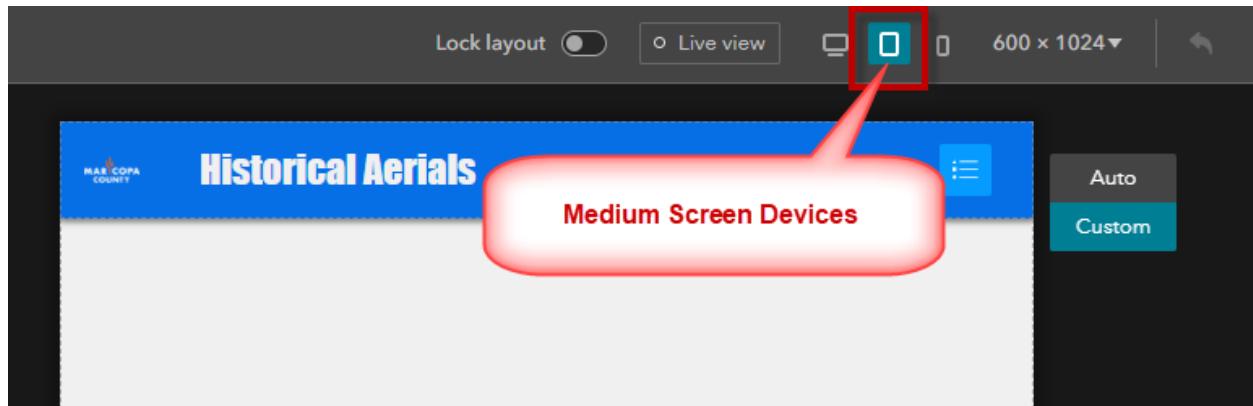


Uncheck Query.

No widget will be open by default.

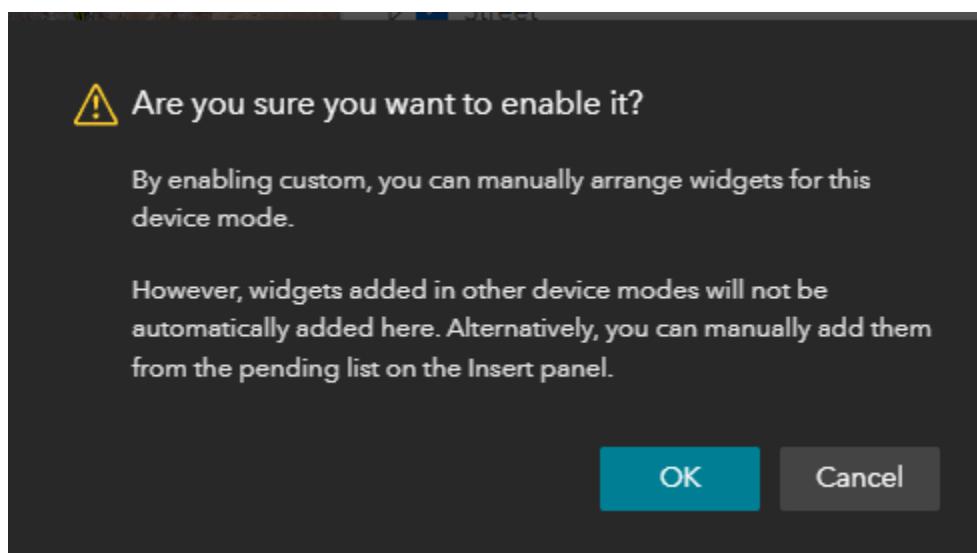
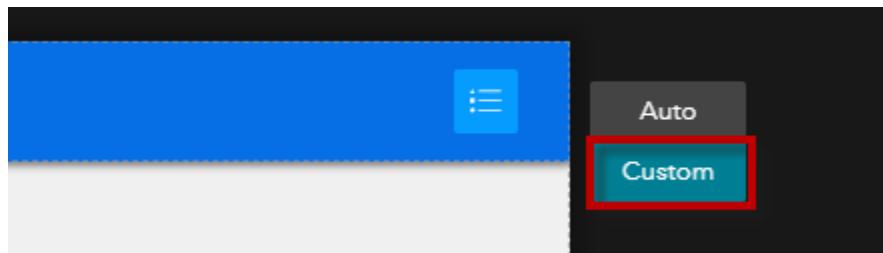


Configure the App for Medium Screen devices



First, click on Auto.

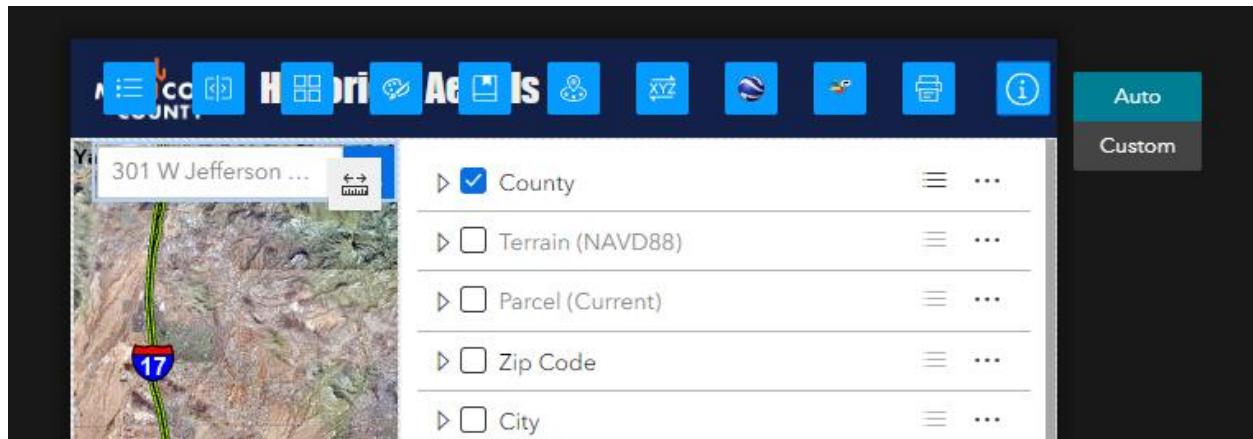
Next, click on Custom.



OK

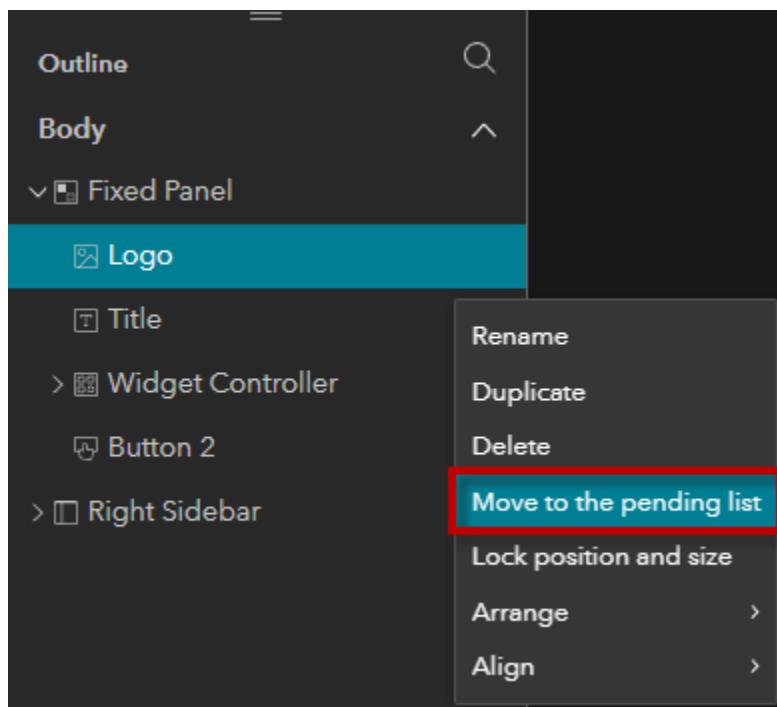
Here is how it looks.

Notice, the widgets are overflowing the space for the Logo and Title.

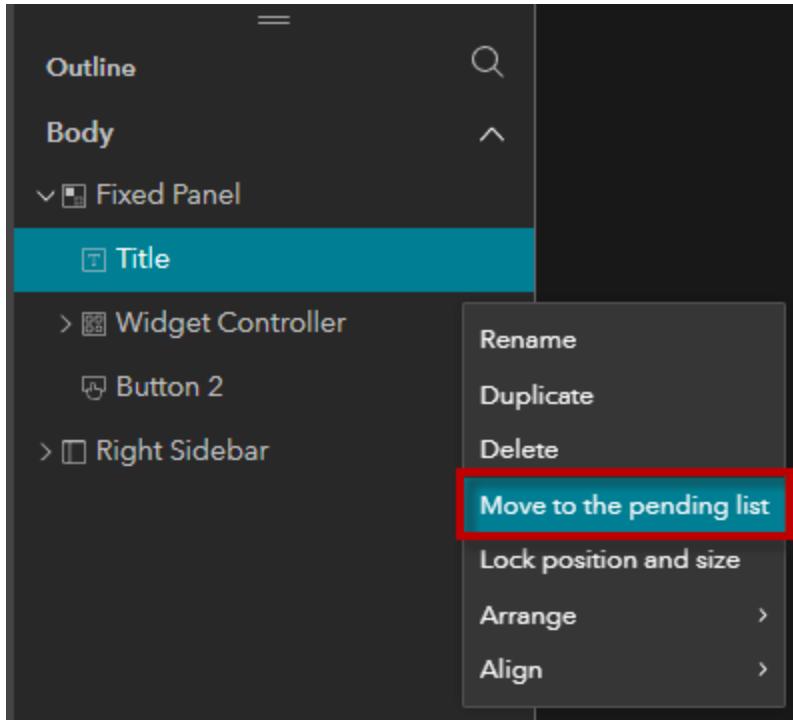


The easiest way to fix this is not to show the Logo and Title for medium screen devices. This applies to tablets in Portrait Mode.

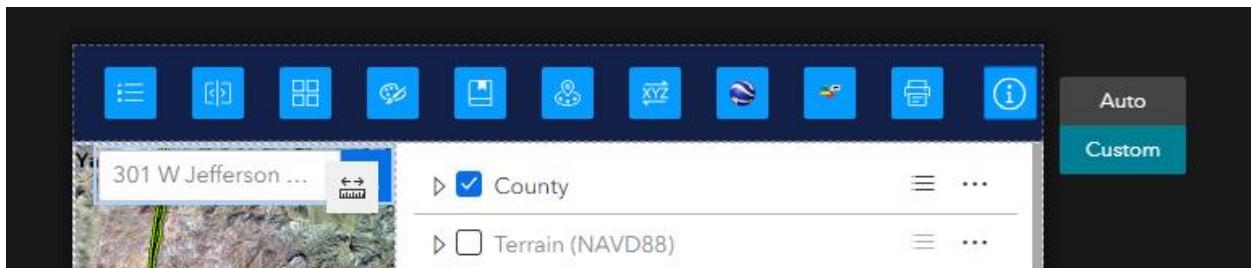
Move the Logo to the Pending List.



Move the Title to the Pending List.



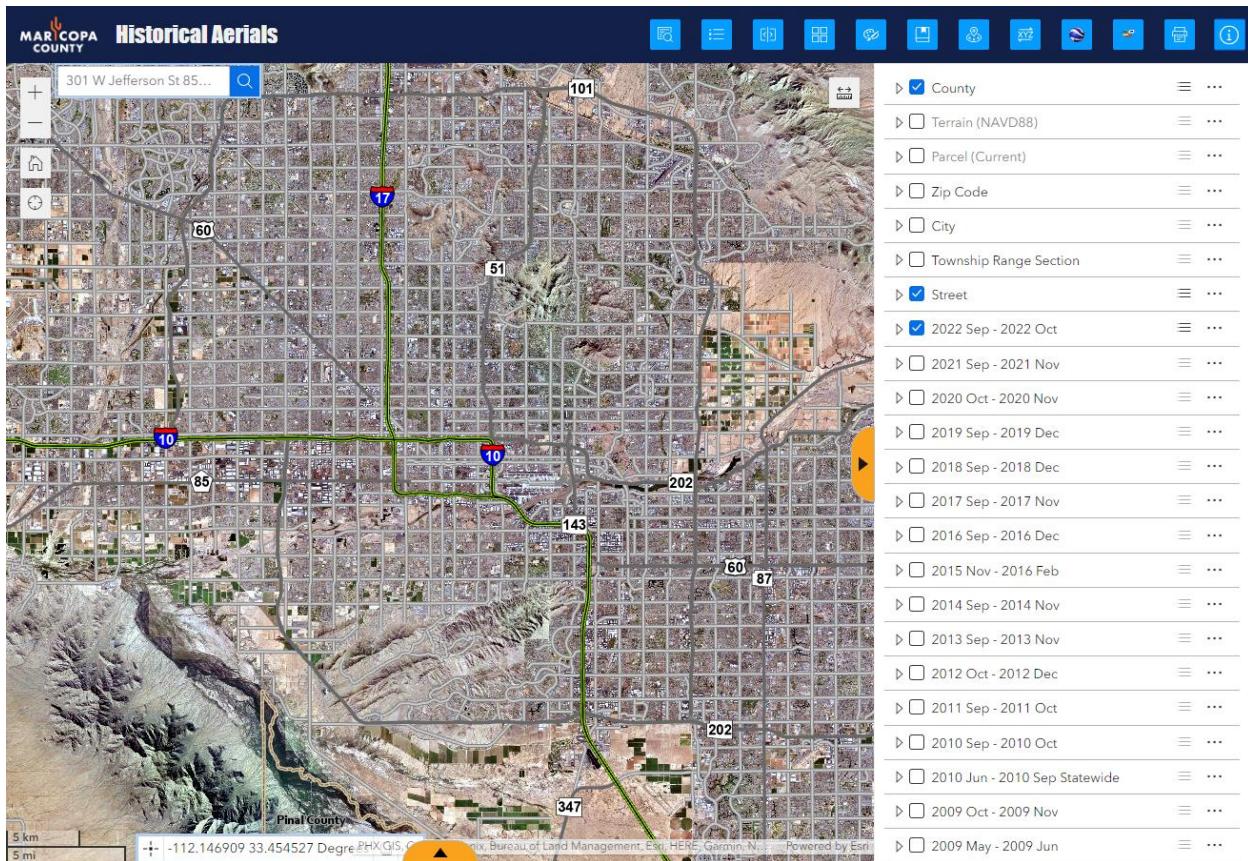
This gives you a cleaner look.



Save, Publish, View Published Item.

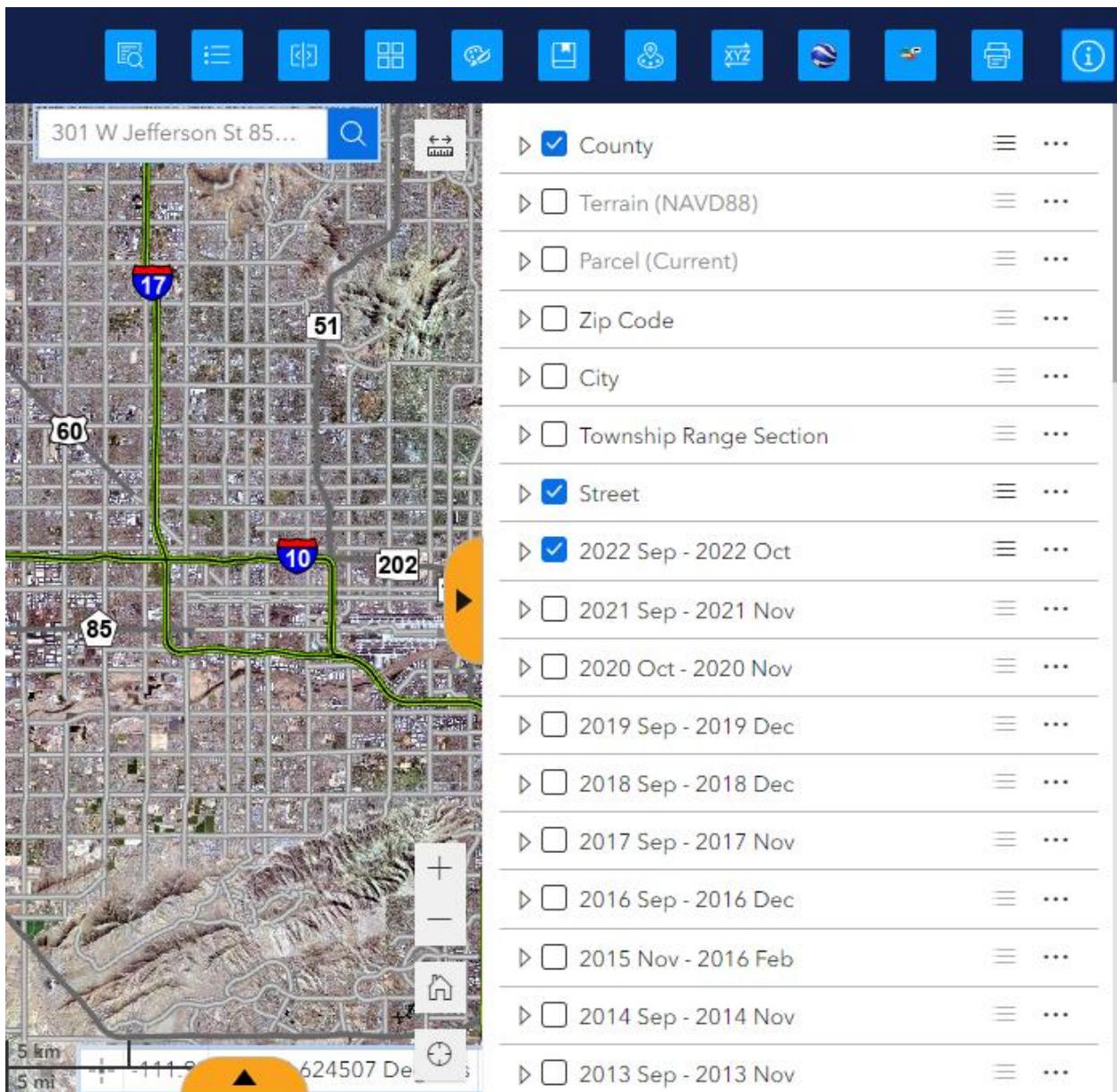
<https://localhost:3001/experience/7/>

On large screens, you get to see the Fixed Panel with the Logo and Title.

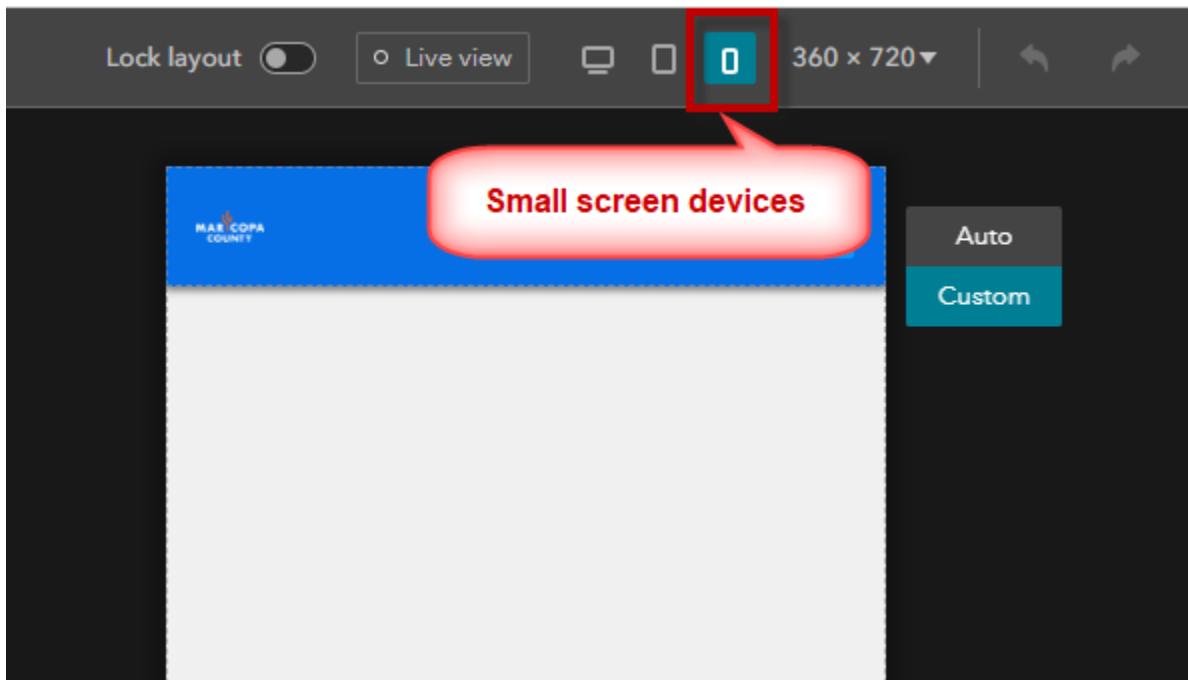


Reduce the width.

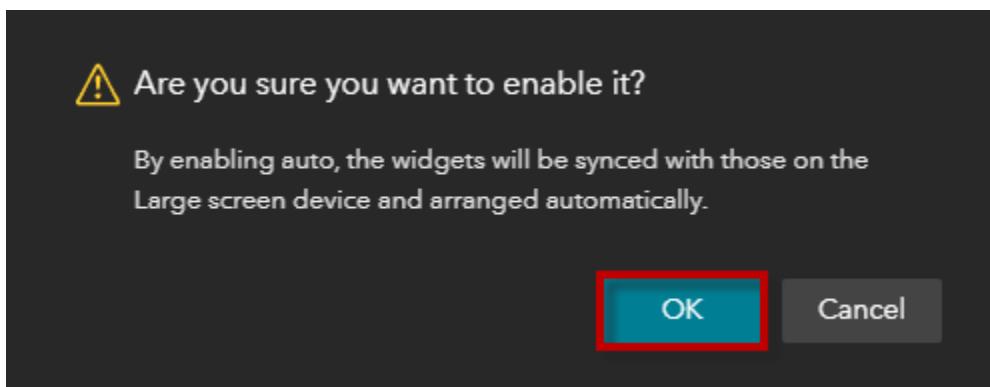
On medium screen devices, the Logo and Title are dropped.



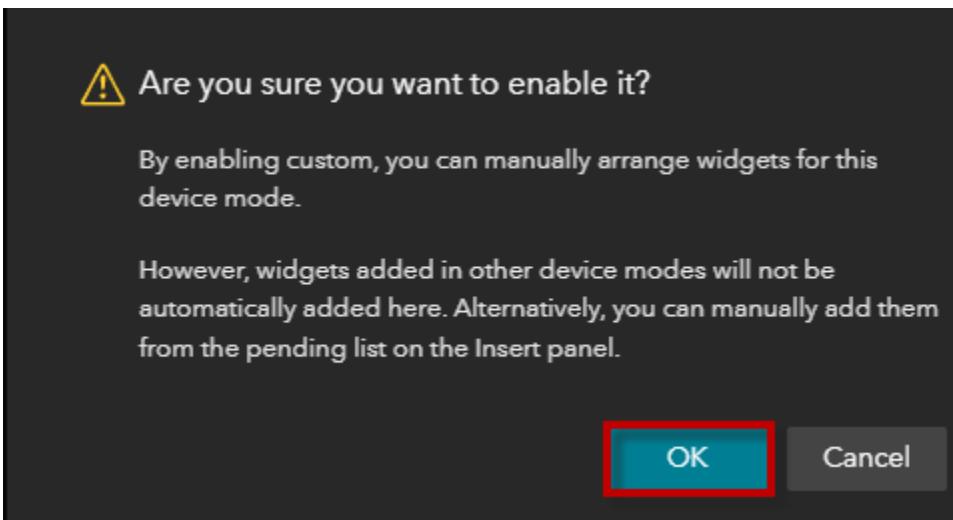
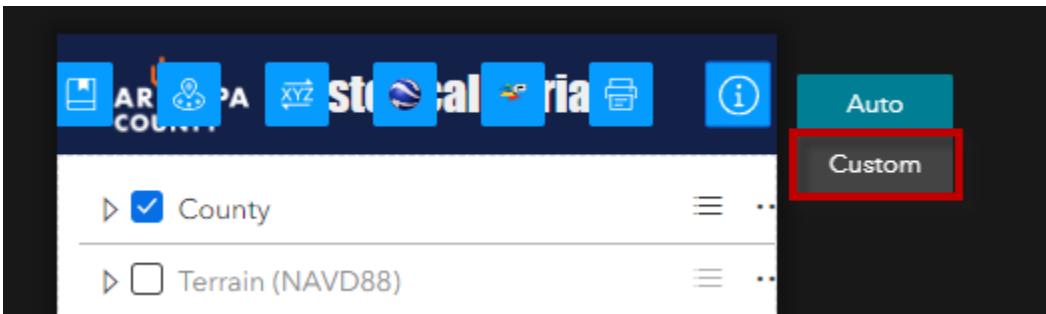
Configure the App for Small Screen Devices



First, click on Auto.



Next, click on **Custom**.

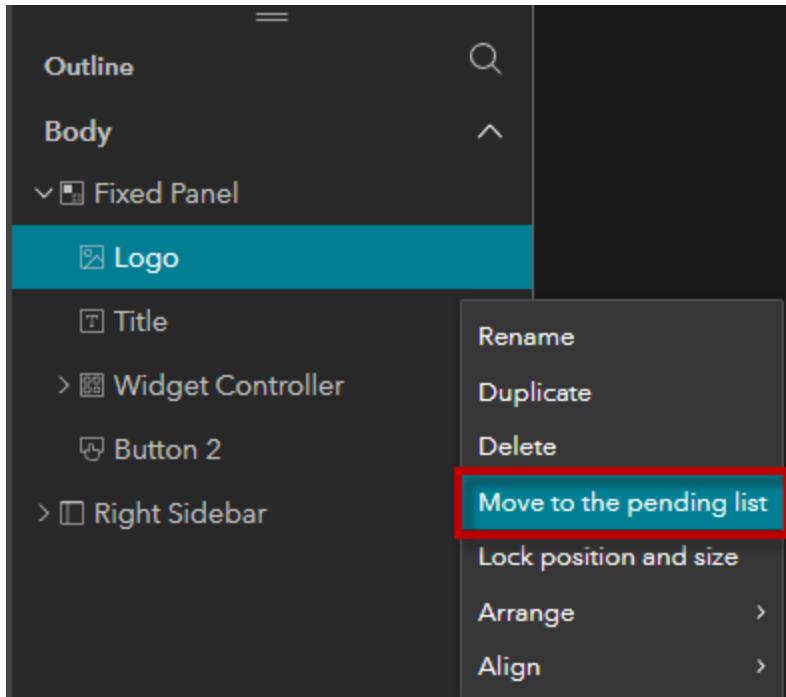


OK

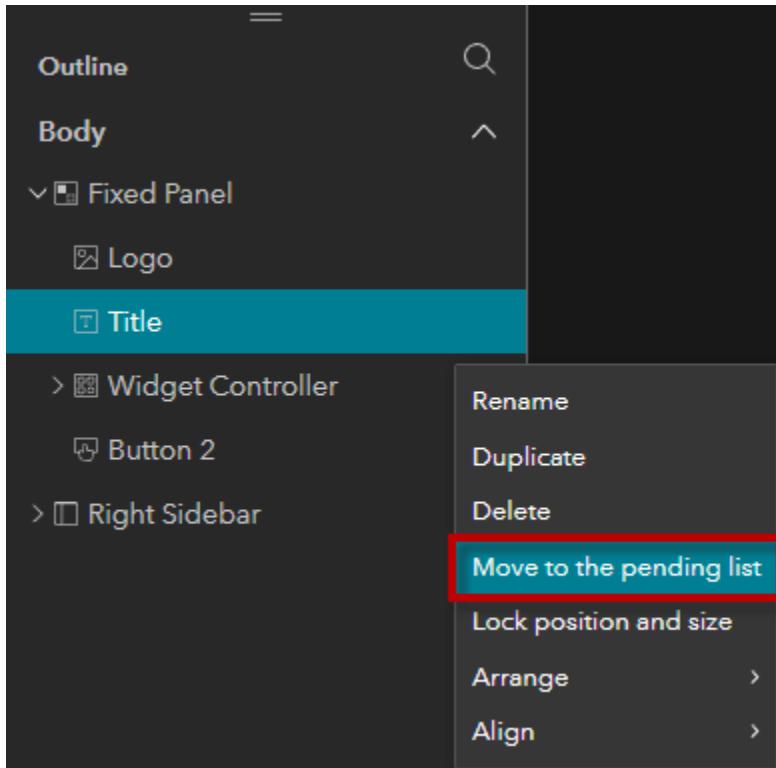
Notice, there is not enough space for the Logo, Title and all the widgets.



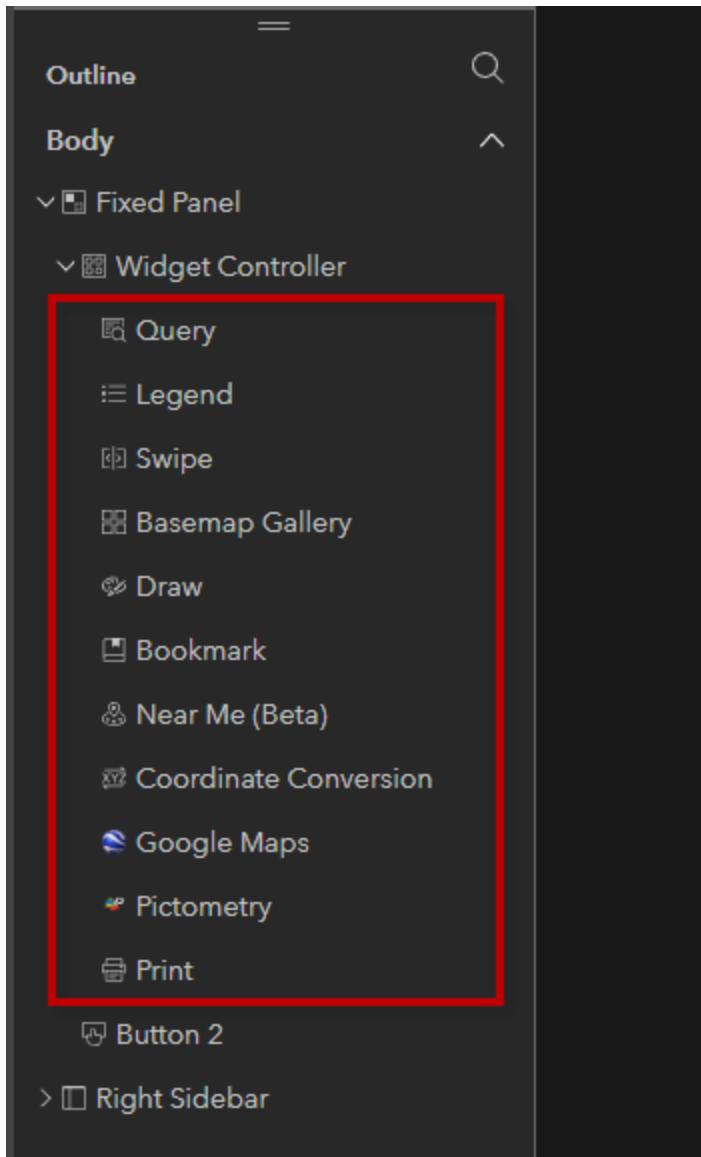
Move the Logo to the Pending List.



Move the Title to the Pending List.

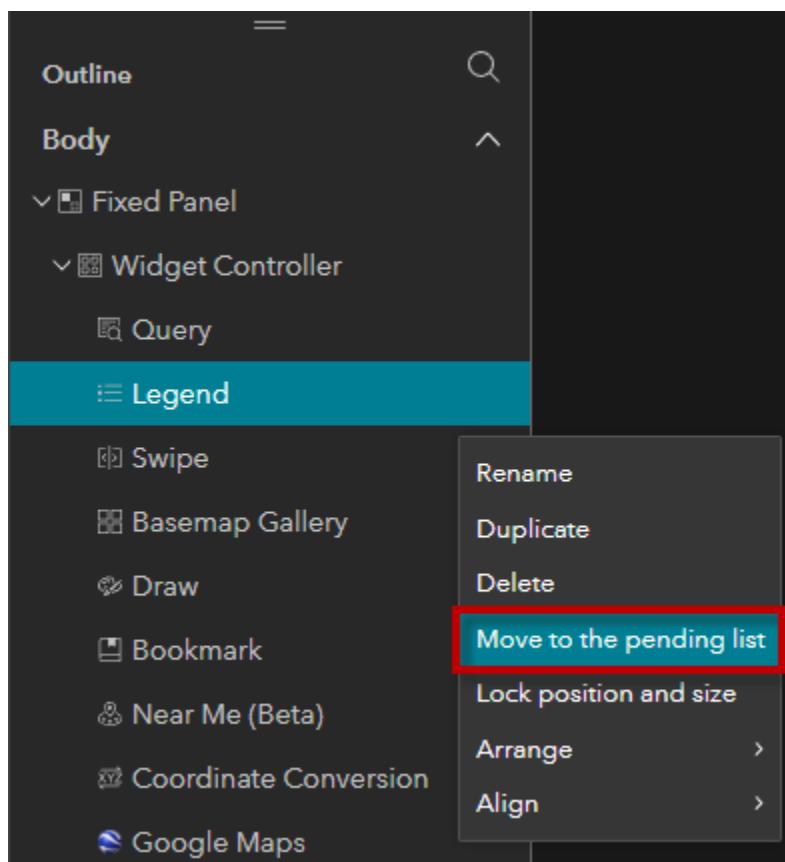


Expand the Outline for the Widget Controller.

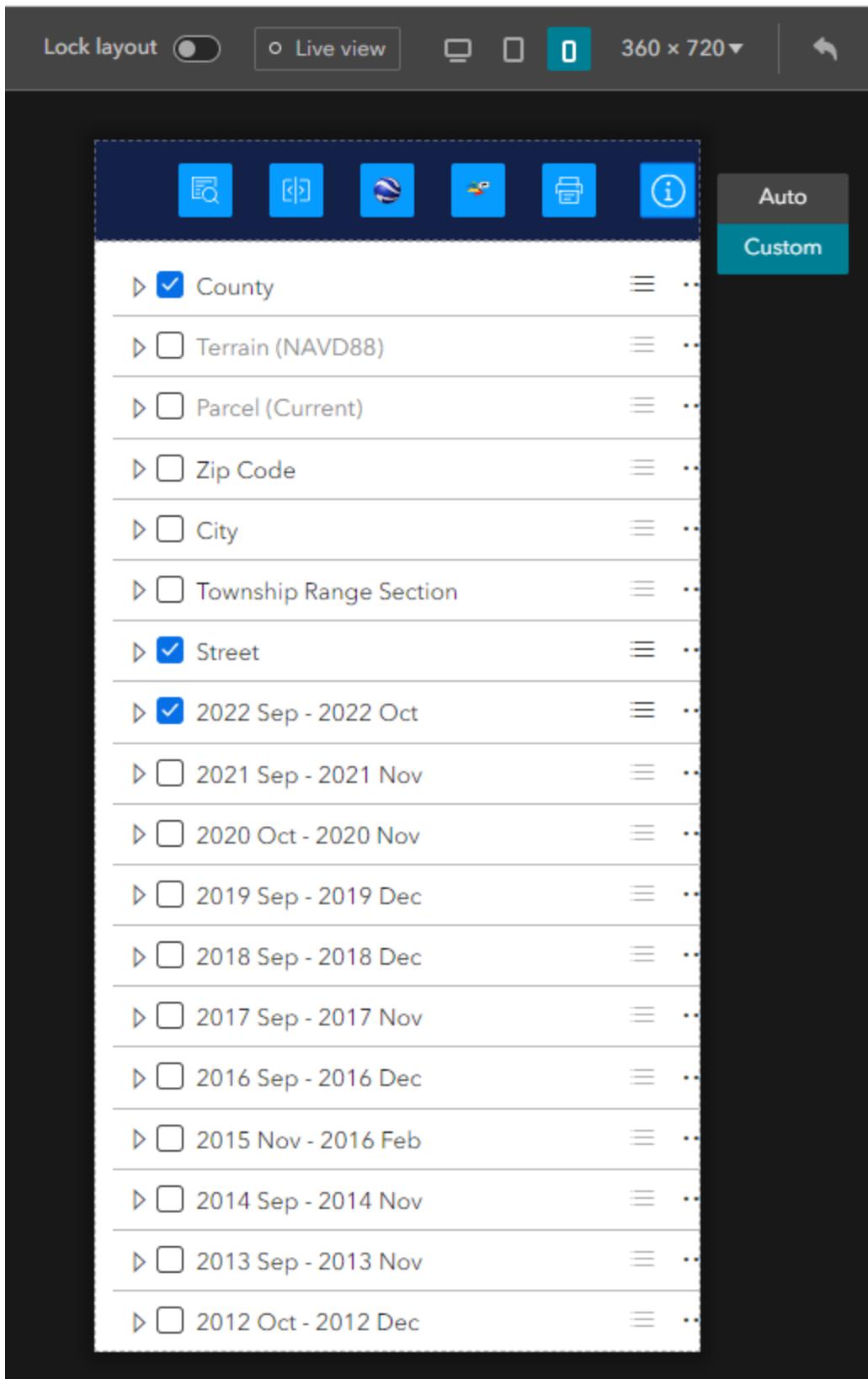


Move the following widgets to the Pending List.

- Legend
- Basemap Gallery
- Draw
- Bookmark
- Near Me
- Coordinate Conversion



This will leave you with these 6 important widgets on the fixed panel in small screen mode.

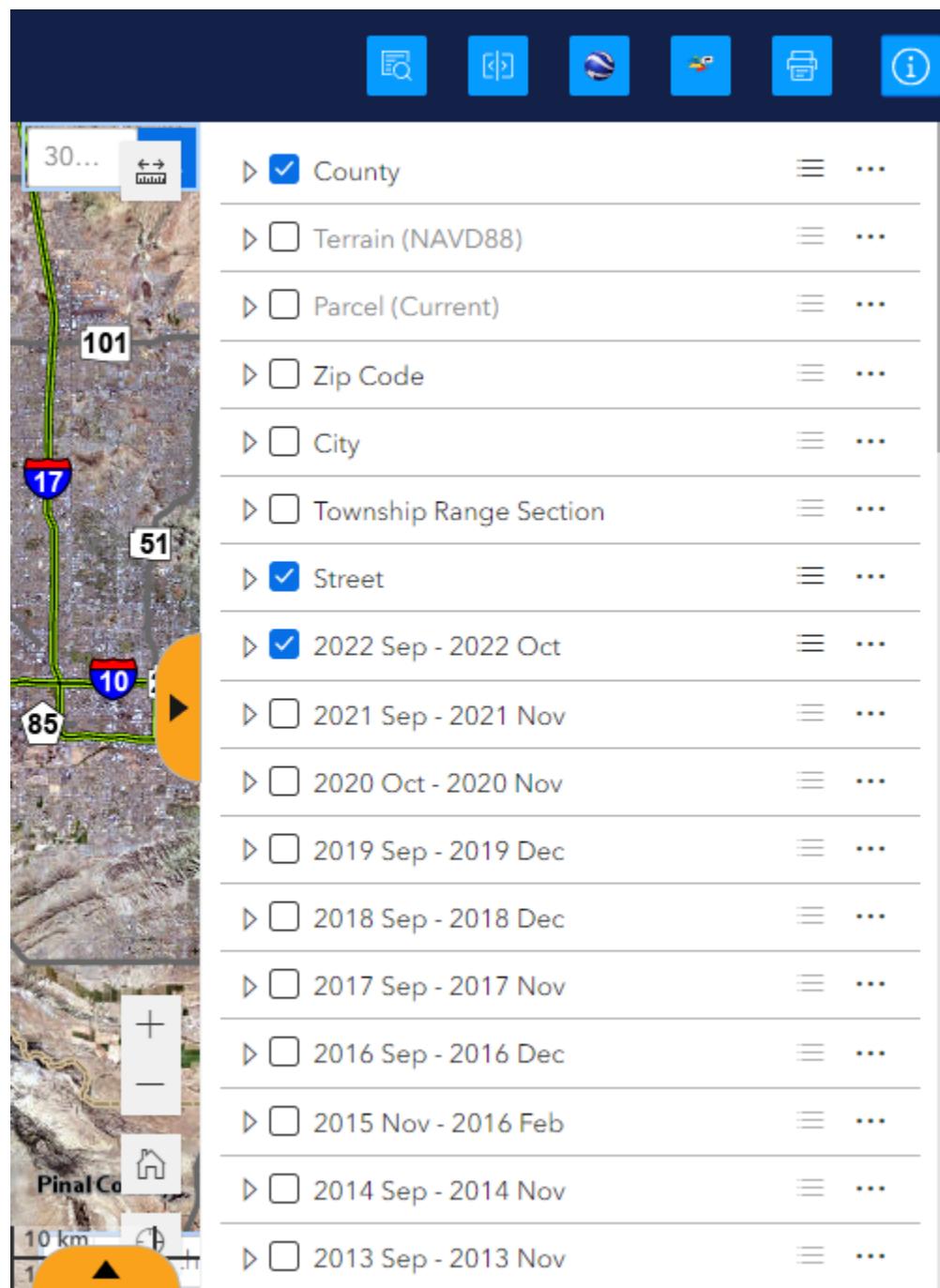


Save, Publish, View Published Item.

<https://localhost:3001/experience/7/>

Make the window narrow.

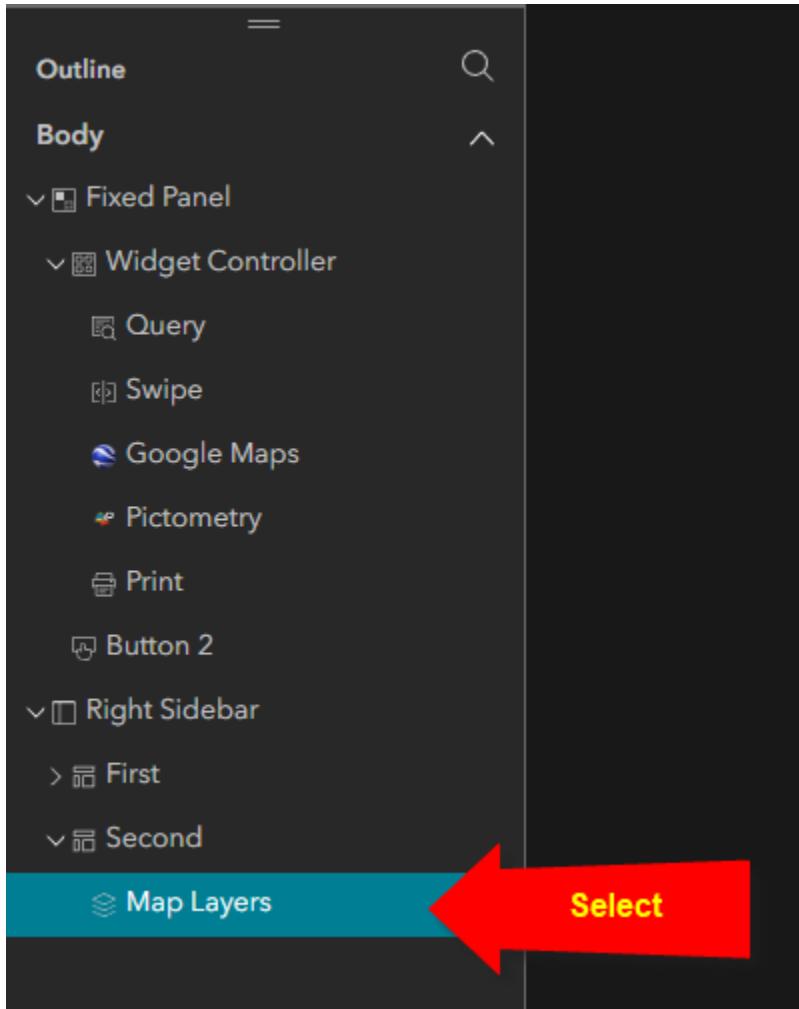
This is what you will see.



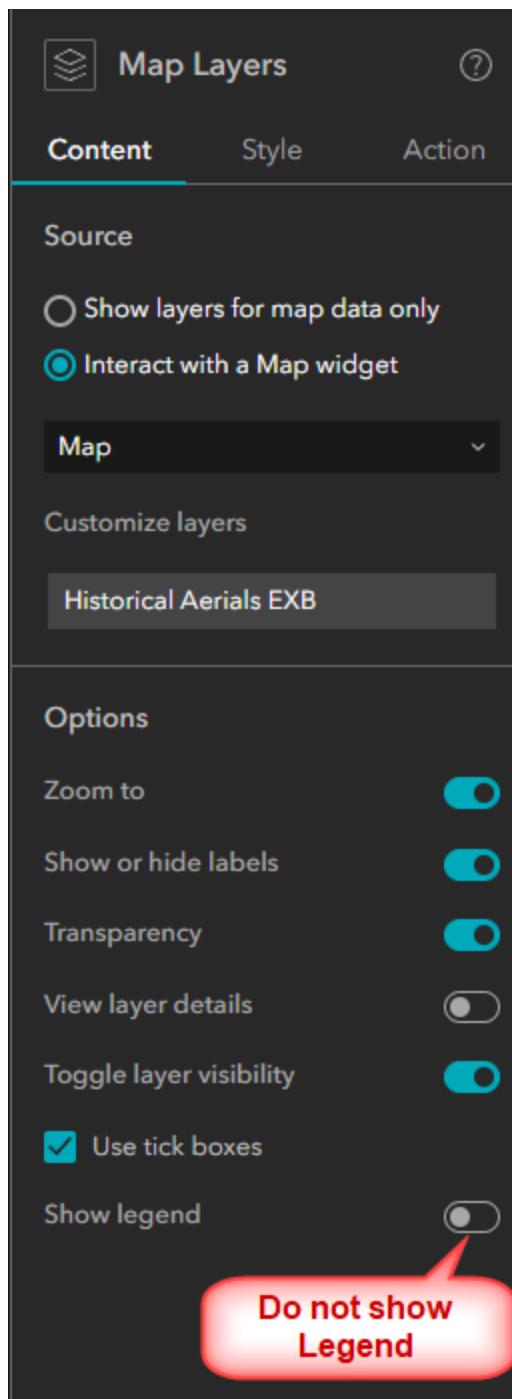
Can the Right Sidebar be made narrower to show more of the map?

Yes, you can do that by not showing the Legend Icon.

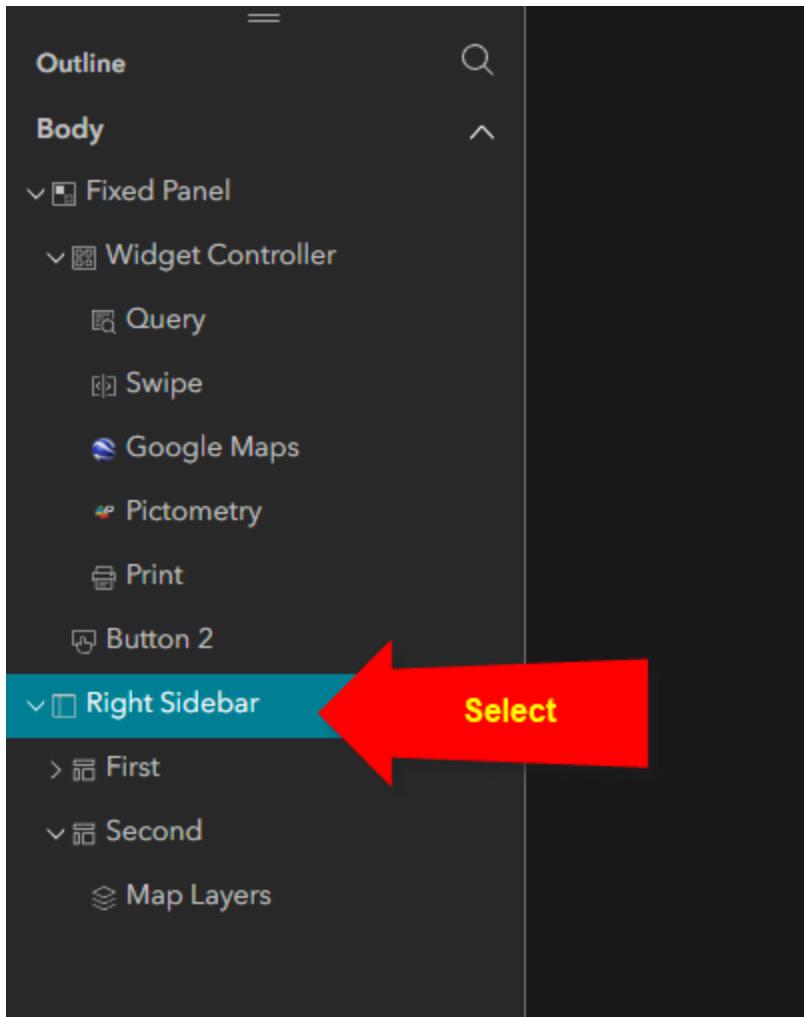
Select **Map Layers** from the Page Outline.



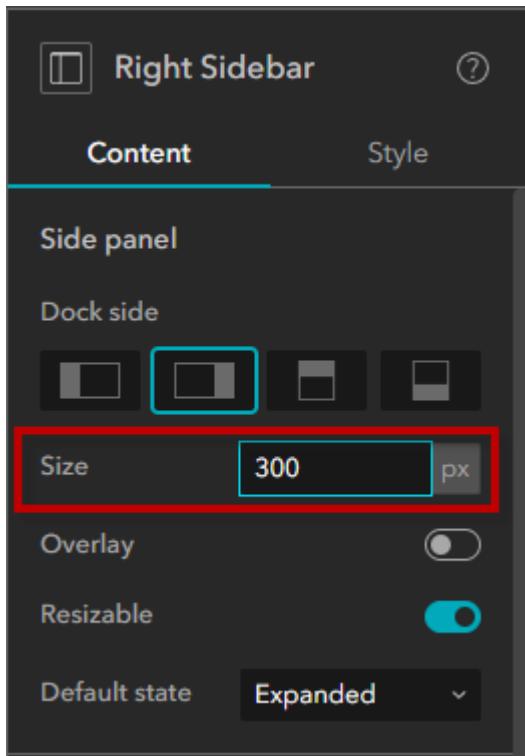
Do not show the Legend.



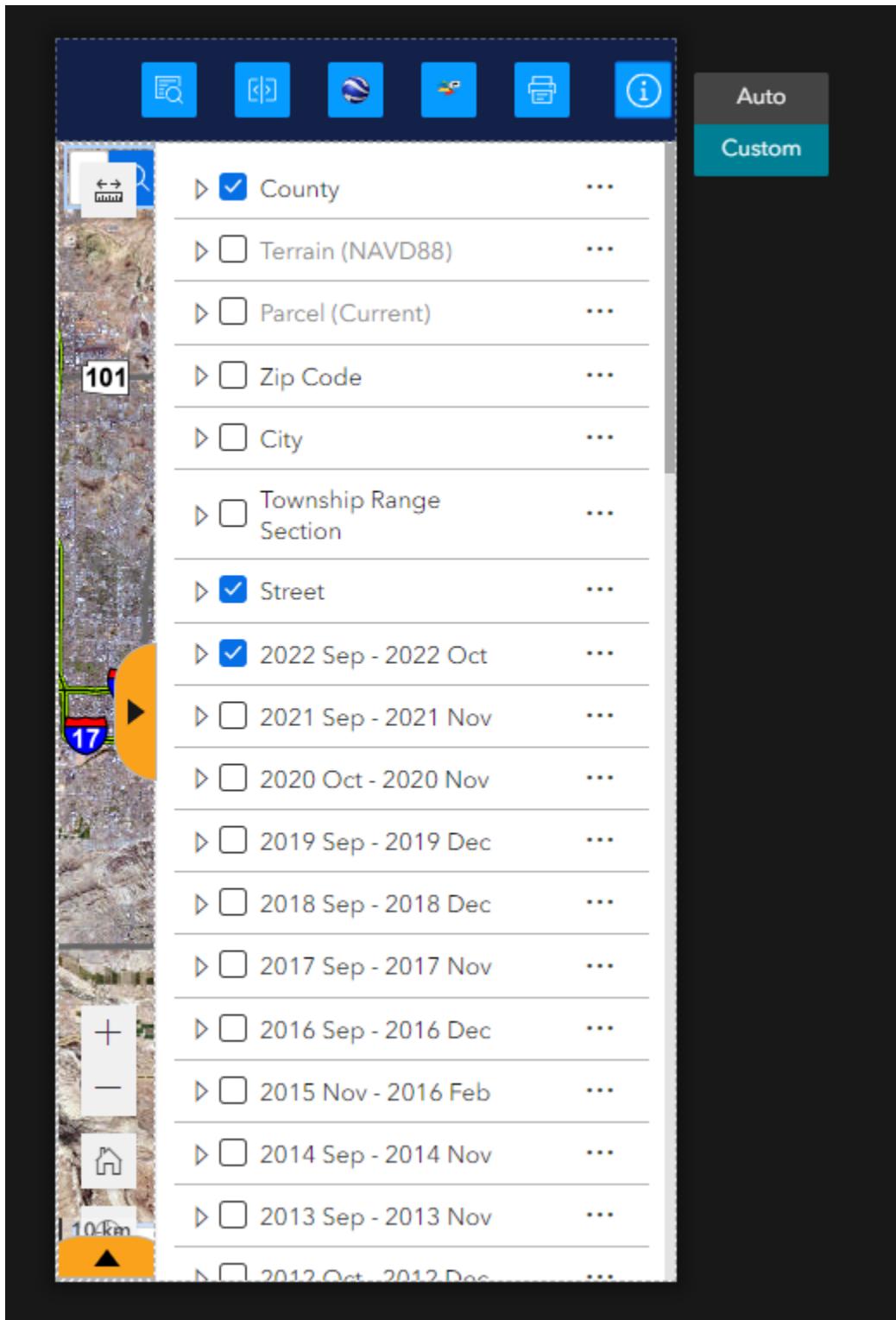
Select the Right Sidebar from the Page Outline.



Reduce the width of the Right Sidebar to 300 pixels.



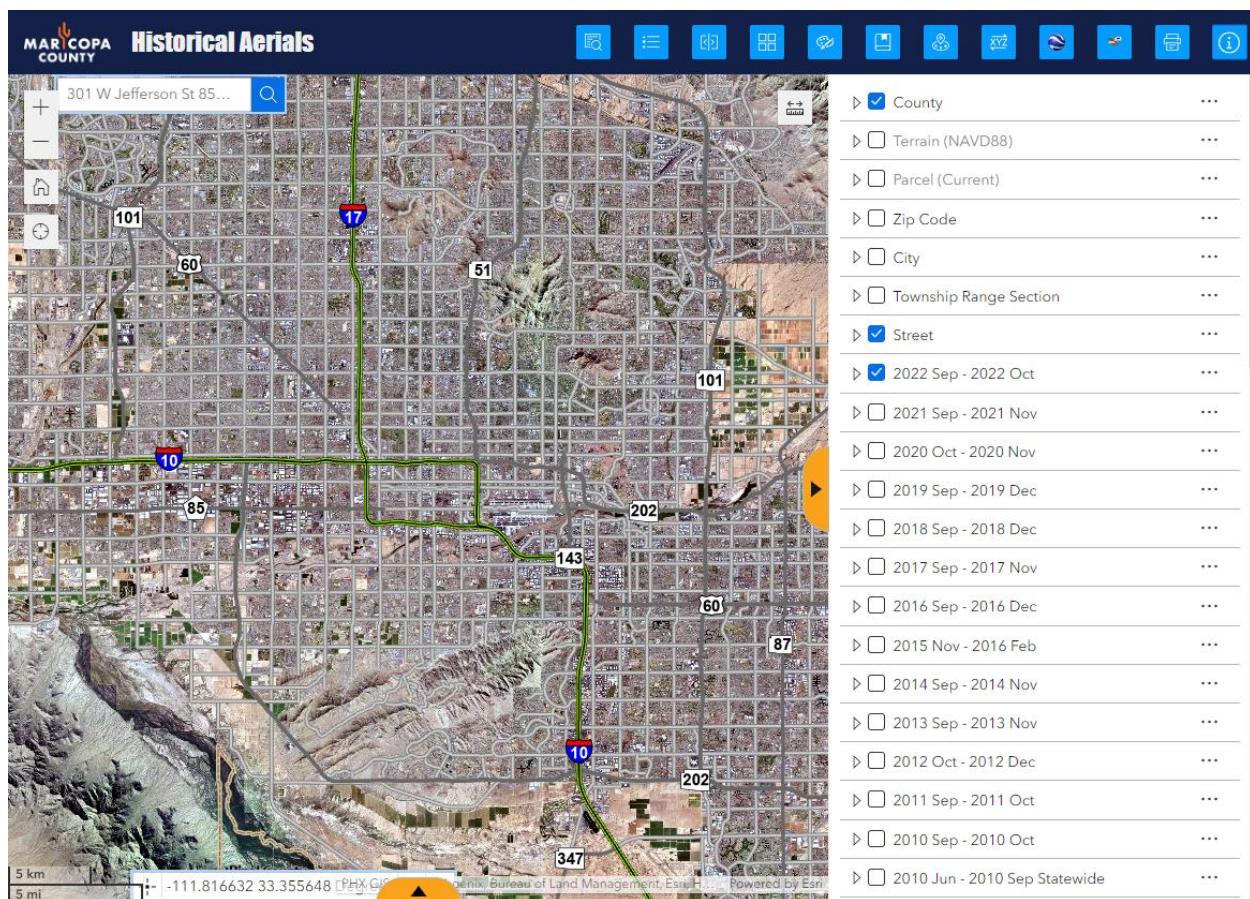
This looks better.



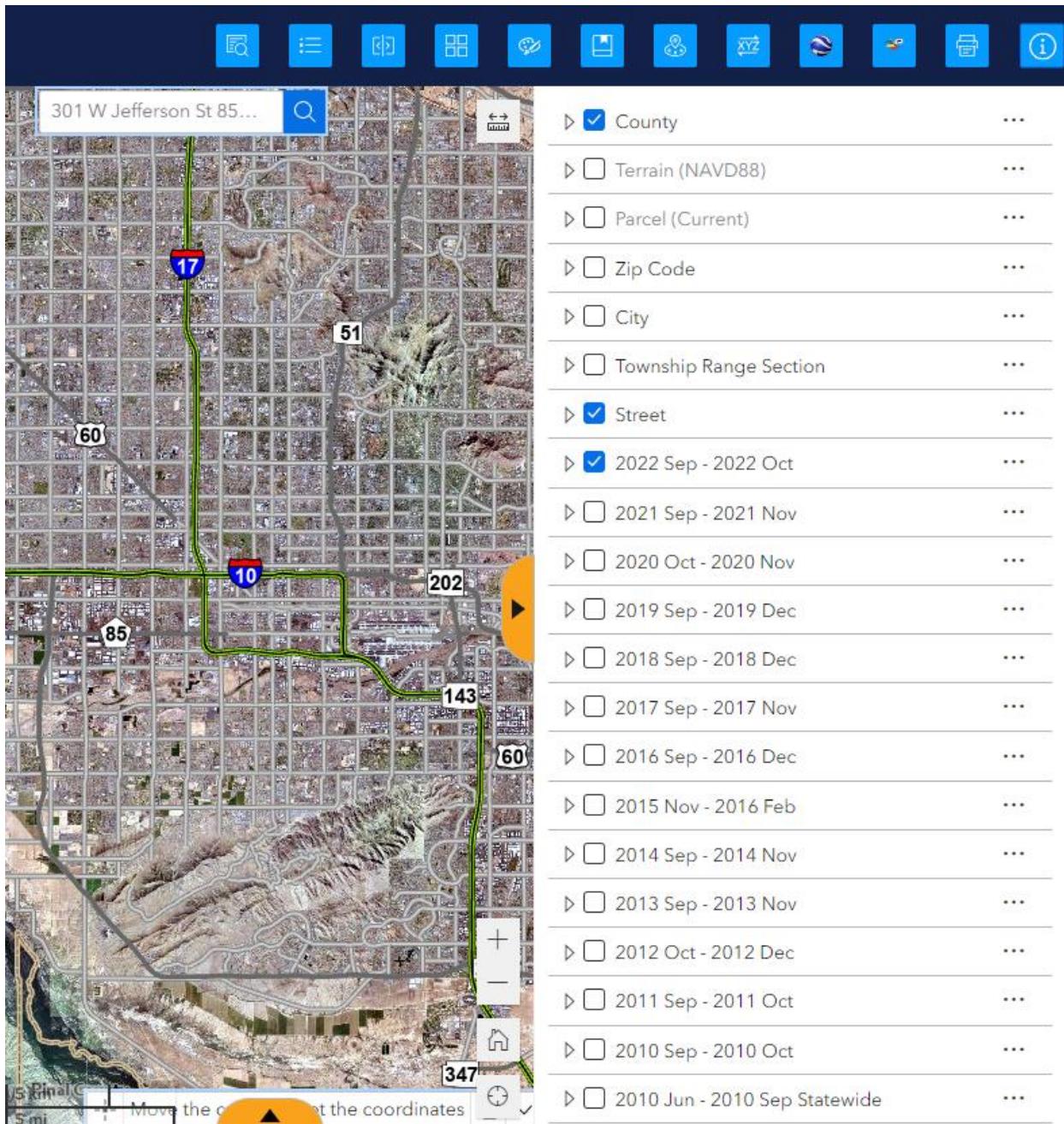
Save, Publish, View Published Item.

<https://localhost:3001/experience/7/>

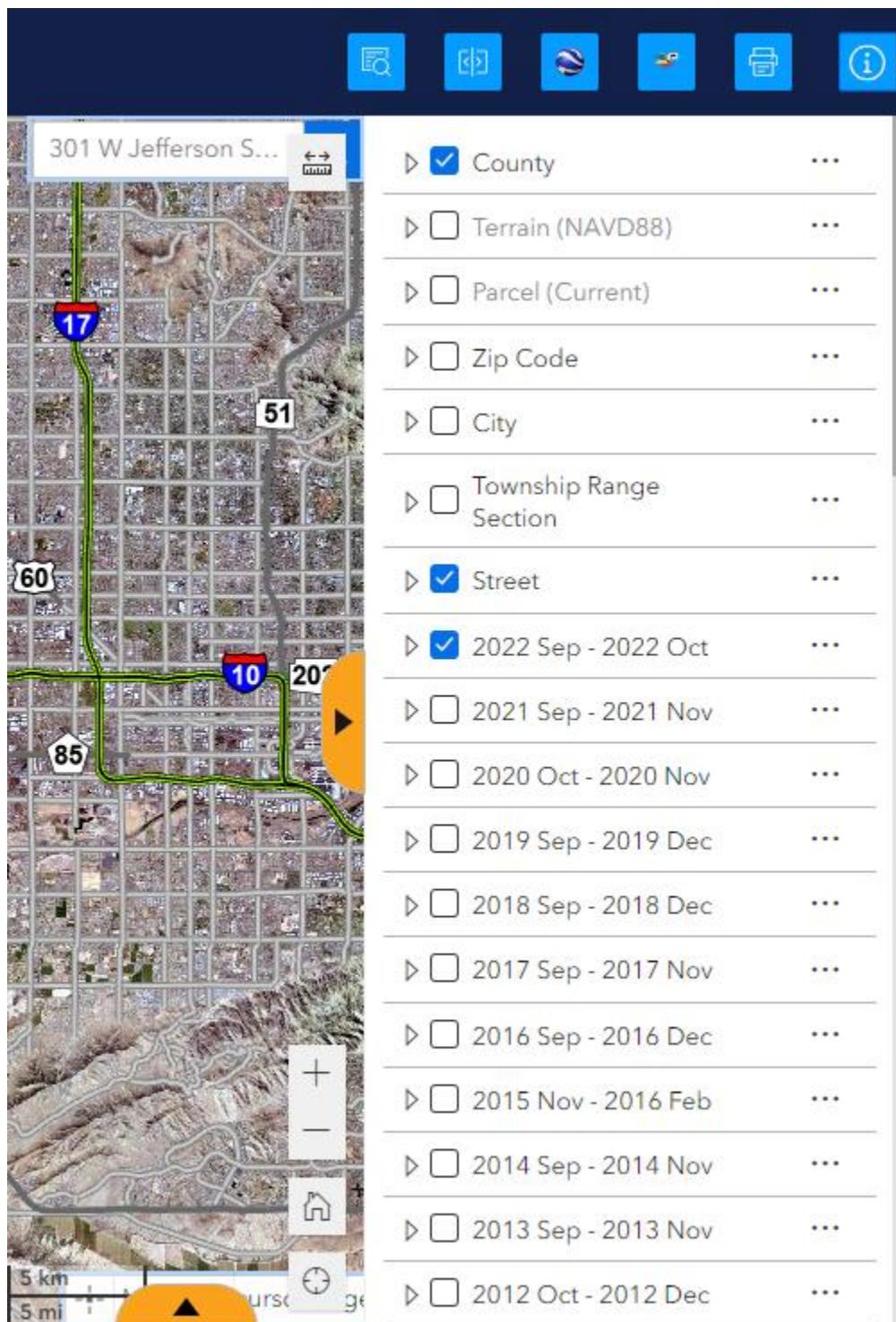
Here is how your app will appear on large screen devices.



Here is how your app will appear on medium screen devices.



Here is how your app will appear on small screen devices.

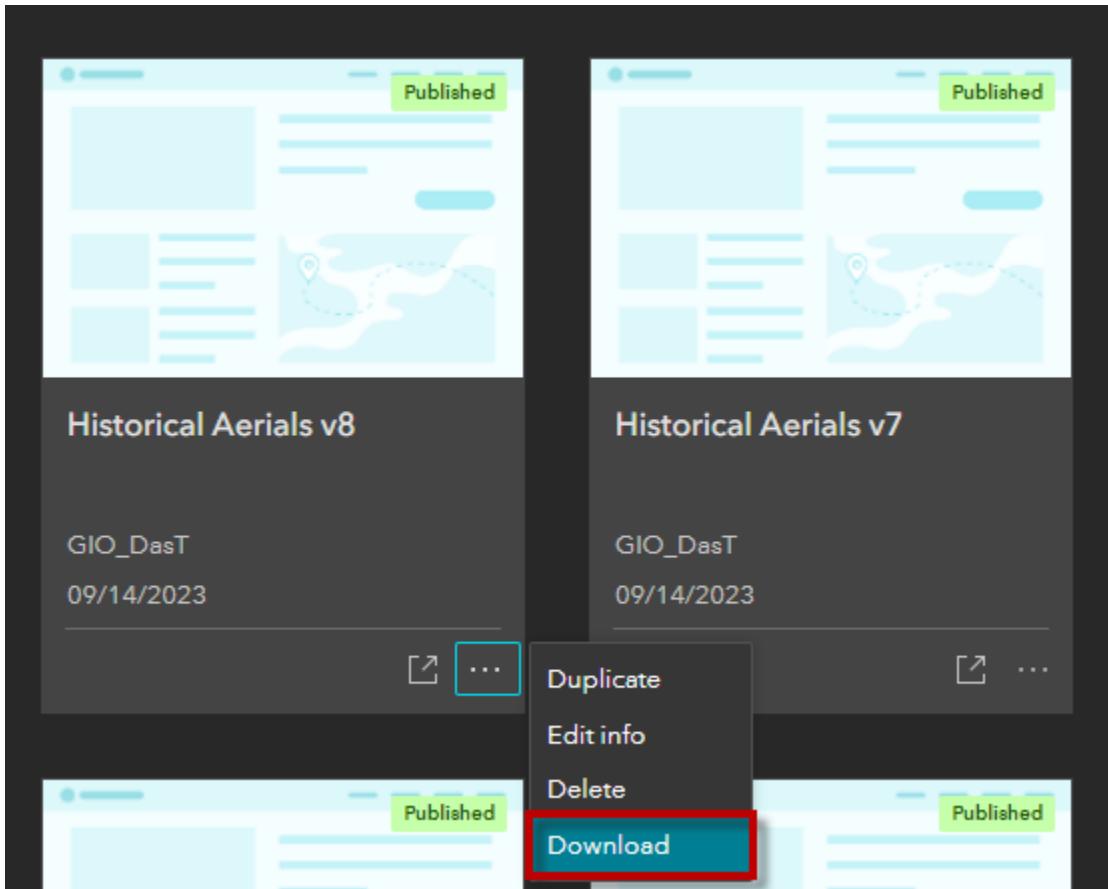


You are ready to download the ZIP file of your EXB project.

Download the ZIP file of your EXB Project

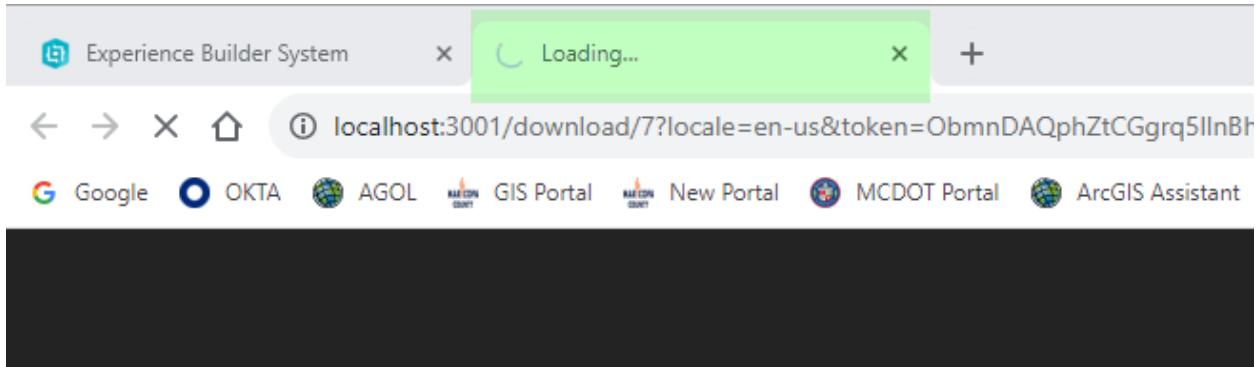
Go back to the Home Page.

Download the ZIP File for Historical Aerials v8



https://localhost:3001/download/7?locale=en-us&token=ObmnDAQphZtCGgrq5lInBhg2L6sAibCBsCD1N5BtKRVijK7g5D7CpBu7xXiHyZrW8kLjN_jBTrZQVdKc6sGCQ_d_x_6i0xM1qvQrcA7-oAAPDE3KoP7MBE8dqabcaLRvM30s1Y2yt_PfaGyCptsat25_gVeixildawEFJsWs4rHlo29ljaqlqFlF6ONi6gp1SdKG4_8loawlt1YgnBlXDHZyAWGdMoeMP0bVE_t9LI.

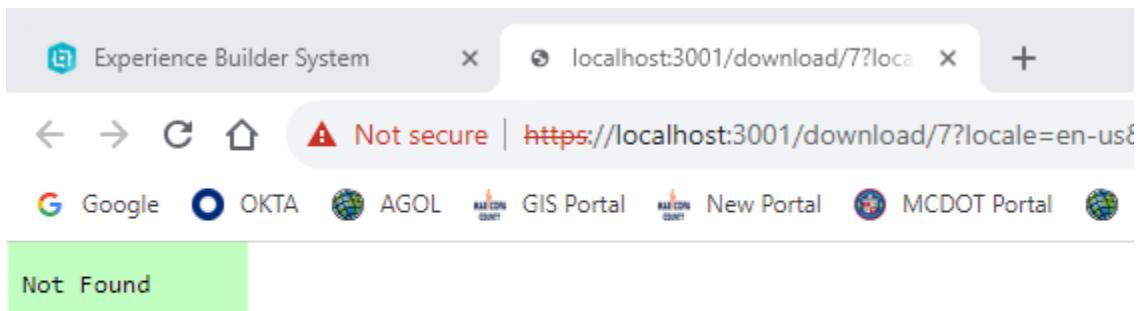
This will open a tab saying Loading...



If you are lucky, you will get a ZIP file in your downloads folder.

However, you are most likely to get this error message:

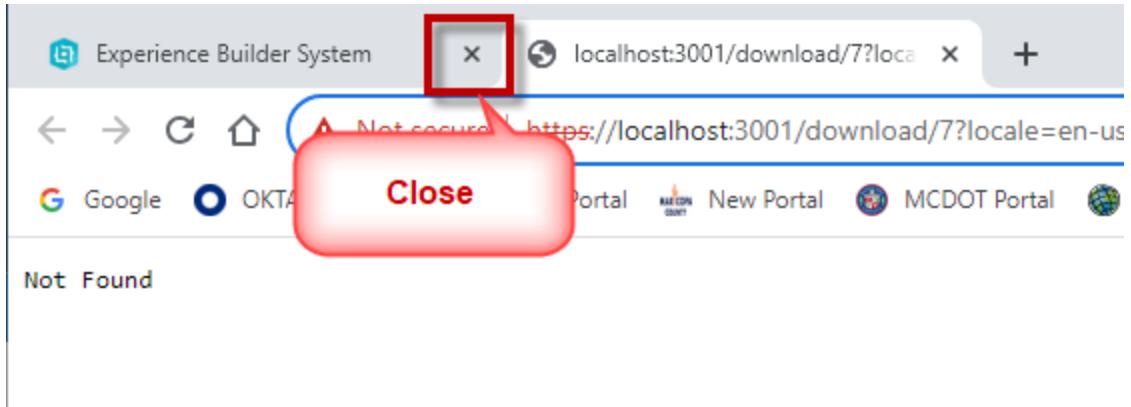
Not found.



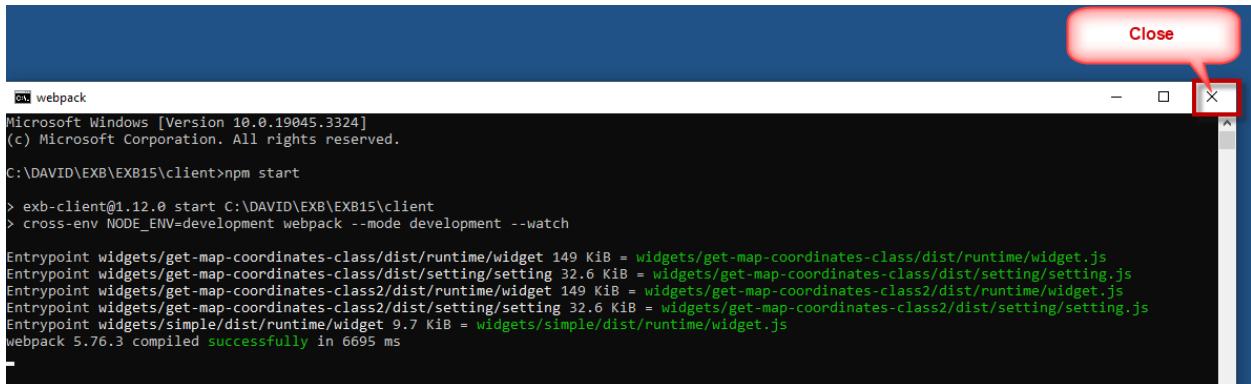
Do not panic!

Next, you will learn how to manually assemble the necessary files to deploy your Web app.

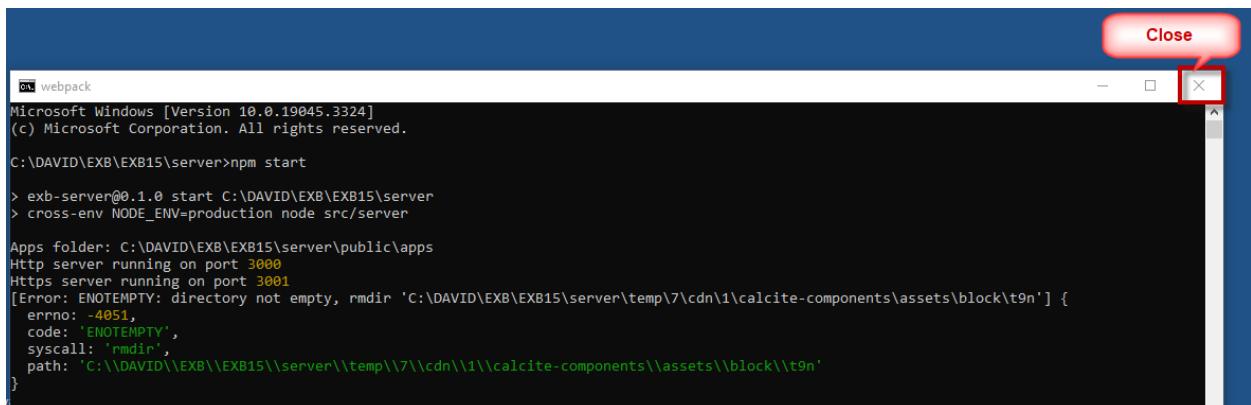
Close the Experience Builder System Tab.



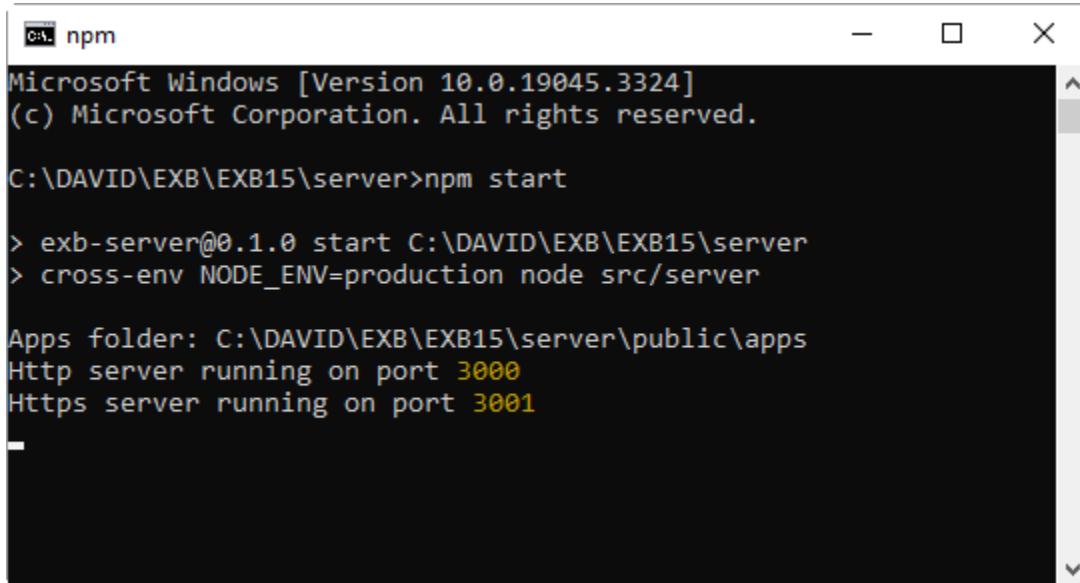
Close the Command Window running the npm Client.



Close the Command Window running the npm Server.



Restart the npm Server process.



```
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

C:\DAVID\EXB\EXB15\server>npm start

> exb-server@0.1.0 start C:\DAVID\EXB\EXB15\server
> cross-env NODE_ENV=production node src/server

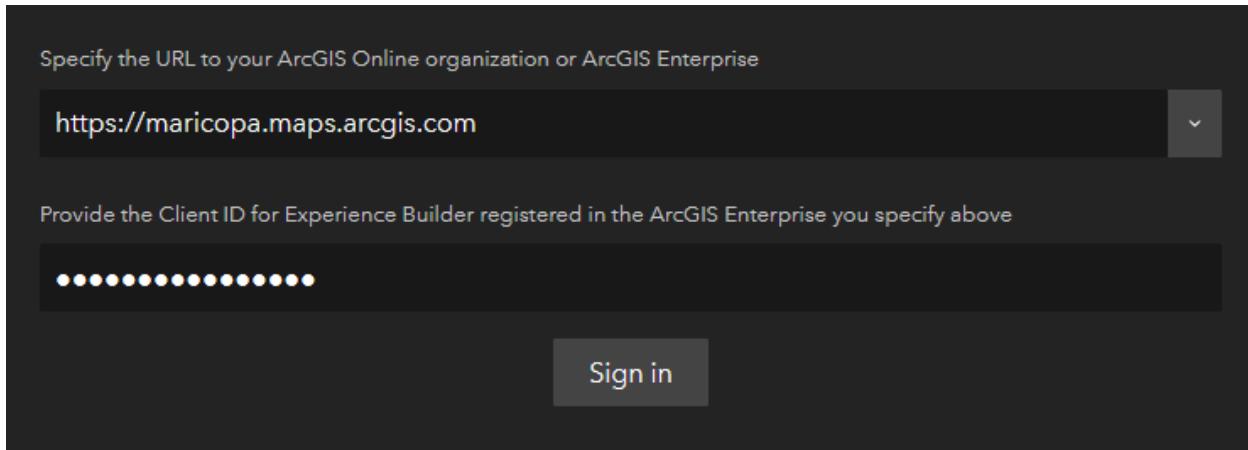
Apps folder: C:\DAVID\EXB\EXB15\server\public\apps
Http server running on port 3000
Https server running on port 3001
```

There is no need to restart the npm Client process.

Launch **Firefox**.

Note: Do not use Chrome.

<https://localhost:3001>



Sign In

EXB Client ID wants to access your ArcGIS Online account information [?](#)

Sign in to Maricopa County Enterprise GIS 

ArcGIS login

 GIO_DasT

 ••••••••••

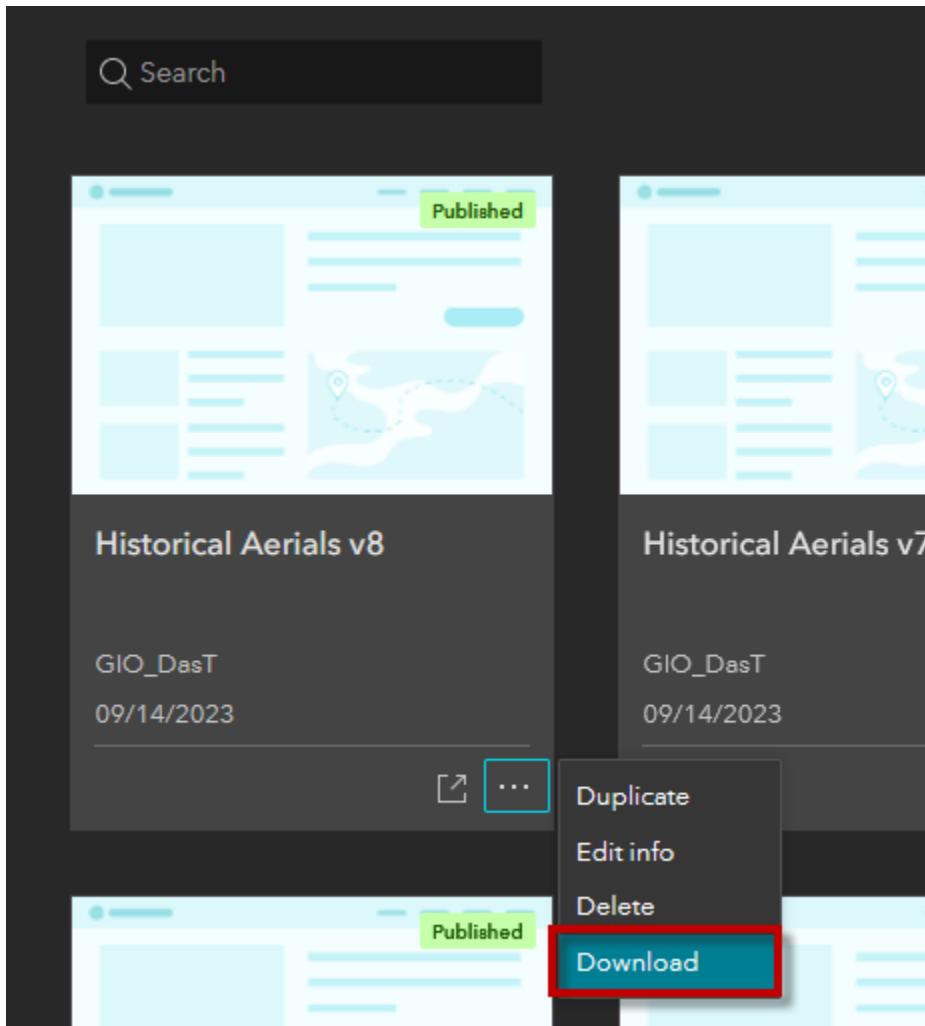
Keep me signed in

[Sign In](#) [Cancel](#)

[Forgot username?](#) or [Forgot password?](#)

[Privacy](#)

Do not start the download yet!



Navigate to the apps folder.

C:\DAVID\EXB\EXB15\server\public\apps\

0	9/4/2023 7:26 PM	File folder
1	9/4/2023 8:52 PM	File folder
2	9/4/2023 11:27 PM	File folder
3	9/5/2023 10:51 AM	File folder
4	9/6/2023 9:27 AM	File folder
5	9/13/2023 8:38 PM	File folder
6	9/14/2023 9:49 AM	File folder
7	9/14/2023 12:32 PM	File folder

These are the 8 iterations of your Historical Aerials App counting from 0 through 7.

Navigate to:

C:\DAVID\EXB\EXB15\server\public\apps\7

Delete download-times.json

resources	9/14/2023 11:14 AM	File folder
config.json	9/14/2023 12:19 PM	JSON File 203 KB
download-times.json	9/14/2023 12:32 PM	JSON File 1 KB
info.json	9/14/2023 12:19 PM	JSON File 1 KB

Navigate to the temp folder.

C:\DAVID\EXB\EXB15\server\temp

0	9/4/2023 7:59 PM	File folder
7	9/14/2023 12:31 PM	File folder

This is where all the temporary files are written before the final ZIP file can be created.

Examine the files that were written before the download process failed in your first attempt.

C:\DAVID\EXB\EXB15\server\temp\7

cdn	9/14/2023 12:29 PM	File folder
-----	--------------------	-------------

C:\DAVID\EXB\EXB15\server\temp\7\cdn\

1	9/14/2023 12:31 PM	File folder
---	--------------------	-------------

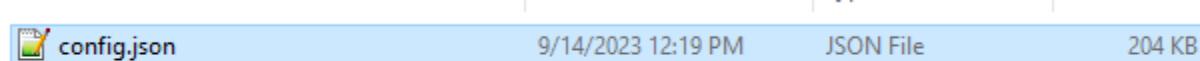
C:\DAVID\EXB\EXB15\server\temp\7\cdn\1\

arcgis-charts	9/14/2023 12:31 PM	File folder
calcite-components	9/14/2023 12:31 PM	File folder
resources	9/14/2023 12:31 PM	File folder
themes	9/14/2023 12:31 PM	File folder
widgets	9/14/2023 12:31 PM	File folder
config.json	9/14/2023 12:31 PM	JSON File 203 KB

Notice, there is a config.json file here.

Navigate to:

C:\DAVID\EXB\EXB15\server\temp\7\cdn\1\resources\config



There is a second config.json file here.

Why does the Experience Builder have 2 config.json files?

Jianxia Song was kind enough to explain the reason.

The ArcGIS Experience Builder supports [draft and published status](#) so you can test changes in the app without affecting the published live app. As such, two config JSON files are available.

<https://doc.arcgis.com/en/experience-builder/latest/build-apps/save-preview-publish.htm>

As you noticed, one is under the **resources** folder while the other is under the **data** folder. The published config.json is under the data folder while the draft config.json is under the resources folder.

If you want to see the changes in the live app, update the published config.json file under the data folder.

If you want to see the changes in the builder, update the draft config.json file under the resources folder.

For web experience items created in ArcGIS Online and ArcGIS Enterprise, the published config json is stored in the data folder. However, for the app created with the developer edition, the published config file is in the cdn/[app number] directly.

Hope this helps.

Jianxia

You have a partial download in the temp folder.

C:\DAVID\EXB\EXB15\server\temp\7



Make a new folder named **HistoricalAerials8**

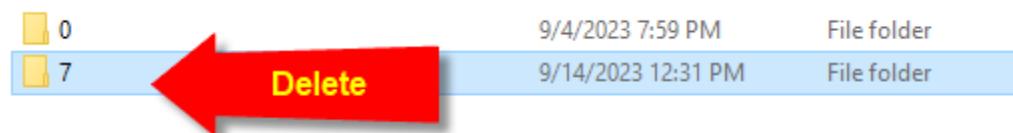
C:\DAVID\PROJECTS\HistoricalAerials8

Copy the cdn folder here.

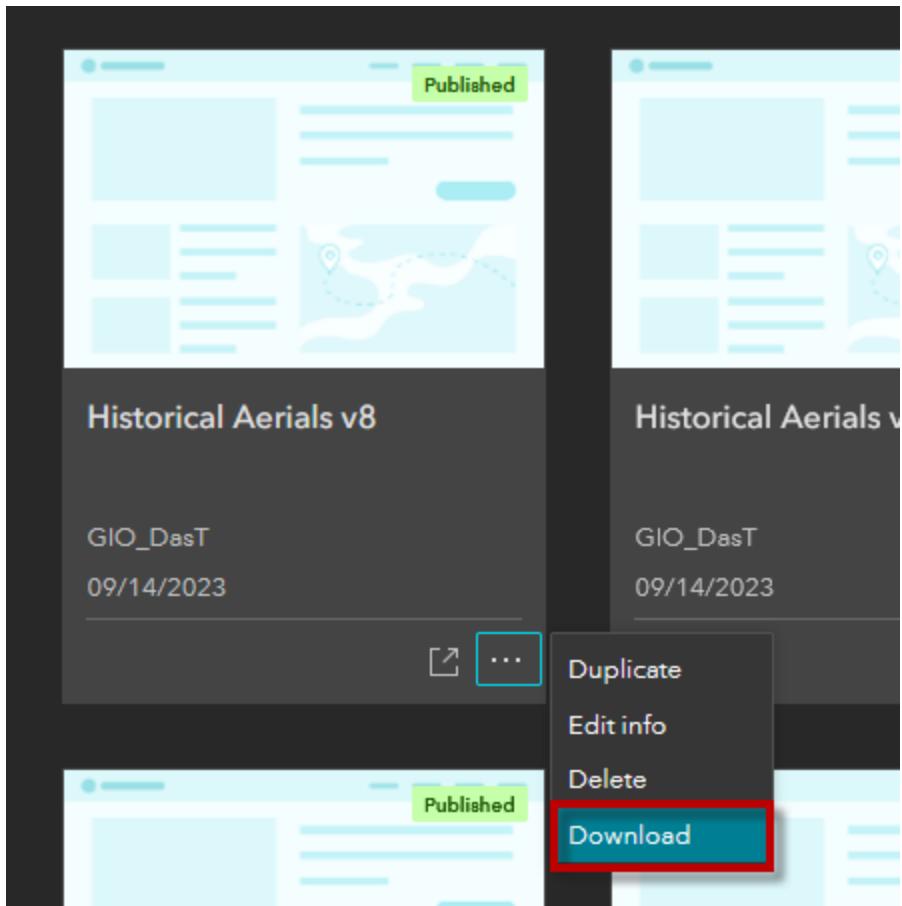


Delete this folder.

C:\DAVID\EXB\EXB15\server\temp\



Start the Download Process.



Monitor the temporary files being writing to:

C:\DAVID\EXB\EXB15\server\temp\

C:\DAVID\EXB\EXB15\server\temp\7

 cdn	9/14/2023 1:23 PM	File folder	
 index.html	9/14/2023 1:23 PM	Firefox HTML Doc...	5 KB
 service-worker.js	9/4/2023 4:52 PM	JavaScript Source ...	10 KB
 web.config	9/4/2023 4:57 PM	Configuration Sou...	2 KB

C:\DAVID\EXB\EXB15\server\temp\7\cdn\1

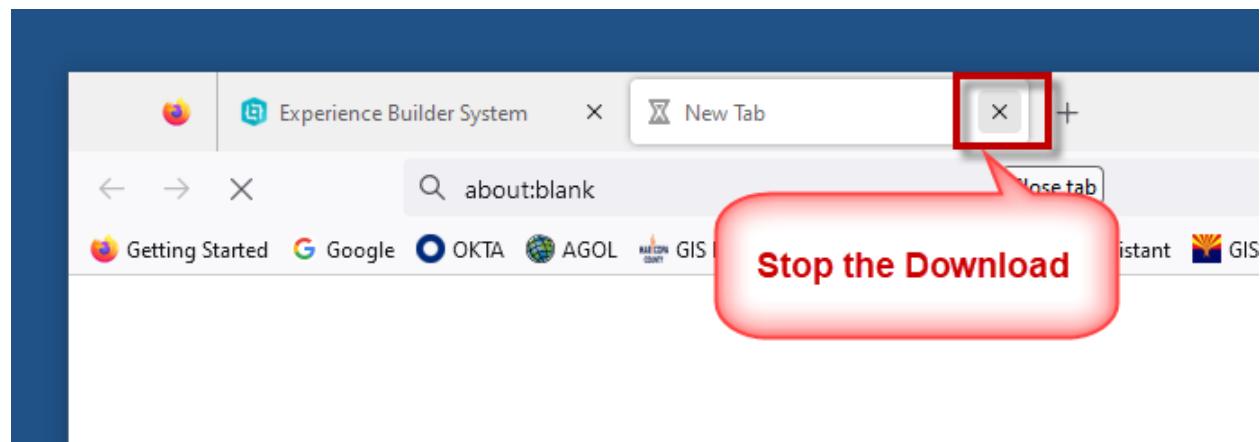
 assets	9/14/2023 1:23 PM	File folder	
 calcite-components	9/14/2023 1:23 PM	File folder	
 jimu-arcgis	9/14/2023 1:23 PM	File folder	
 jimu-core	9/14/2023 1:23 PM	File folder	
 jimu-for-builder	9/14/2023 1:23 PM	File folder	
 jimu-layouts	9/14/2023 1:23 PM	File folder	
 jimu-theme	9/14/2023 1:23 PM	File folder	
 jimu-ui	9/14/2023 1:23 PM	File folder	
 index.js	9/4/2023 4:57 PM	JavaScript Source ...	41 KB
 service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ...	1 KB

Keep refreshing this folder.

Stop the download process the moment the **widgets** folder gets written.

C:\DAVID\EXB\EXB15\server\temp\7\cdn\1\

arcgis-charts	9/14/2023 1:25 PM	File folder
assets	9/14/2023 1:23 PM	File folder
calcite-components	9/14/2023 1:23 PM	File folder
jimu-arcgis	9/14/2023 1:23 PM	File folder
jimu-core	9/14/2023 1:23 PM	File folder
jimu-for-builder	9/14/2023 1:23 PM	File folder
jimu-layouts	9/14/2023 1:23 PM	File folder
jimu-theme	9/14/2023 1:23 PM	File folder
jimu-ui	9/14/2023 1:23 PM	File folder
themes	9/14/2023 1:24 PM	File folder
widgets	9/14/2023 1:25 PM	File folder
index.js	9/4/2023 4:57 PM	JavaScript Source ... 41 KB
service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ... 1 KB



Note: If you wait too long, the process will fail and most of your temporary files will begin to get deleted.

Examine the temporary files under:

C:\DAVID\EXB\EXB15\server\temp\7\

cdn	9/14/2023 1:23 PM	File folder
index.html	9/14/2023 1:23 PM	Firefox HTML Doc... 5 KB
service-worker.js	9/4/2023 4:52 PM	JavaScript Source ... 10 KB
web.config	9/4/2023 4:57 PM	Configuration Sou... 2 KB

Copy the highlighted files to:

C:\DAVID\PROJECTS\HistoricalAerials8\

cdn	9/14/2023 1:19 PM	File folder
index.html	9/14/2023 1:23 PM	Firefox HTML Doc... 5 KB
service-worker.js	9/4/2023 4:52 PM	JavaScript Source ... 10 KB
web.config	9/4/2023 4:57 PM	Configuration Sou... 2 KB

Open the cdn\1 folder.

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1\

Delete everything except config.json

arcgis-charts	9/14/2023 1:19 PM	File folder
calcite-components	9/14/2023 1:19 PM	File folder
resources	9/14/2023 1:19 PM	File folder
themes	9/14/2023 1:19 PM	File folder
widgets	9/14/2023 1:20 PM	File folder
config.json	9/14/2023 1:20 PM	JSON File 203 KB

Delete everything except config.json

Copy these files from:

C:\DAVID\EXB\EXB15\server\temp\7\cdn\1

📁	arcgis-charts	9/14/2023 1:25 PM	File folder
📁	assets	9/14/2023 1:23 PM	File folder
📁	calcite-components	9/14/2023 1:23 PM	File folder
📁	jimu-arcgis	9/14/2023 1:23 PM	File folder
📁	jimu-core	9/14/2023 1:23 PM	File folder
📁	jimu-for-builder	9/14/2023 1:23 PM	File folder
📁	jimu-layouts	9/14/2023 1:23 PM	File folder
📁	jimu-theme	9/14/2023 1:23 PM	File folder
📁	jimu-ui	9/14/2023 1:23 PM	File folder
📁	themes	9/14/2023 1:24 PM	File folder
📁	widgets	9/14/2023 1:25 PM	File folder
📄	index.js	9/4/2023 4:57 PM	JavaScript Source ... 41 KB
📄	service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ... 1 KB

To:

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1

arcgis-charts	9/14/2023 1:38 PM	File folder
assets	9/14/2023 1:38 PM	File folder
calcite-components	9/14/2023 1:40 PM	File folder
jimu-arcgis	9/14/2023 1:40 PM	File folder
jimu-core	9/14/2023 1:40 PM	File folder
jimu-for-builder	9/14/2023 1:40 PM	File folder
jimu-layouts	9/14/2023 1:40 PM	File folder
jimu-theme	9/14/2023 1:40 PM	File folder
jimu-ui	9/14/2023 1:40 PM	File folder
themes	9/14/2023 1:40 PM	File folder
widgets	9/14/2023 1:40 PM	File folder
config.json	9/14/2023 1:25 PM	JSON File 203 KB
index.js	9/4/2023 4:57 PM	JavaScript Source ... 41 KB
service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ... 1 KB

Examine the widgets folder:

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1\widgets\

It has both your Custom Widgets.

arcgis	9/14/2023 1:40 PM	File folder
chunks	9/14/2023 1:40 PM	File folder
common	9/14/2023 1:40 PM	File folder
get-map-coordinates-class	9/14/2023 1:40 PM	File folder
get-map-coordinates-class2	9/14/2023 1:40 PM	File folder
layout	9/14/2023 1:40 PM	File folder
widgets-info.json	9/14/2023 12:29 PM	JSON File 176 KB

The only folder you are missing is the resources folder under:

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1

Copy the resources folder from:

C:\DAVID\EXB\EXB15\server\public\apps\7

 resources	9/14/2023 11:14 AM	File folder
 config.json	9/14/2023 12:19 PM	JSON File 203 KB
 download-times.json	9/14/2023 1:26 PM	JSON File 1 KB
 info.json	9/14/2023 12:19 PM	JSON File 1 KB

To:

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1\

 arcgis-charts	9/14/2023 1:38 PM	File folder
 assets	9/14/2023 1:38 PM	File folder
 calcite-components	9/14/2023 1:40 PM	File folder
 jimu-arcgis	9/14/2023 1:40 PM	File folder
 jimu-core	9/14/2023 1:40 PM	File folder
 jimu-for-builder	9/14/2023 1:40 PM	File folder
 jimu-layouts	9/14/2023 1:40 PM	File folder
 jimu-theme	9/14/2023 1:40 PM	File folder
 jimu-ui	9/14/2023 1:40 PM	File folder
 resources	9/14/2023 1:46 PM	File folder
 themes	9/14/2023 1:40 PM	File folder
 widgets	9/14/2023 1:40 PM	File folder
 config.json	9/14/2023 1:25 PM	JSON File 203 KB
 index.js	9/4/2023 4:57 PM	JavaScript Source ... 41 KB
 service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ... 1 KB

These are all the files and folders you need to deploy your web app.

Deploy to a Web Server

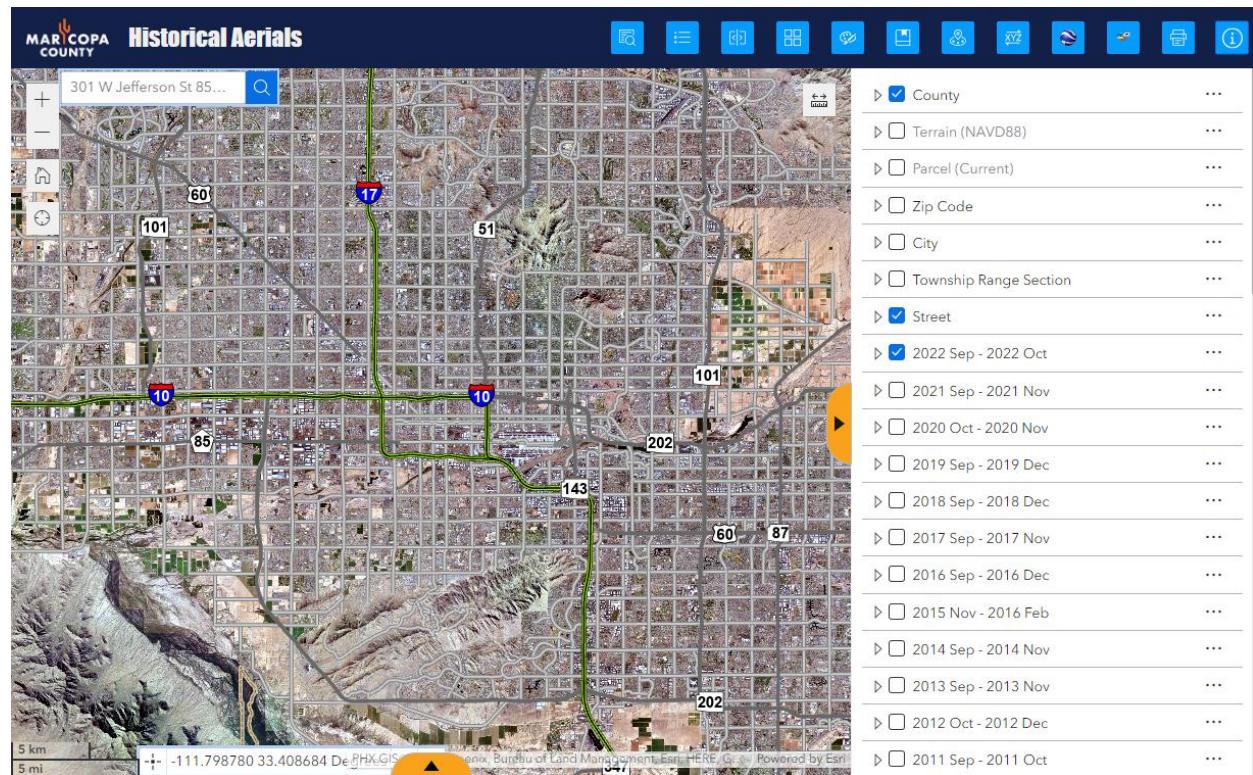
Move the HistoricalAerials8 folder to your Web Server.

C:\inetpub\wwwroot\maps\HistoricalAerials8\

 cdn	9/14/2023 1:54 PM	File folder
 index.html	9/14/2023 1:23 PM	HTML Document
 service-worker.js	9/4/2023 4:52 PM	JavaScript File
 web.config	9/4/2023 4:57 PM	CONFIG File

Launch your Web App:

<https://gisdevweb.maricopa.gov/maps/HistoricalAerials8/>



How to Publish a Website on GitHub Pages

If you do not have ready access to a Web Server, there is yet another way to test your website and verify if everything is working properly under different browsers and screen sizes.

You can publish your website to GitHub pages by creating a free account.

As an added bonus, the SSL Certificate for your website comes for free.

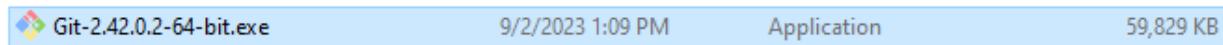
First, you must install Git on your PC.

Install Git on your PC

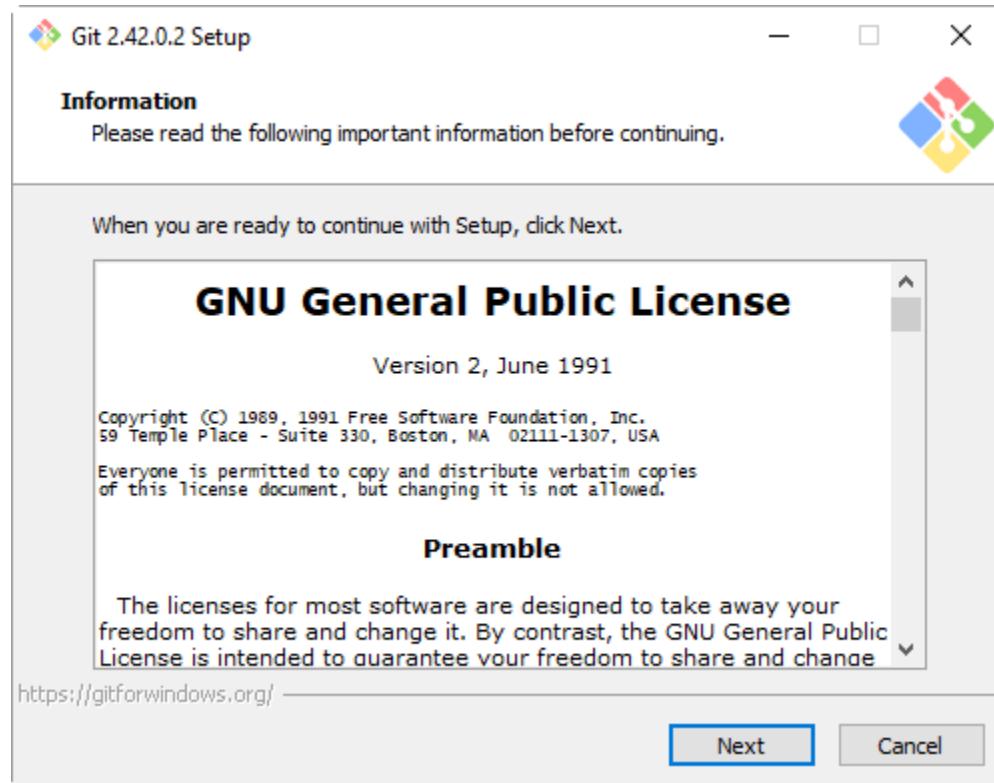
Important: Before you install Git, make sure you have Microsoft .NET Framework 4.8 installed. The Git Credential Manager needs Microsoft .NET Framework 4.76 or higher.

Download Git version 2.42 for Windows 64-bit:

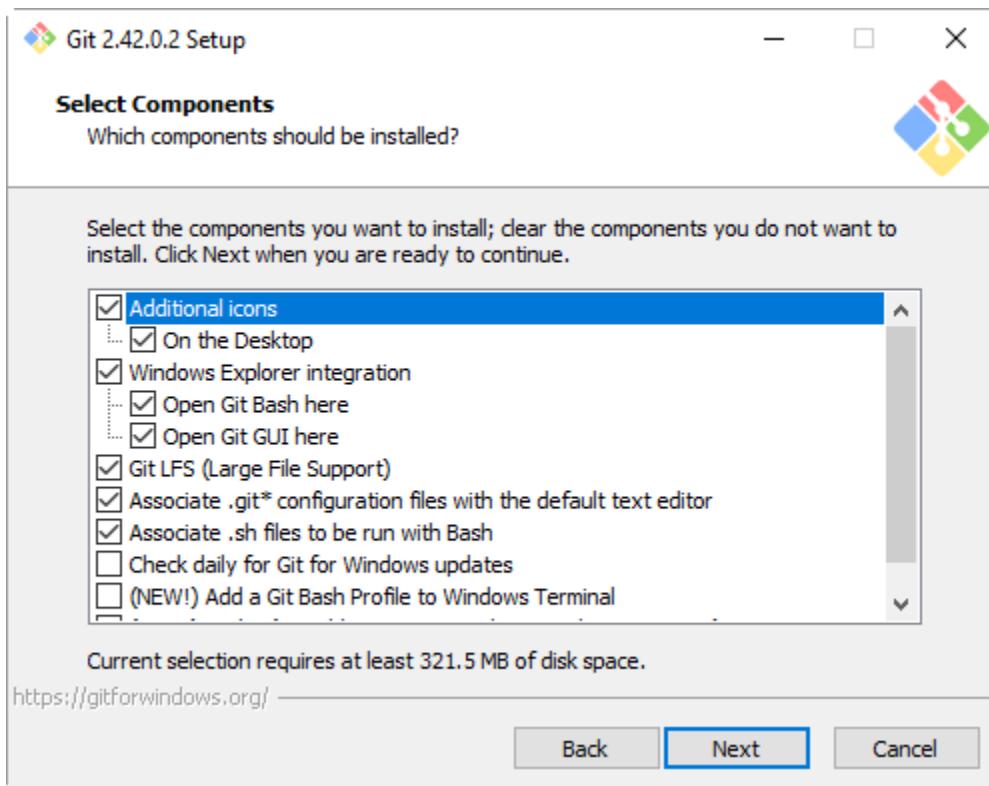
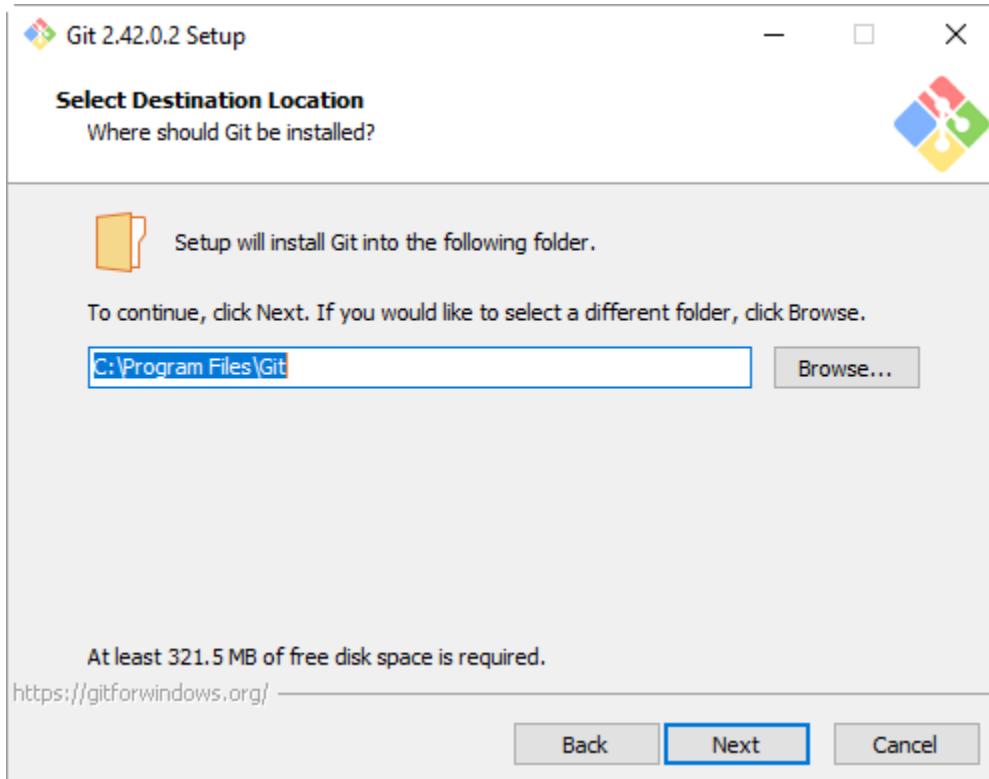
<https://github.com/git-for-windows/git/releases/download/v2.42.0.windows.2/Git-2.42.0.2-64-bit.exe>

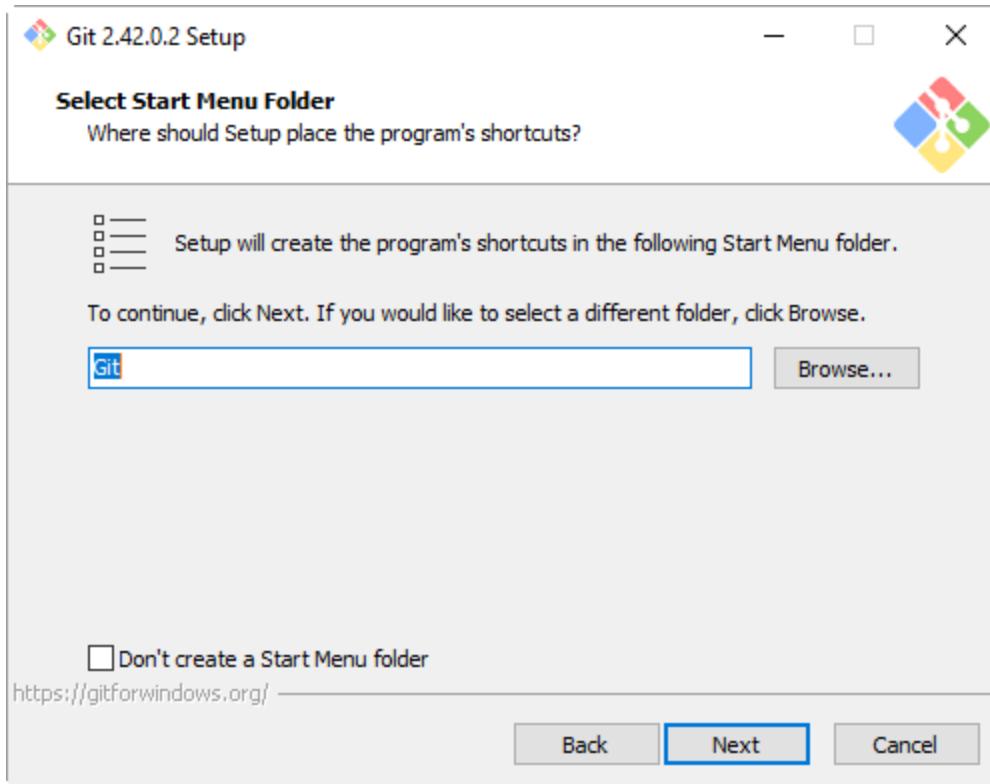


Install Git

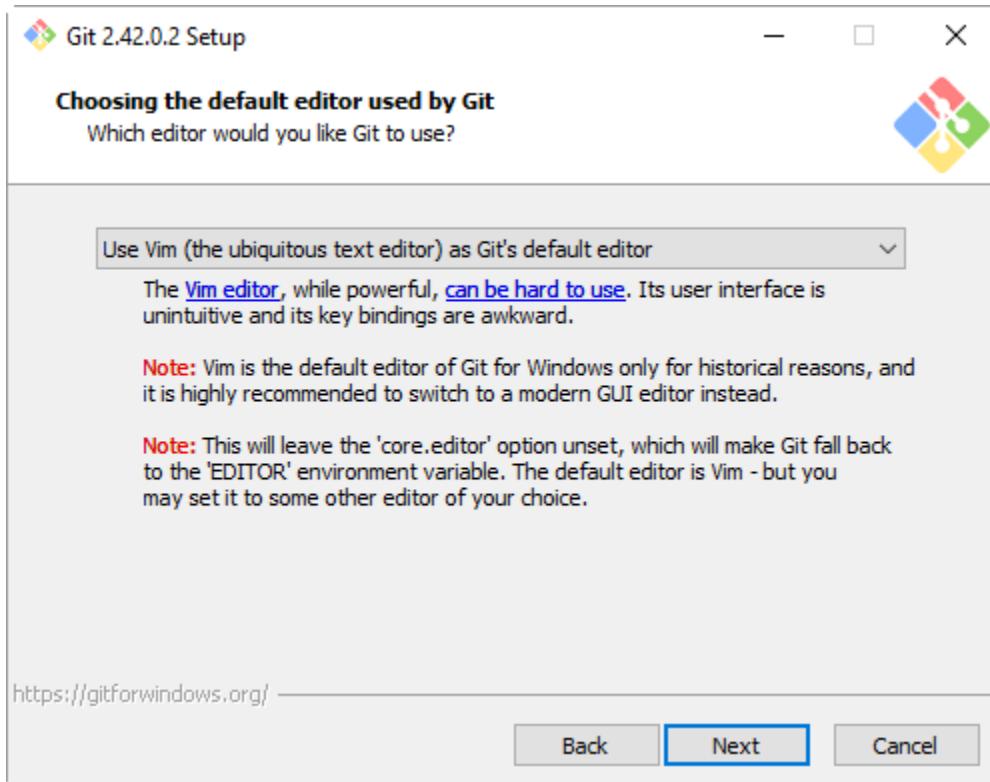


Install Folder = C:\Program Files\Git

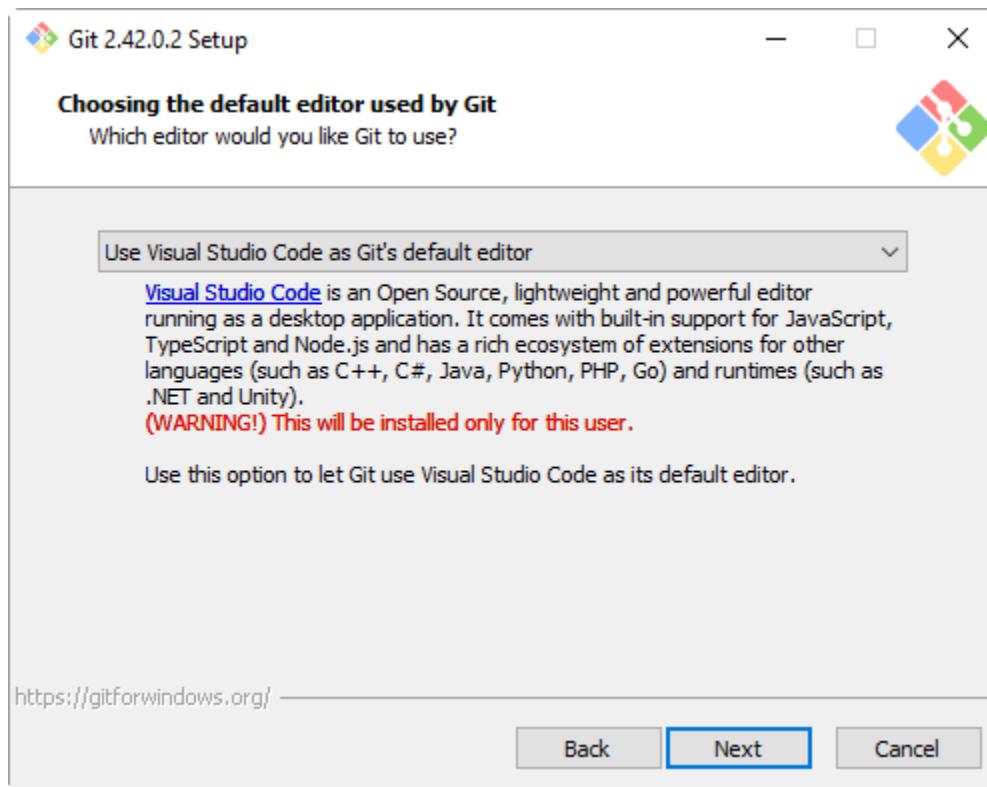
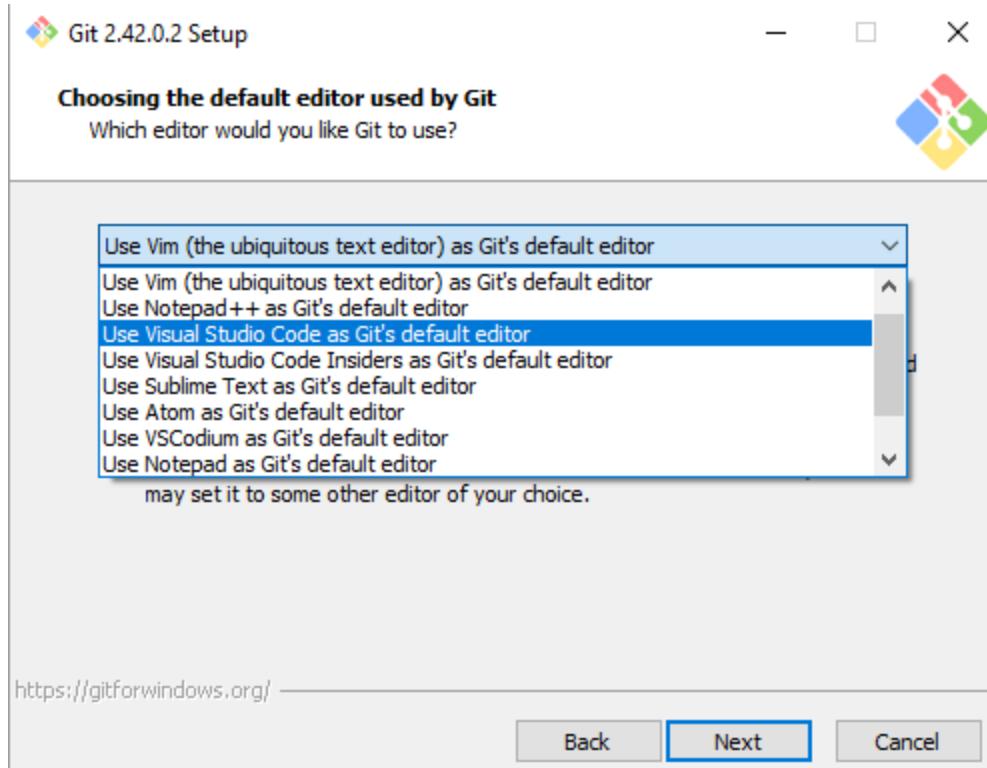


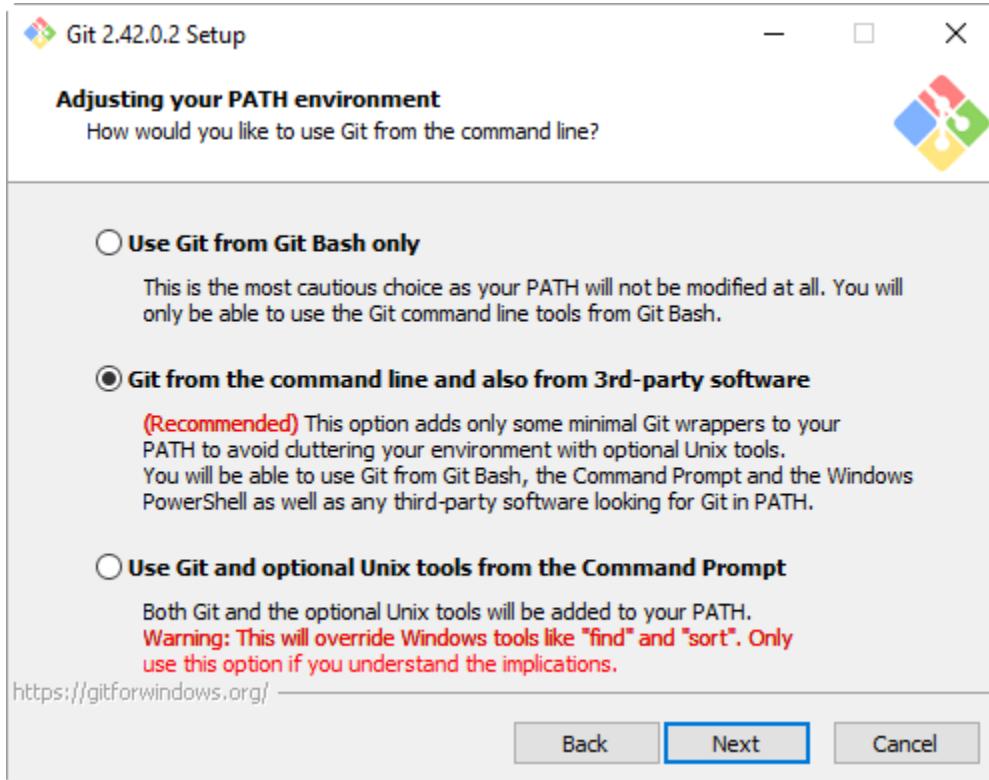
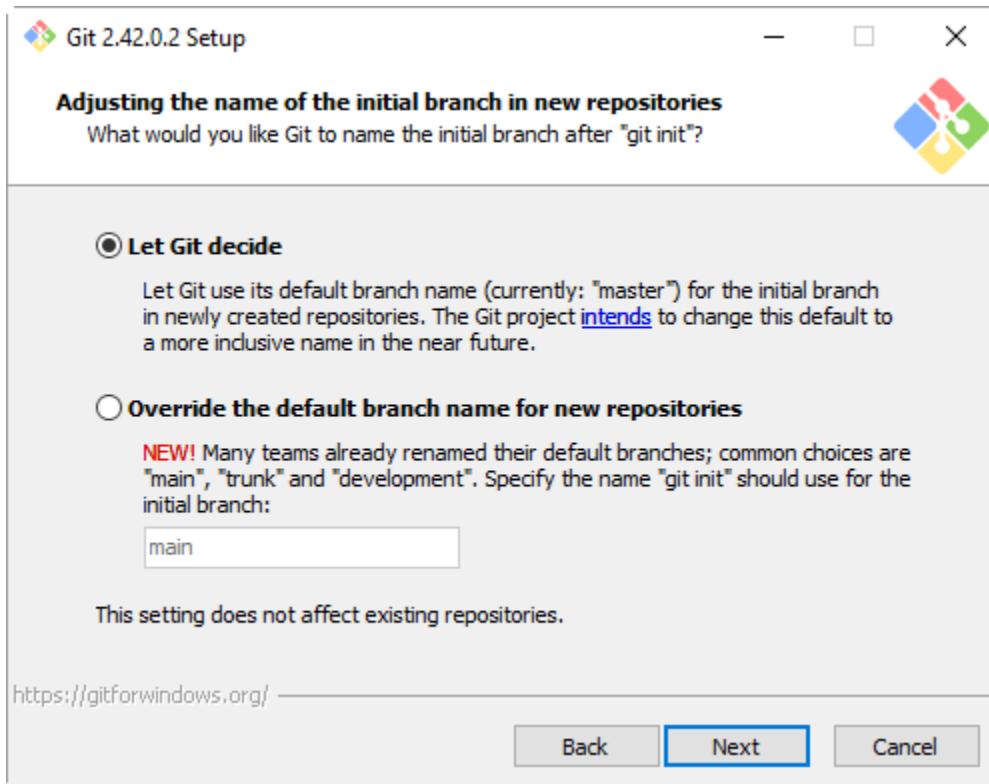


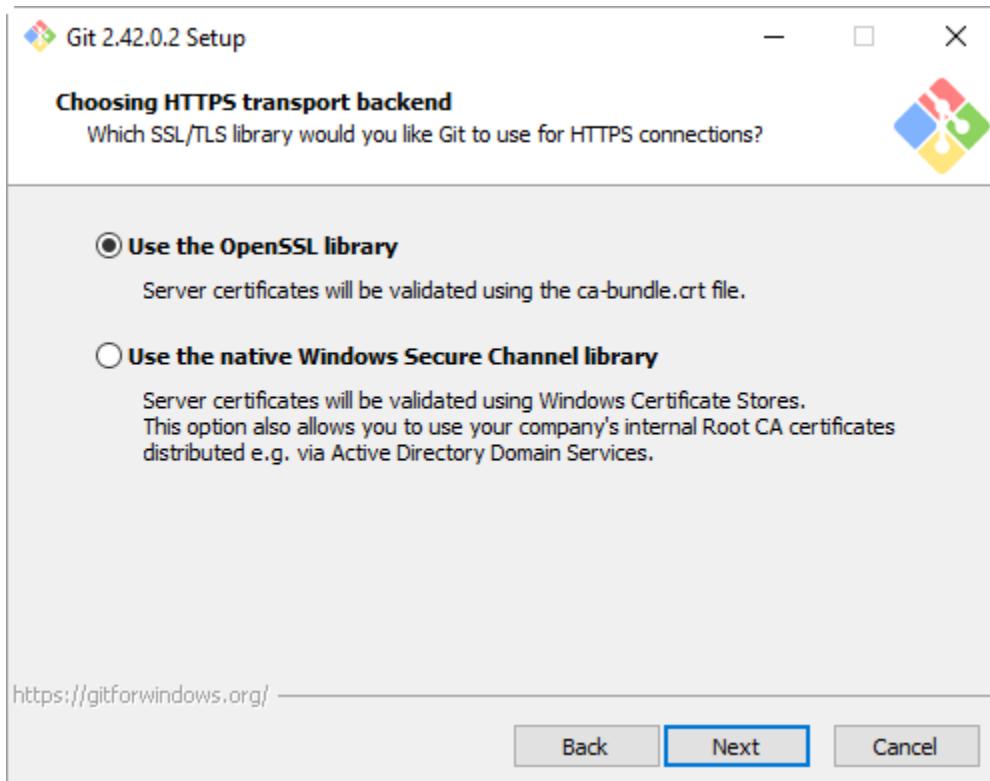
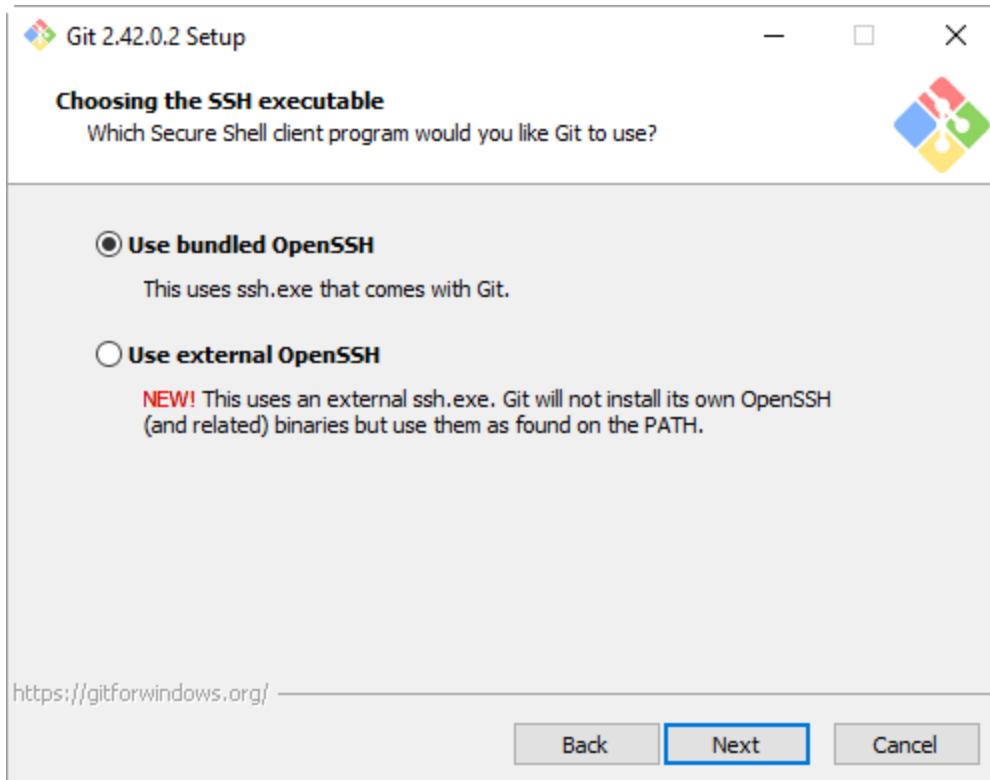
Note: Do not use the default Vim Editor!

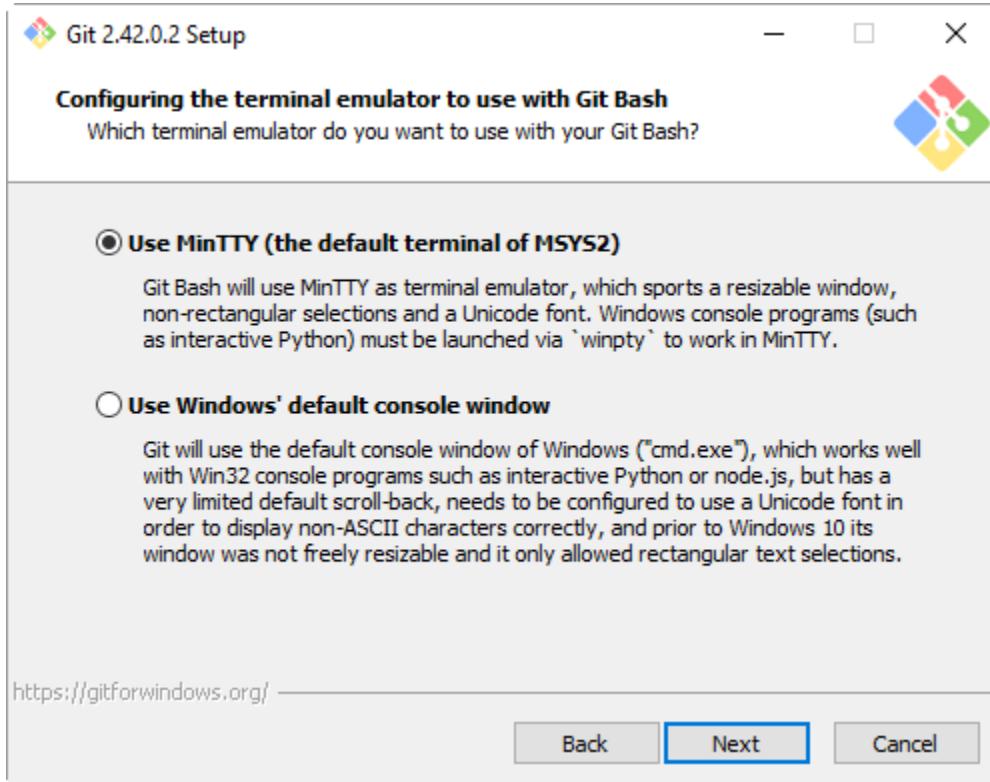
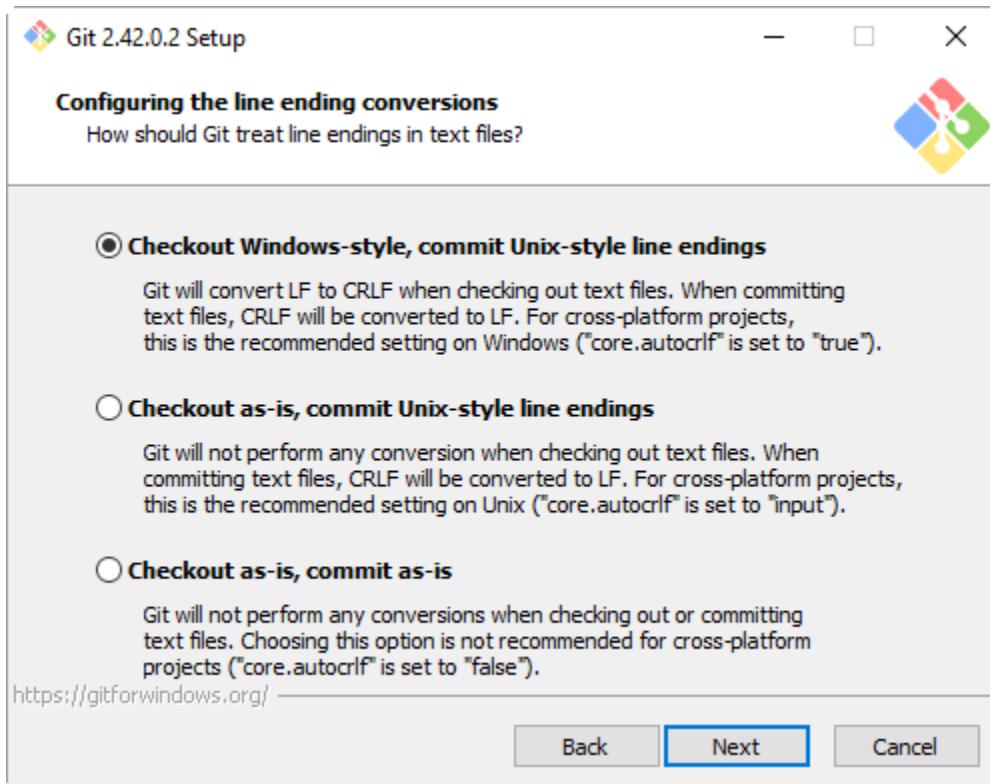


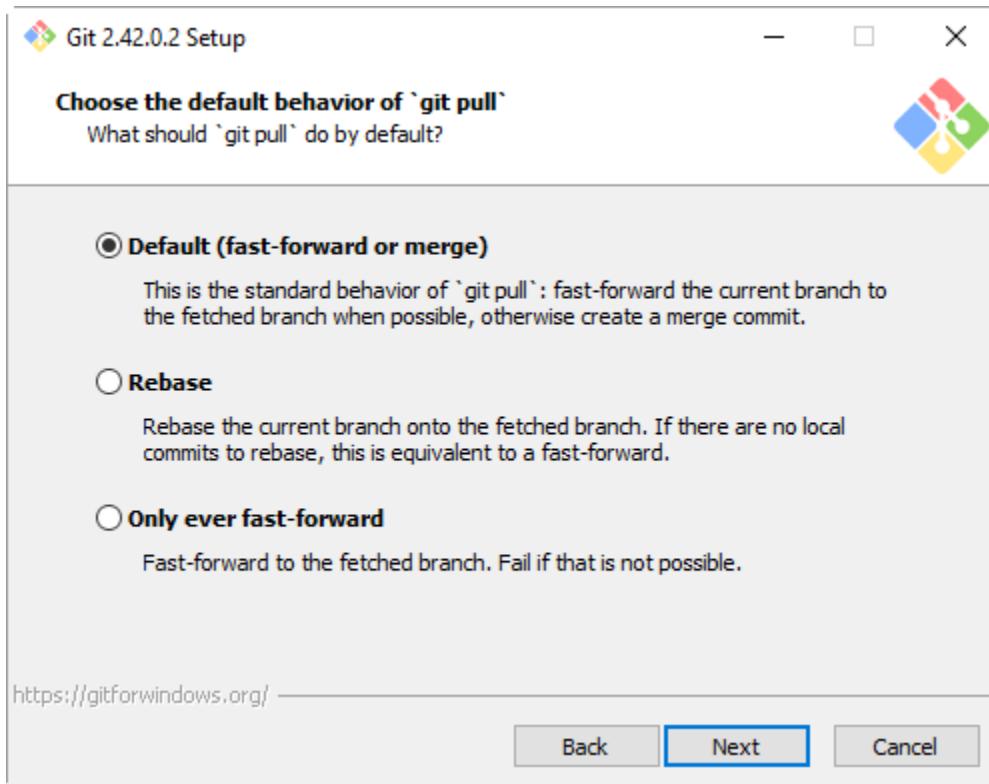
Use Visual Studio Code as Git's default editor.



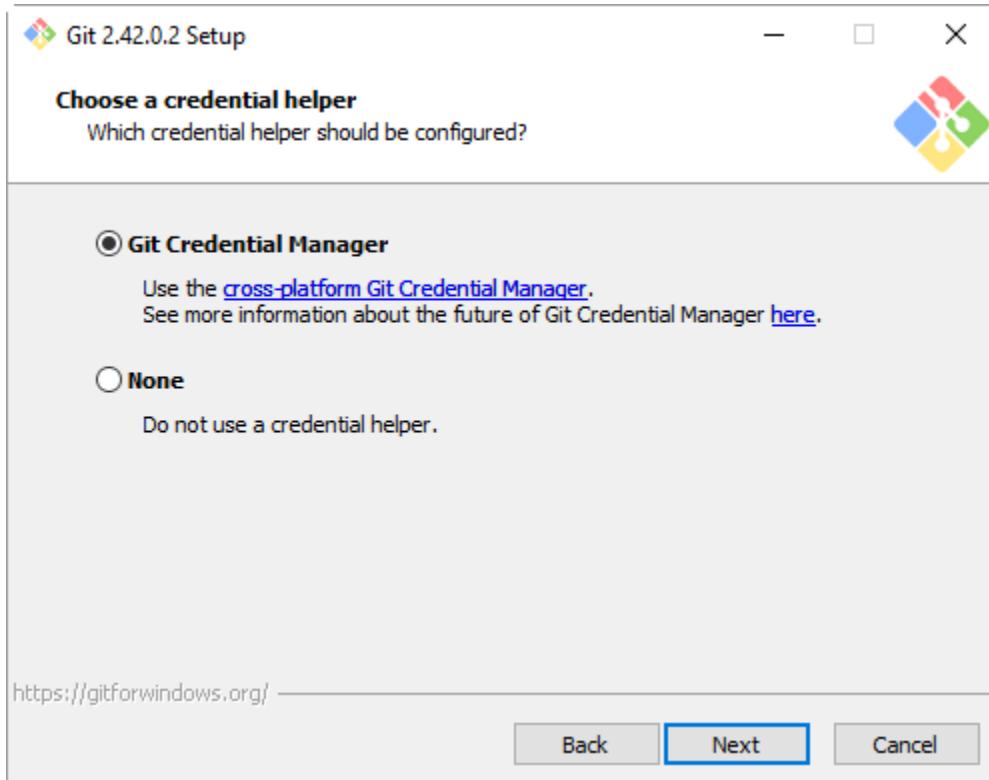


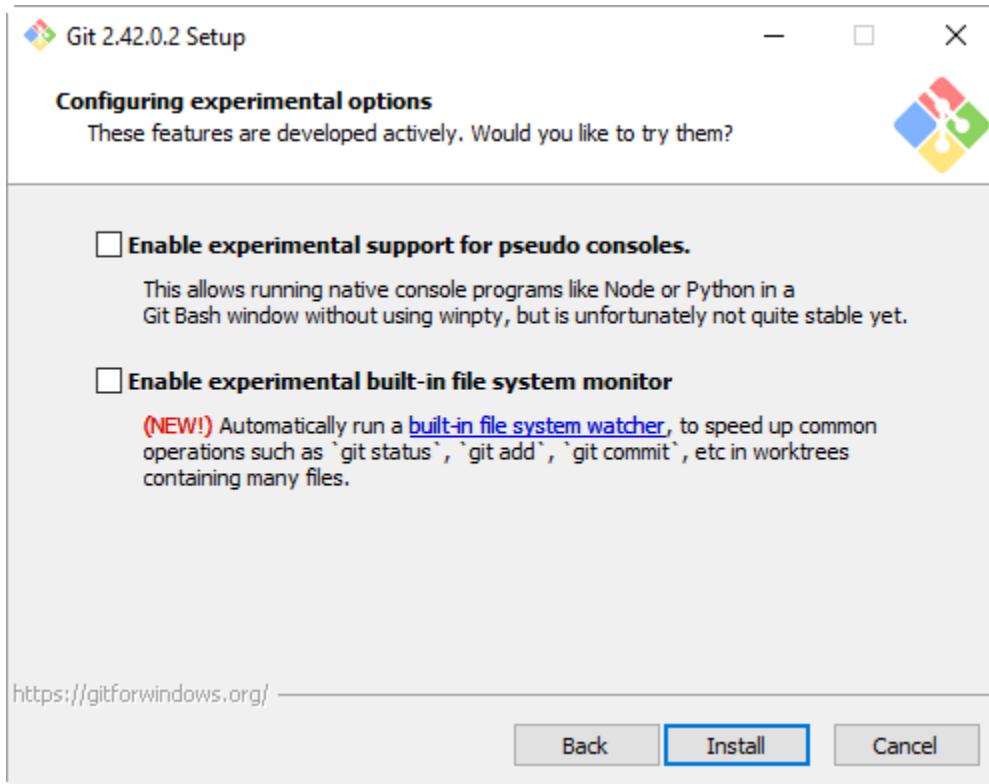
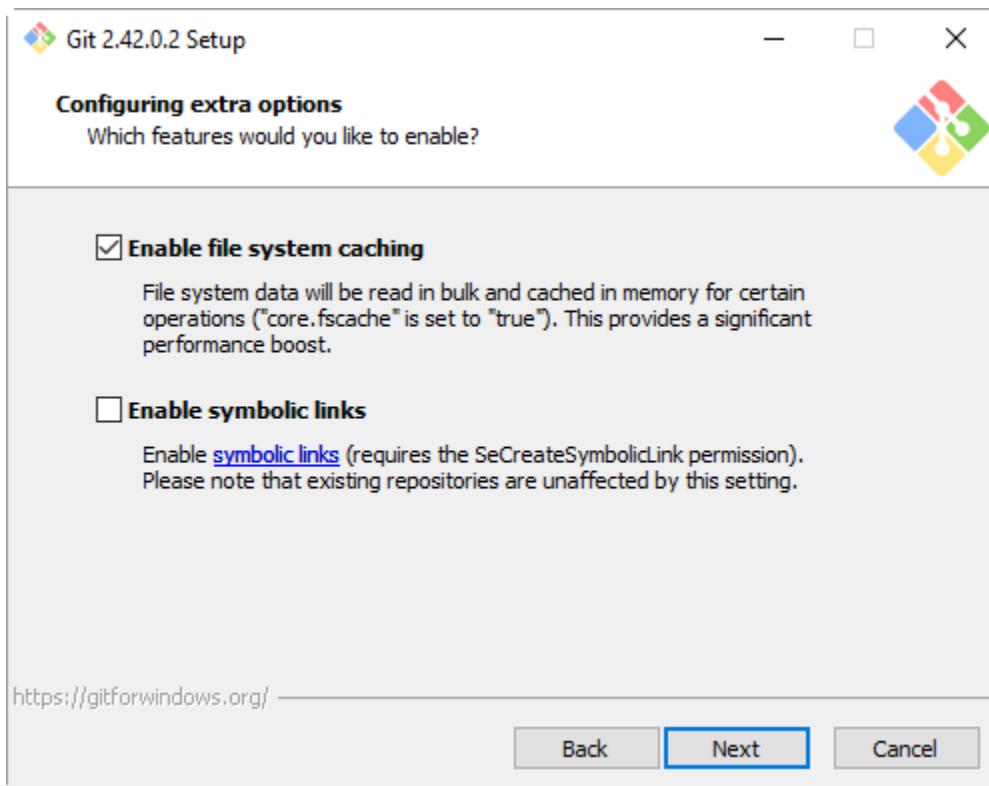






You must use the Git Credential Manager.





Completing the Git Setup Wizard

Setup has finished installing Git on your computer. The application may be launched by selecting the installed shortcuts.

Click Finish to exit Setup.

- Launch Git Bash
- [View Release Notes](#)

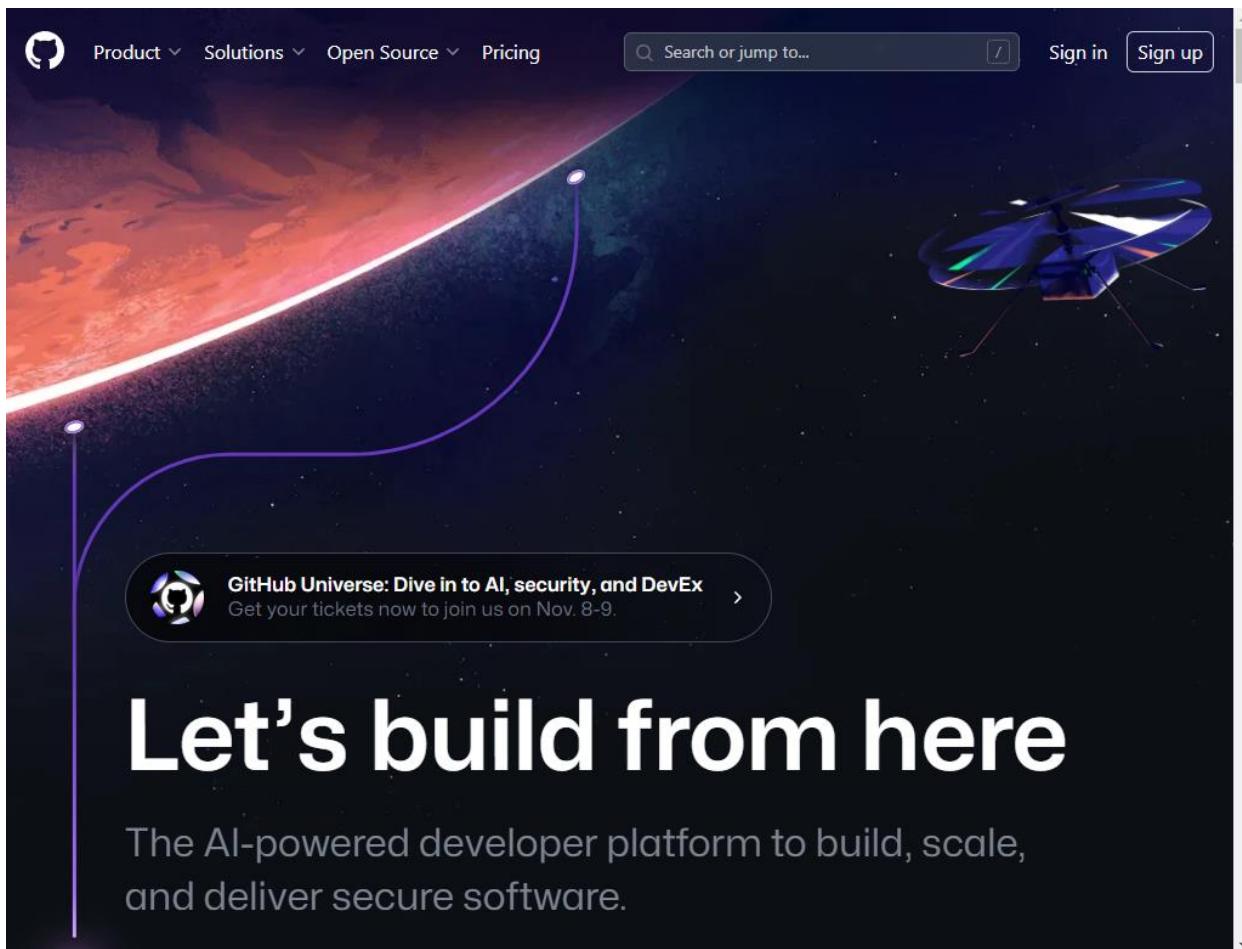


[Finish](#)

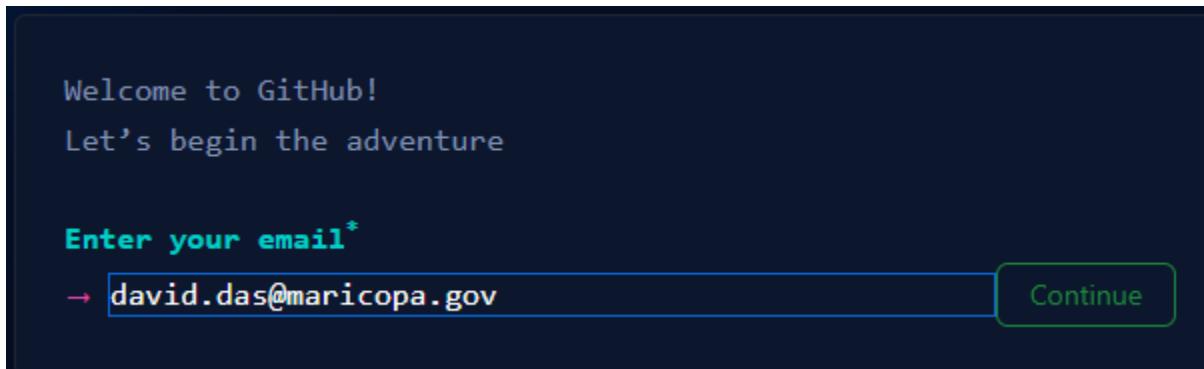
Create a Free Account on GitHub

<https://github.com/>

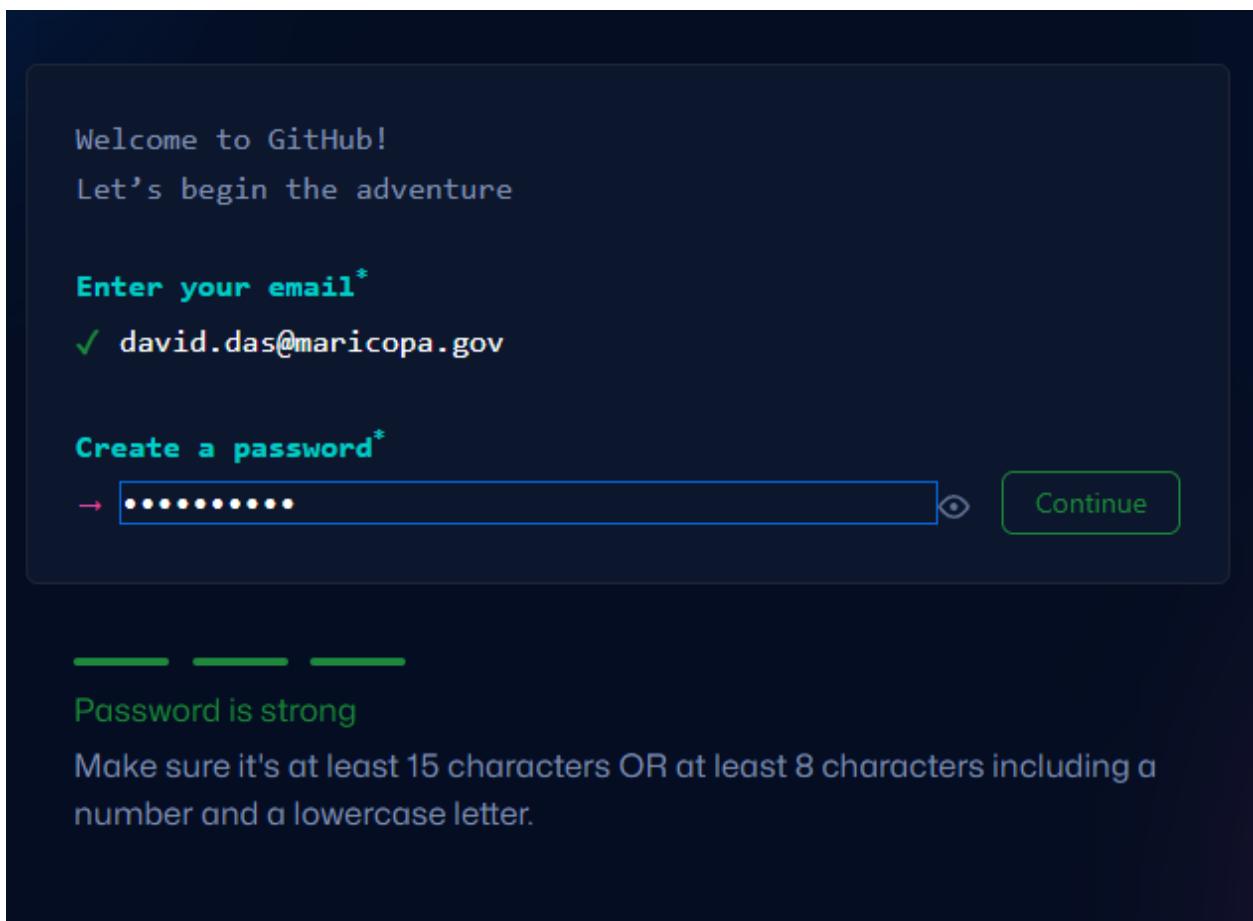
Sign Up



Email = david.das@maricopa.gov



Password =



Enter a Username = DavidDas2

Note: Make this Username as short as possible. It will become a part of the path to your website.

Welcome to GitHub!
Let's begin the adventure

Enter your email*
✓ david.das@maricopa.gov

Create a password*
✓ ••••••••

Enter a username*
→ DavidDas2

[Continue](#)

DavidDas2 is available.

Welcome to GitHub!
Let's begin the adventure

Enter your email*

✓ david.das@maricopa.gov

Create a password*

✓*

Enter a username*

✓ DavidDas2

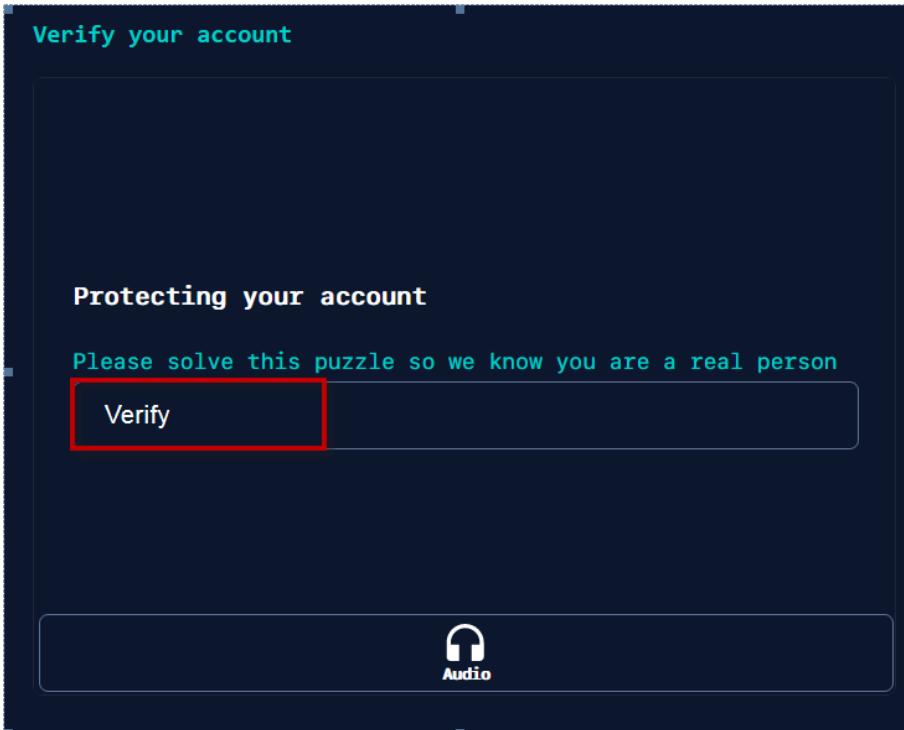
Would you like to receive product updates and announcements via email?

Type "y" for yes or "n" for no

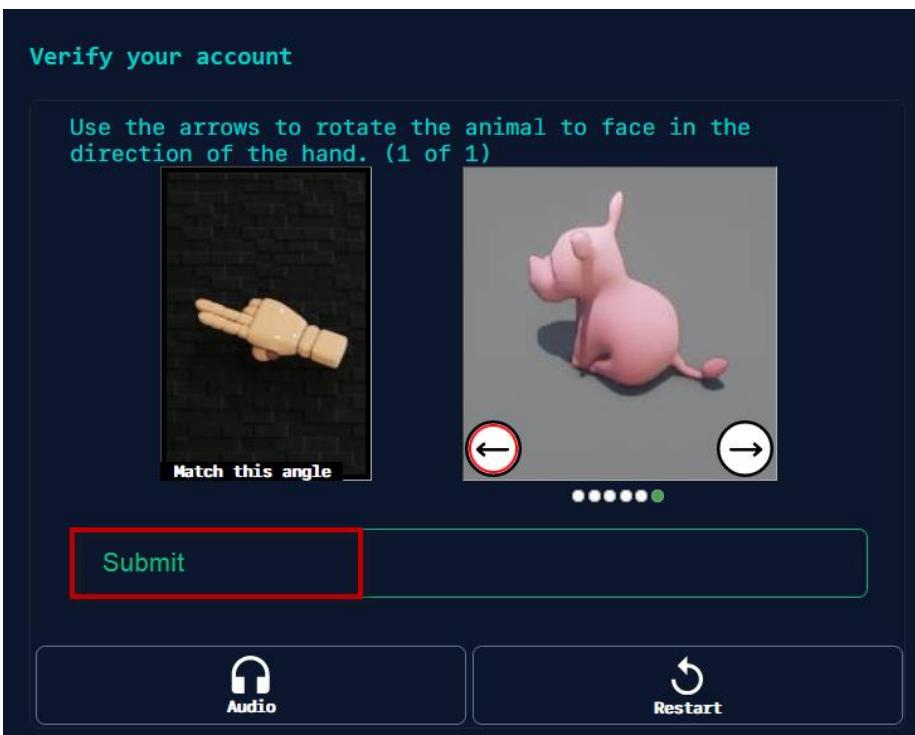
→ n

Continue

Verify your Account

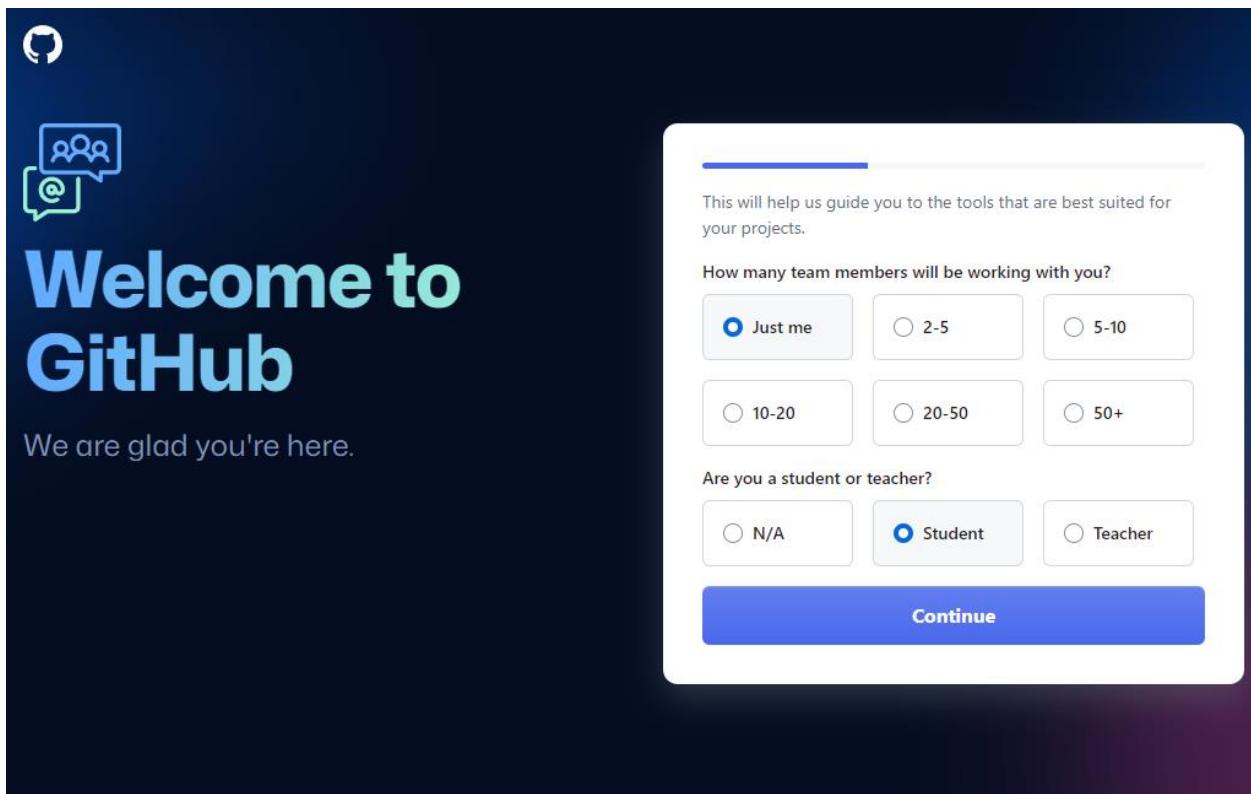
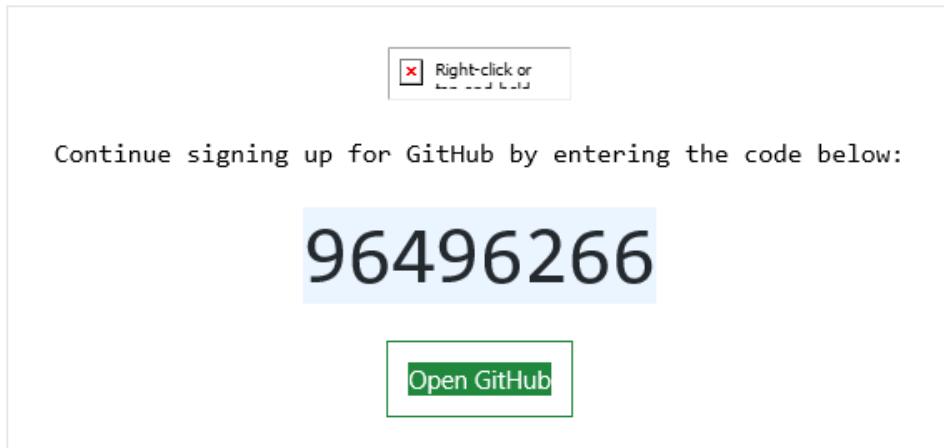


Submit



The GitHub Launch Code will be emailed to you.

Here's your GitHub launch code, @DavidDas2!



Select the Free Option.

Free

- > Unlimited public/private repositories
- > 2,000 CI/CD minutes/month
Free for public repositories
- > 500MB of Packages storage
Free for public repositories
- > 120 core-hours of Codespaces compute
- > 15GB of Codespaces storage
- > Community support

Select the Free Option

[Continue for free](#)

Get additional student benefits

GitHub Pro

-  **Protect your branches**
Ensure that collaborators on your repository cannot make irrevocable changes to branches.
- > Draft pull requests
- > Pages and Wikis
- > 3,000 CI/CD minutes/month
Free for public repositories
- > 2GB of Packages storage
Free for public repositories
- > 180 core-hours of Codespaces compute
- > 20GB of Codespaces storage
- > Web-based support

GitHub Student Developer Pack

-  **Free access to the industry's best developer tools**
Hundreds of offers, including Digital Ocean, Microsoft Azure, Heroku, MongoDB, DataDog, Twilio, and Stripe.

GitHub Campus Expert training

-  **Enrich your college technical community**
Learn the skills to build diverse tech communities on campus with training, mentorship, and support from GitHub.

[Apply for your GitHub student benefits](#)

Create a new Public Repository

<https://github.com/dashboard>

Create a new Public Repository = **HistoricalAerials**

Check the Public option.

The screenshot shows the GitHub interface for creating a new repository. At the top, it says "Start a new repository". Below that, a description states: "A repository contains all of your project's files, revision history, and collaborator discussion." The repository name "HistoricalAerials" is shown in a green box next to the user handle "DavidDas2 /". There are two options for repository visibility: "Public" (selected, indicated by a red box around the radio button) and "Private" (not selected). The "Public" option is described as "Anyone on the internet can see this repository". The "Private" option is described as "You choose who can see and commit to this repository". At the bottom, there is a large green button labeled "Create a new repository".

Create a new repository.

<https://github.com/DavidDas2/HistoricalAerials>

The screenshot shows a GitHub repository page for 'HistoricalAerials'. At the top, there's a navigation bar with links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. Below the navigation bar, the repository name 'HistoricalAerials' is displayed along with its status as 'Public'. There are buttons for Pin, Unwatch (1), Fork (0), and Star (0). A search bar at the top right contains the placeholder 'Type to search'. The main content area has two sections: 'Set up GitHub Copilot' (with a 'Get started with GitHub Copilot' button) and 'Add collaborators to this repository' (with a 'Invite collaborators' button). Below these, a 'Quick setup' section provides instructions for cloning the repository via Desktop, HTTPS, or SSH, with the URL <https://github.com/DavidDas2/HistoricalAerials.git>. It also suggests creating a new file or uploading an existing one, mentioning README, LICENSE, and .gitignore. A command-line setup section follows, showing a series of Git commands:

```
echo "# HistoricalAerials" >> README.md  
git init  
git add README.md  
git commit -m "first commit"  
git branch -M main  
git remote add origin https://github.com/DavidDas2/HistoricalAerials.git  
git push -u origin main
```

A red arrow points to the last line of the command list, with the text 'Copy this command' overlaid in yellow.

Make a note of this command:

```
git remote add origin https://github.com/DavidDas2/HistoricalAerials.git
```

You will use this later.

Open Settings | Pages

<https://github.com/DavidDas2/HistoricalAerials/settings/pages>

The screenshot shows the GitHub repository settings page for 'HistoricalAerials'. The top navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The 'Settings' link is highlighted with a red box. On the left, a sidebar lists General, Access, Collaborators, Moderation options, Code and automation (with Rules, Actions, Webhooks, Environments, and Codespaces), and Pages. The 'Pages' item is also highlighted with a red box. The main content area is titled 'GitHub Pages' and contains information about GitHub Pages hosting. It shows that GitHub Pages is currently disabled and provides instructions to add content. Below this is a 'Build and deployment' section with a 'Source' dropdown set to 'Deploy from a branch', a 'Branch' dropdown set to 'None', and 'Save' and 'None' buttons.

At the moment, there is no content.

The screenshot shows the 'Select branch' dropdown menu. The title 'Select branch' is at the top. Below it is a single option 'Select branch' which is highlighted with a blue border. At the bottom of the list is an option 'None' with a checked checkbox. Below the dropdown are 'None' and 'Save' buttons.

Expand Branch.

There are no branches at present.

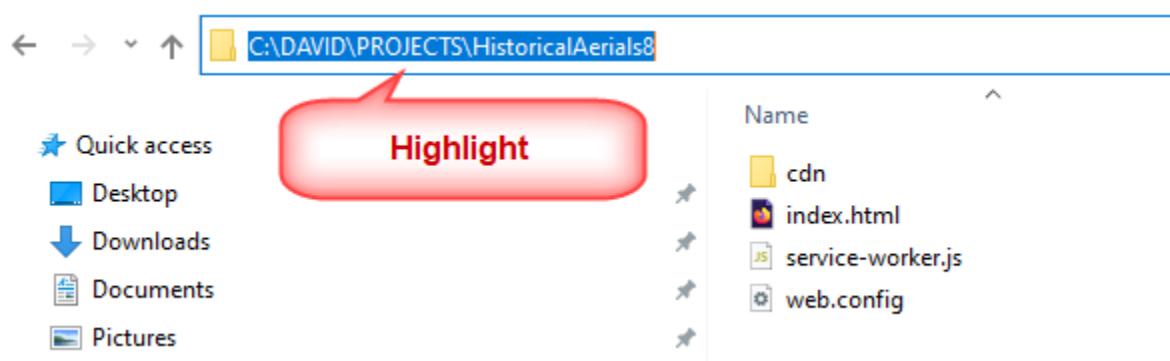
The master branch will show up here once you upload content.

This local folder on your PC contains all the necessary files for your website.

C:\DAVID\PROJECTS\HistoricalAerials8\

📁 cdn	9/14/2023 1:19 PM	File folder
📝 index.html	9/14/2023 1:23 PM	Firefox HTML Doc... 5 KB
JS service-worker.js	9/4/2023 4:52 PM	JavaScript Source ... 10 KB
⚙️ web.config	9/4/2023 4:57 PM	Configuration Sou... 2 KB

Highlight the folder path and type cmd



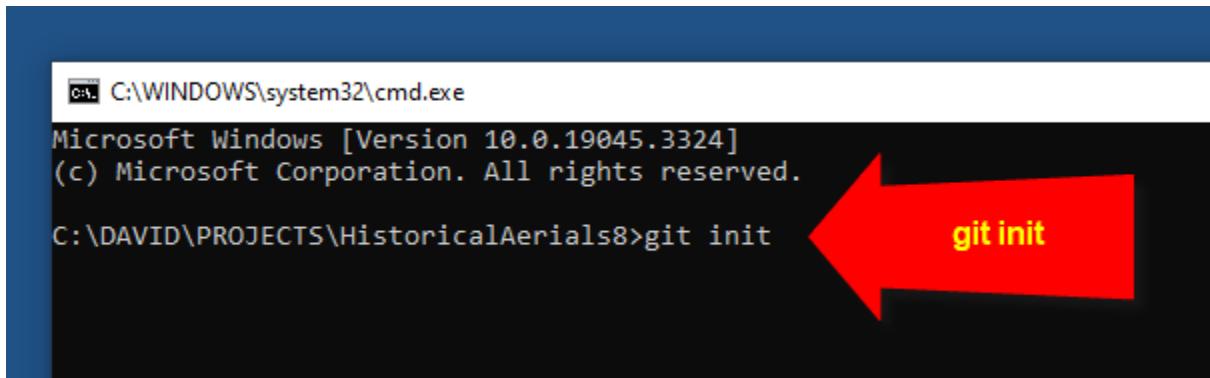
This opens a command window with the path set to C:\DAVID\PROJECTS\HistoricalAerials8

```
cmd C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.

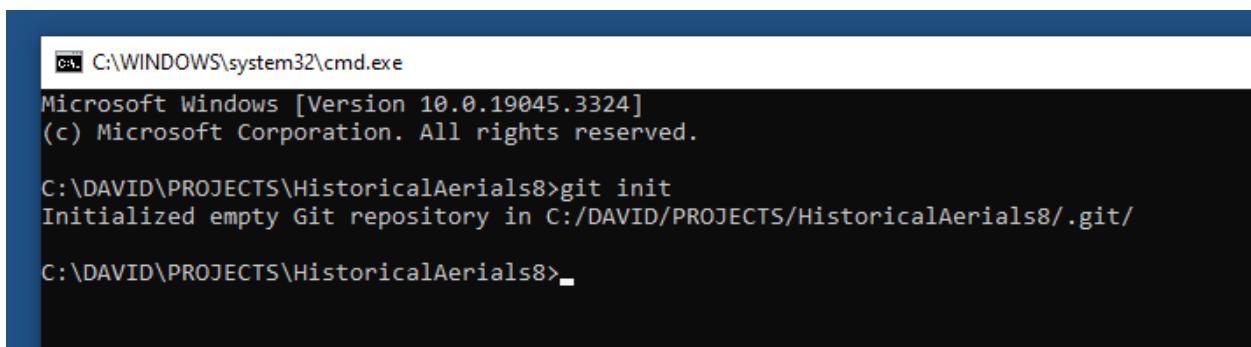
C:\DAVID\PROJECTS\HistoricalAerials8>
```

Enter the following 7 commands highlighted in green in the following order:

git init



C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\PROJECTS\HistoricalAerials8>git init

A large red arrow points from the text "git init" back towards the command prompt window.

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.3324]
(c) Microsoft Corporation. All rights reserved.
C:\DAVID\PROJECTS\HistoricalAerials8>git init
Initialized empty Git repository in C:/DAVID/PROJECTS/HistoricalAerials8/.git/
C:\DAVID\PROJECTS\HistoricalAerials8>

This creates the .git folder

C:\DAVID\PROJECTS\HistoricalAerials8\

.git	9/14/2023 3:34 PM	File folder
cdn	9/14/2023 1:19 PM	File folder
index.html	9/14/2023 1:23 PM	Firefox HTML Doc... 5 KB
service-worker.js	9/4/2023 4:52 PM	JavaScript Source ... 10 KB
web.config	9/4/2023 4:57 PM	Configuration Sou... 2 KB

```
git add -A
```

Be patient! It may take a while to add all the files.

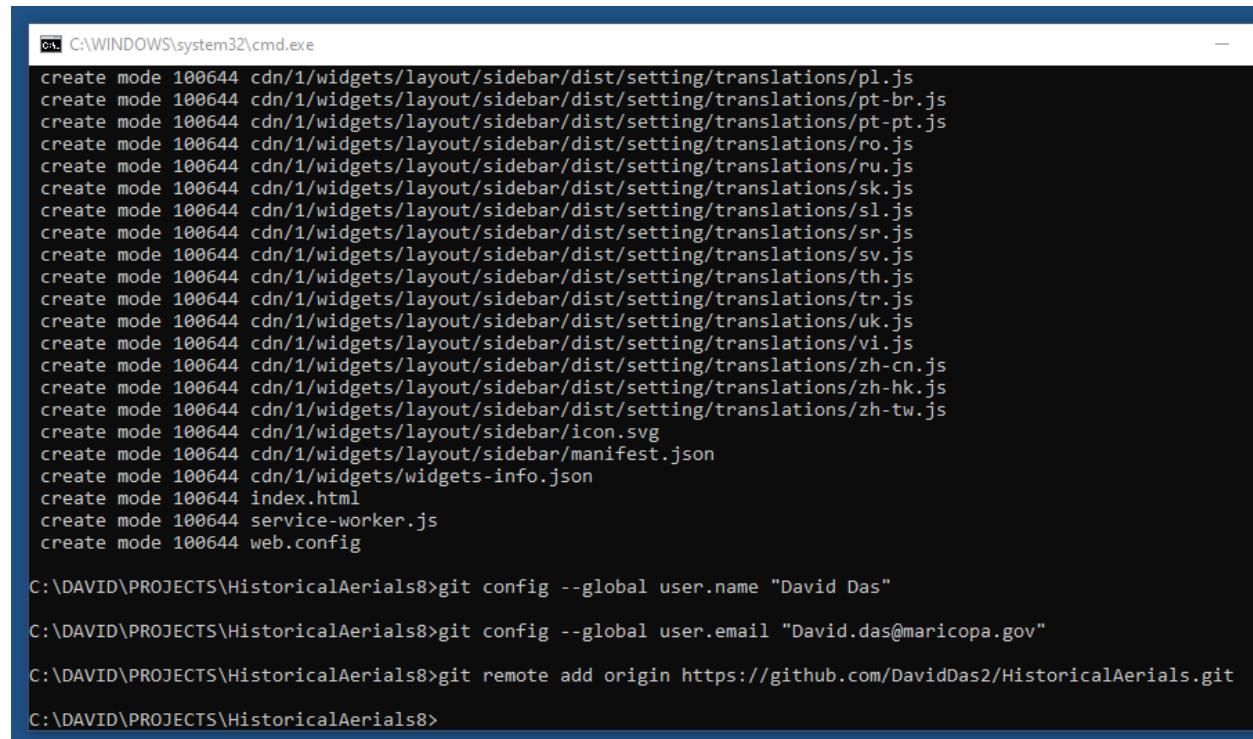
```
git commit -m "Initial Commit"
```

```
git config --global user.name "David Das"
```

```
git config --global user.email "David.das@maricopa.gov"
```

```
git remote add origin https://github.com/DavidDas2/HistoricalAerials.git
```

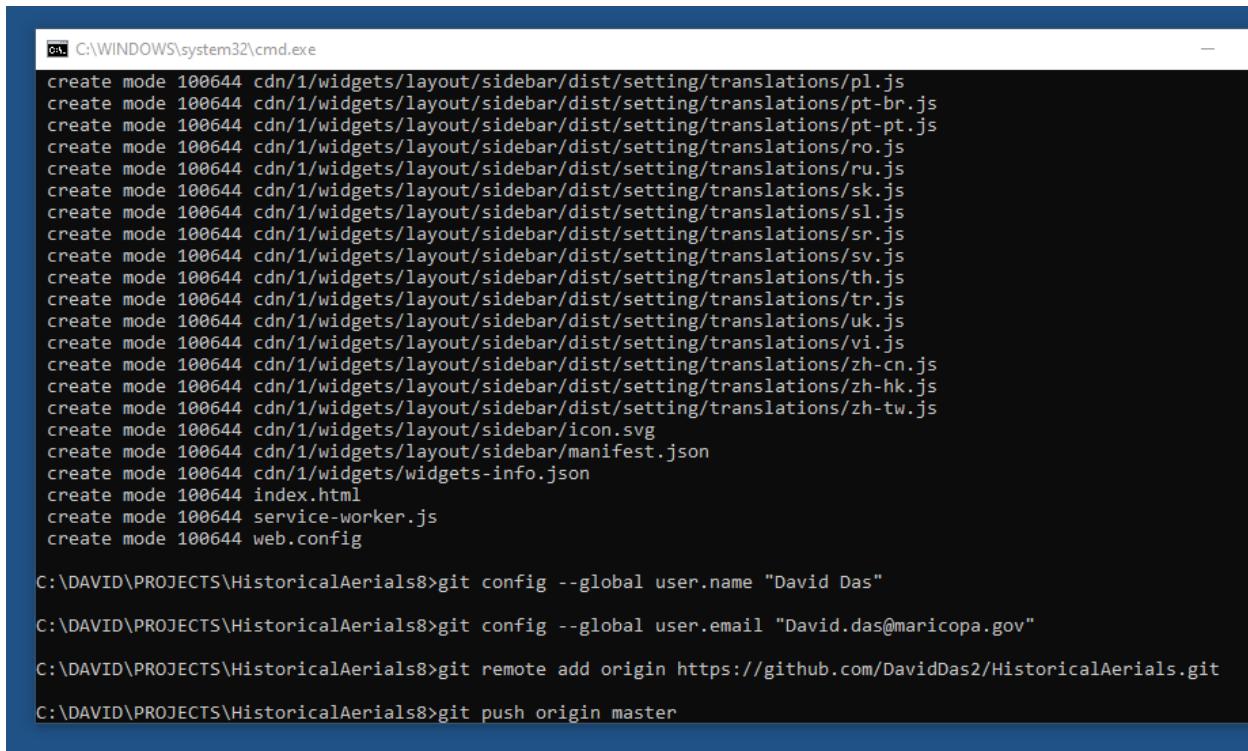
Note: You had copied this command earlier.



```
C:\WINDOWS\system32\cmd.exe
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/p1.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/pt-br.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/pt-pt.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/ro.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/ru.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sl.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sr.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sv.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/th.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/tr.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/uk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/vi.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-cn.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-hk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-tw.js
create mode 100644 cdn/1/widgets/layout/sidebar/icon.svg
create mode 100644 cdn/1/widgets/layout/sidebar/manifest.json
create mode 100644 index.html
create mode 100644 service-worker.js
create mode 100644 web.config

C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.name "David Das"
C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.email "David.das@maricopa.gov"
C:\DAVID\PROJECTS\HistoricalAerials8>git remote add origin https://github.com/DavidDas2/HistoricalAerials.git
C:\DAVID\PROJECTS\HistoricalAerials8>
```

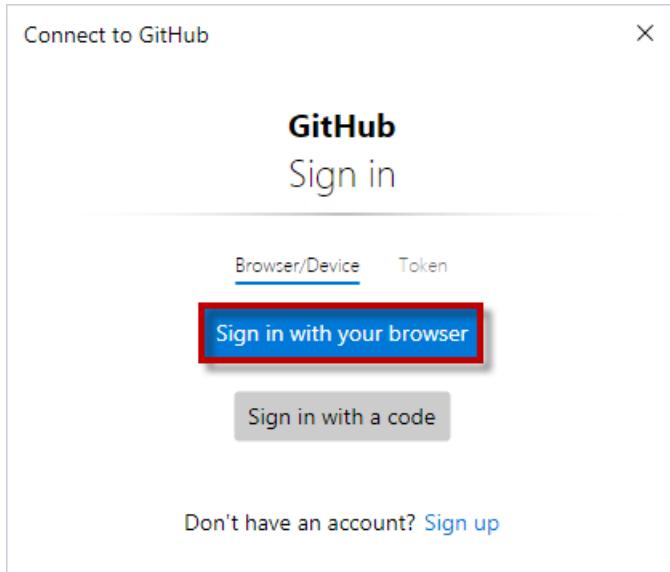
```
git push origin master
```

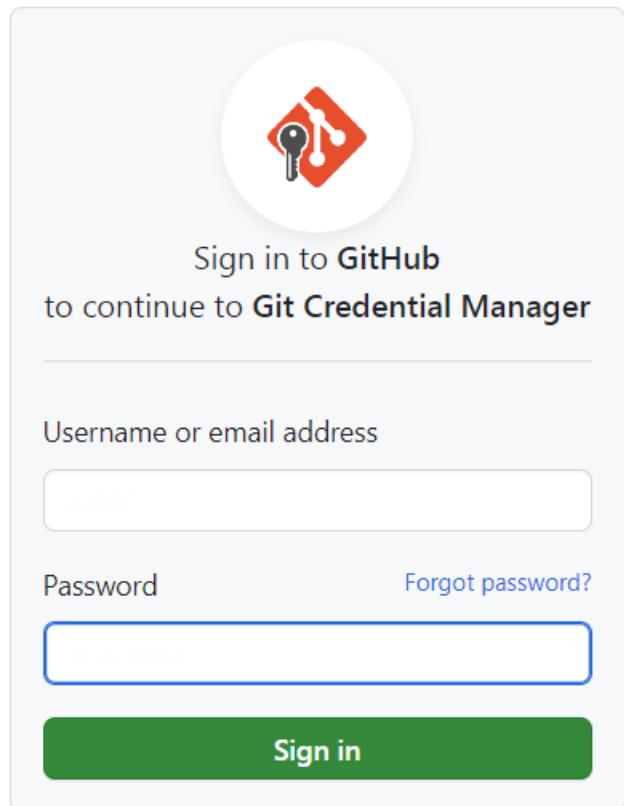


```
C:\WINDOWS\system32\cmd.exe
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/pl.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/pt-br.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/pt-pt.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/ro.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/ru.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sl.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sr.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/sv.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/th.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/tr.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/uk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/vi.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-cn.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-hk.js
create mode 100644 cdn/1/widgets/layout/sidebar/dist/setting/translations/zh-tw.js
create mode 100644 cdn/1/widgets/layout/sidebar/icon.svg
create mode 100644 cdn/1/widgets/layout/sidebar/manifest.json
create mode 100644 index.html
create mode 100644 service-worker.js
create mode 100644 web.config

C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.name "David Das"
C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.email "David.das@maricopa.gov"
C:\DAVID\PROJECTS\HistoricalAerials8>git remote add origin https://github.com/DavidDas2/HistoricalAerials.git
C:\DAVID\PROJECTS\HistoricalAerials8>git push origin master
```

Note: The very first time you enter this command, the Git Credential Manager will ask you to enter your Username and Password to your GitHub Account.





Once the Git Credential Manager is successful in verifying your credentials, you will not be challenged again on this device.

```
C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.name "David Das"
C:\DAVID\PROJECTS\HistoricalAerials8>git config --global user.email "David.das@maricopa.gov"
C:\DAVID\PROJECTS\HistoricalAerials8>git remote add origin https://github.com/DavidDas2/HistoricalAerials.git
C:\DAVID\PROJECTS\HistoricalAerials8>git push origin master
Enumerating objects: 7403, done.
Counting objects: 100% (7403/7403), done.
Delta compression using up to 20 threads
Compressing objects: 100% (6365/6365), done.
Writing objects: 100% (7403/7403), 13.56 MiB | 4.08 MiB/s, done.
Total 7403 (delta 467), reused 7403 (delta 467), pack-reused 0
remote: Resolving deltas: 100% (467/467), done.
To https://github.com/DavidDas2/HistoricalAerials.git
 * [new branch]      master -> master
C:\DAVID\PROJECTS\HistoricalAerials8>
```

The master branch has been created.

<https://github.com/DavidDas2/HistoricalAerials>

Open Settings | Pages

The screenshot shows the GitHub repository settings page for 'DavidDas2 / HistoricalAerials'. The top navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The 'Settings' link is highlighted with a red box. On the left, a sidebar lists General, Access, Collaborators, Moderation options, Code and automation (Branches, Tags, Rules, Actions, Webhooks, Environments, Codespaces), and Security (Code security and analysis, Deploy keys, Secrets and variables). The 'Pages' option is selected and highlighted with a red box. The main content area is titled 'GitHub Pages' and explains its purpose: 'GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.' It shows a dropdown menu 'Deploy from a branch' set to 'None' (highlighted with a red box) and a 'Save' button. A modal window titled 'Select branch' shows a dropdown menu with 'master' selected (highlighted with a green box). Below the modal, there is explanatory text about publishing sites and a 'Try GitHub Enterprise risk-free for 30 days' button.

Expand Branch.

Notice, now you have a master branch.

Select **master**.

<https://github.com/DavidDas2/HistoricalAerials/settings/pages>

GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

Build and deployment

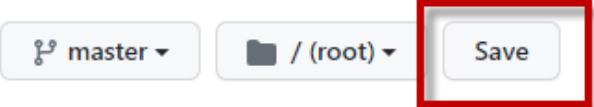
Source

Deploy from a branch ▾

Branch

GitHub Pages is currently disabled. Select a source below to enable GitHub Pages for this repository.

[Learn more about configuring the publishing source for your site.](#)



Save

A screenshot of a GitHub repository dashboard. At the top, there's a navigation bar with links like 'Code', 'Issues', 'Pull requests', 'Actions', 'Projects', 'Wiki', 'Security', 'Insights', and 'Settings'. The 'Settings' link is underlined. Below the navigation bar, a message 'GitHub Pages source saved.' is displayed in a light blue box with a close button in the top right corner.

Refresh this page.

After about 10 minutes, your site will go live.

<https://github.com/DavidDas2/HistoricalAerials/settings/pages>

The screenshot shows the GitHub repository settings for 'DavidDas2 / HistoricalAerials'. The left sidebar has sections like General, Access, Collaborators, Moderation options, Code and automation, Branches, Tags, Rules, Actions, and Webhooks. The main area is titled 'GitHub Pages' and contains a message: 'GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.' Below this is a green box containing the message 'Your site is live at <https://daviddas2.github.io/HistoricalAerials/>' and 'Last deployed by DavidDas2 4 minutes ago'. A red box highlights this green box. To the right of the green box are 'Visit site' and '...' buttons. At the bottom left of the main area is a 'Visit Site' button.

GitHub Pages

GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.

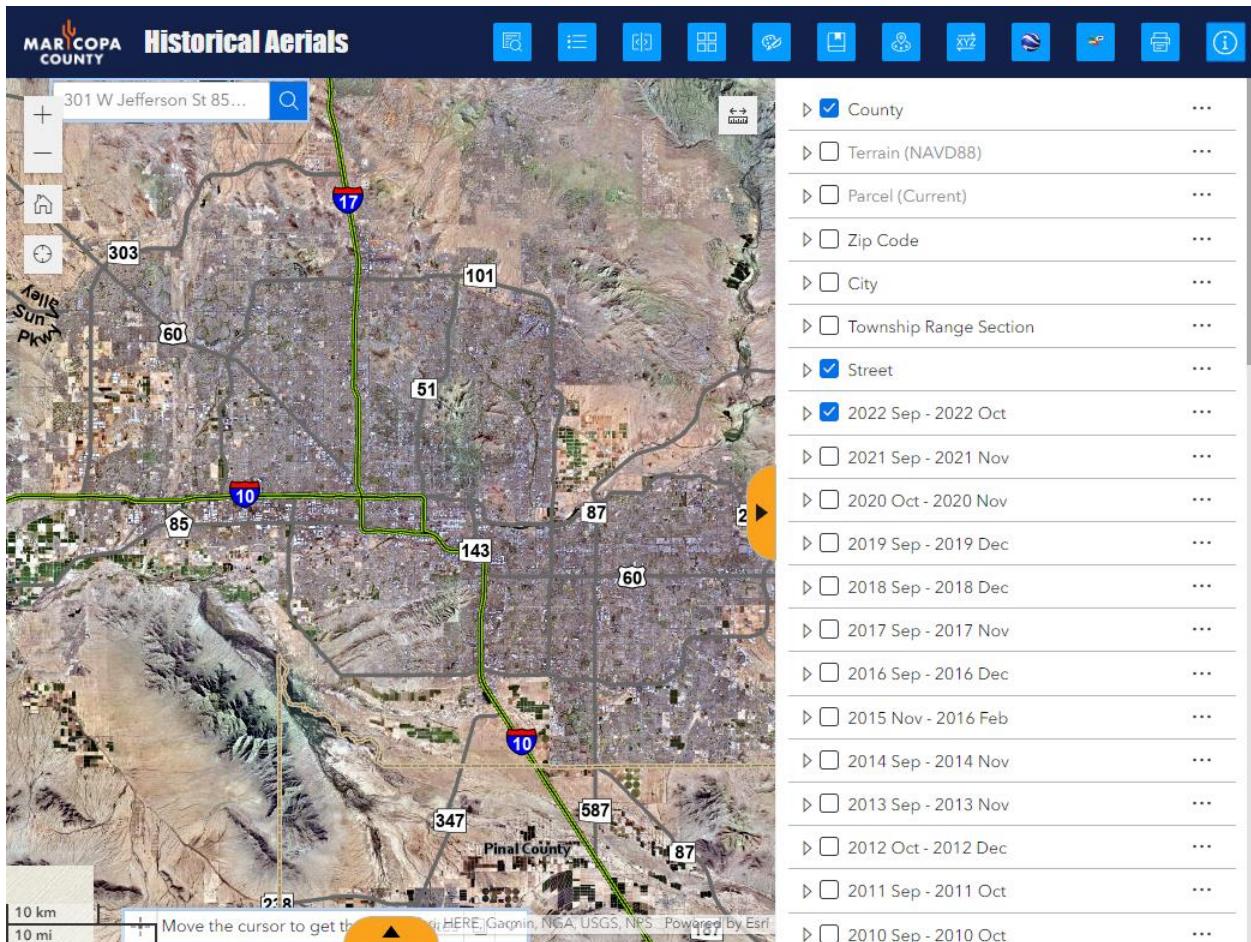
Your site is live at <https://daviddas2.github.io/HistoricalAerials/>
Last deployed by DavidDas2 5 minutes ago

[Visit site](#)

This is your website deployed on GitHub Pages.

Notice the https in the URL. You get to enjoy a free SSL certificate.

<https://daviddas2.github.io/HistoricalAerials/>



You can open this link on your Tablet or Smartphone and test to see if your web app works for all devices and web browsers in portrait and landscape mode.

Making changes to your code

Examine your HistoricalAerials8 folder:

C:\DAVID\PROJECTS\HistoricalAerials8\

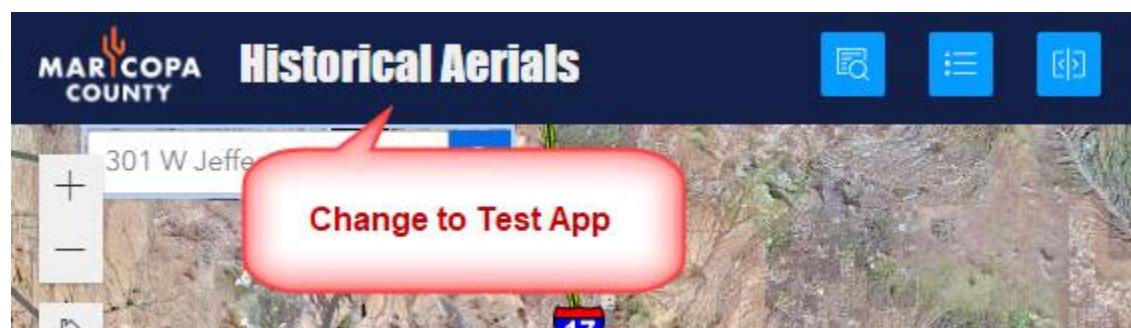
Notice the **.git** folder that was created.

All the files and folders are under Git control.

Any changes that you make to a file or folder are being tracked.

📁 .git	9/14/2023 3:38 PM	File folder
📁 cdn	9/14/2023 1:19 PM	File folder
📄 index.html	9/14/2023 1:23 PM	Firefox HTML Doc... 5 KB
📄 service-worker.js	9/4/2023 4:52 PM	JavaScript Source ... 10 KB
📄 web.config	9/4/2023 4:57 PM	Configuration Sou... 2 KB

Let's say you want to change the Title from Historical Aerials to Test App.



Edit the config.json file under:

C:\DAVID\PROJECTS\HistoricalAerials8\cdn\1\

 arcgis-charts	9/14/2023 1:38 PM	File folder	
 assets	9/14/2023 1:38 PM	File folder	
 calcite-components	9/14/2023 1:40 PM	File folder	
 jimu-arcgis	9/14/2023 1:40 PM	File folder	
 jimu-core	9/14/2023 1:40 PM	File folder	
 jimu-for-builder	9/14/2023 1:40 PM	File folder	
 jimu-layouts	9/14/2023 1:40 PM	File folder	
 jimu-theme	9/14/2023 1:40 PM	File folder	
 jimu-ui	9/14/2023 1:40 PM	File folder	
 resources	9/14/2023 1:46 PM	File folder	
 themes	9/14/2023 1:40 PM	File folder	
 widgets	9/14/2023 1:40 PM	File folder	
 config.json	9/14/2023 1:25 PM	JSON File	203 KB
 index.js	9/4/2023 4:57 PM	JavaScript Source ...	41 KB
 service-worker-registration.js	9/14/2023 1:23 PM	JavaScript Source ...	1 KB

Search for the string “Historical Aerials”

A screenshot of a code editor showing a JSON file named config.json. The code is a list of objects. One object has an "id" of "widget_3" and a "text" field containing the string "<p>Historical Aerials</p>". A red callout bubble points to this text with the label "Historical Aerials".

```
1719 },
1720   "widget_3": {
1721     "id": "widget_3",
1722     "uri": "widgets/common/text/",
1723     "config": {
1724       "text": "<p><span style=\\\"color: var(--light); font-size: 24px; font-family: Impact;\\\">Historical Aerials</span></p>",
1725         "style": {
1726           "verticalAlign": "center",
1727           "wrap": true,
1728           "overflow": "scroll",
1729           "padding": "p-1"
1730         }
1731     },
1732     "version": "1.12.0",
1733     "label": "Title"
1734   },
```

Replace with “Test App”

A screenshot of a code editor showing the same JSON file after modification. The "text" field now contains "<p>Test App</p>". A red callout bubble points to this text with the label "Test App".

```
1719 },
1720   "widget_3": {
1721     "id": "widget_3",
1722     "uri": "widgets/common/text/",
1723     "config": {
1724       "text": "<p><span style=\\\"color: var(--light); font-size: 24px; font-family: Impact;\\\">Test App</span></p>",
1725         "style": {
1726           "verticalAlign": "center",
1727           "wrap": true,
1728           "overflow": "scroll",
1729           "padding": "p-1"
1730         }
1731     },
1732     "version": "1.12.0",
1733     "label": "Title"
1734   },
```

Save your edits.

To push these changes to your remote website, enter these 3 commands highlighted in green.

Enter:

```
git add -A
```

Enter:

```
git commit -m "Changed Title to Test App"
```

```
1 file changed, 1 insertion(+), 1 deletion(-)  
C:\DAVID\PROJECTS\HistoricalAerials8>_
```

Notice, Git recognizes that 1 file was changed.

It is always a good practice to add a short message indicated by the `-m` flag.

In this example, the message is “Changed Title to Test App.”

This allows anyone to follow the changes while going through the history of commits.

<https://www.freecodecamp.org/news/how-to-write-better-git-commit-messages>

Enter:

```
git push origin master
```

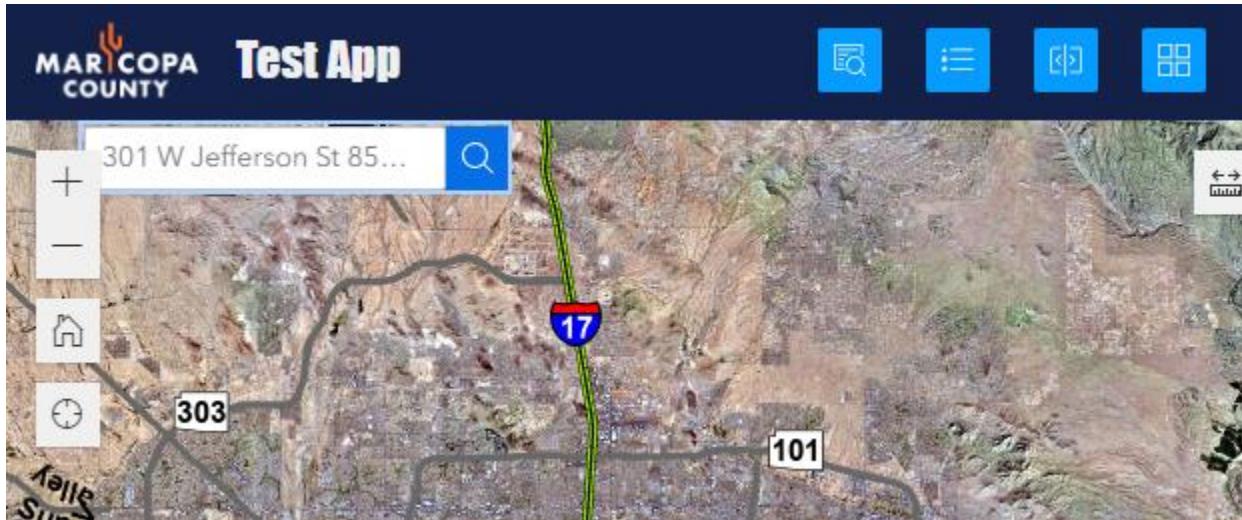
```
C:\DAVID\PROJECTS\HistoricalAerials8>git push origin master  
Enumerating objects: 9, done.  
Counting objects: 100% (9/9), done.  
Delta compression using up to 20 threads  
Compressing objects: 100% (4/4), done.  
Writing objects: 100% (5/5), 425 bytes | 212.00 KiB/s, done.  
Total 5 (delta 3), reused 0 (delta 0), pack-reused 0  
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.  
To https://github.com/DavidDas2/HistoricalAerials.git  
 224e483..02e2ca4  master -> master  
  
C:\DAVID\PROJECTS\HistoricalAerials8>
```

This pushes the local changes that you made to your GitHub Repository.

Clear your browser cache and reopen your website.

<https://daviddas2.github.io/HistoricalAerials/>

You have successfully changed the Title to **Test App**.



As you can see, GitHub is a powerful tool to test your changes on the fly and have them reflected instantly on your remote website.

Best of all, this is a free resource.

How to create the HTML5 User Guide

Examine this mobile friendly HTML5 User Guide for the Historical Aerials.

<https://daviddas2.github.io/HistoricalAerials/help/>

The screenshot shows a web browser displaying the "Historical Aerial Photography Web Application User Guide". The title bar reads "Historical Aerial Photography Web Application User Guide". The left sidebar contains a navigation menu with sections like Overview, Quick Tour, Launching the Web App, List of Widgets and Tools, Navigation Tools, Query Widget, Map Layers Widget, Legend Widget, Attribute Table Widget, Swipe Widget, Google Maps Widget, Pictometry Widget, Print Widget, About Widget, Summary, and Contact Us. The main content area shows a map of Maricopa County, Arizona, with various roads labeled (e.g., 101, 10, 51, 87, 60, 74, 303, 65, 143, 347, 587). To the right of the map is a legend and a list of historical aerial image options. Below the map, a text box states: "This Web Application offers a simple interface to zoom to your area of interest and compare the latest Aerial Images with those taken one, two, five, ten years dating all the way back to 1930."

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It collapses gracefully to fit smaller windows.

Overview

Overview

Welcome to the new Maricopa County Historical Aerial Photography Web Application.

This Web Application offers a simple interface to zoom to your area of interest and compare the latest Aerial Images with those taken one, two, five, ten years dating all the way back to 1930.

They present a fascinating visual history of how Maricopa County grew from a small population of less than a million in 1970 to become the 4th largest County in the US serving a population of 4.6 million.

☰ Menu Index Search X

Overview

- Quick Tour
- Launching the Web App
- List of Widgets and Tools
- Navigation Tools
 - Graphical Scale Bar
 - Coordinate Widget
 - Search Tool
 - Identify a Parcel
 - Measure Tool
 - Draw Widget
 - Bookmark Widget
 - Coordinate Conversion Widget
 - Near Me Widget
 - Basemap Gallery Widget
- Query Widget
 - Map Layers Widget
 - Legend Widget
 - Attribute Table Widget
 - Swipe Widget
 - Google Maps Widget
 - Pictometry Widget
 - Print Widget

Overview

Welcome to the new Maricopa County Historical Aerial Photography Application.



This Web Application offers a simple interface to view and compare the latest Aerial Images with historical images dating all the way back to 1930. They present a fascinating visual history of the area, which is a small population of less than a million in 1930 and has grown to be the largest city in the US serving a population of 4.6 million.

This was created using a popular help authoring tool named **Dr. Explain**.

Here is a Tutorial on using Dr. Explain.

It shows you how to convert any Word Document into an HTML5 Help System.

<http://davidapps.net/DrExplain/Tutorial>

The screenshot shows the Dr. Explain User Guide Overview page. The left sidebar contains a navigation menu with the following items:

- Overview
- Download the trial version of Dr. Explain
- Launch Dr. Explain
- Import a Word Document
- The Document Style Matching Window
- Save your Project
- Generate HTML
- Configure Project Settings
- Generate the HTML Help
- Examine your HTML Help
- Add your Index Entries
- Examine the HTML File Structure
- Copy the entire help folder to the Web Server
- Try the full text Search
- Fully Responsive Design
- Where to order Dr. Explain?

The main content area has a title "Overview". It includes a search bar at the top right and navigation links for "← Previous page", "Next page →", and "Print version". The content itself is titled "Overview" and describes the tutorial's purpose: "This Tutorial shows how to convert a Word Document into a fully responsive HTML5 Web Help without writing a single line of code." It highlights Dr. Explain's features like generating responsive HTML5 help files and capturing screenshots. It also provides a download link for a sample Word document: <http://www.davidapps.net/DrExplain/Sample.zip>. The footer of the page includes the copyright notice "© 2019 Maricopa County".

Brief history of ESRI's Web Mapping Technology

Jay Theodore kick started the era of Web Mapping at ESRI with the introduction of ArcIMS. We started using ArcIMS 3.0 in 2000. It gave us a simple and reliable way to share our data on the web. This product served us well for 10 years.

ESRI released 3 APIs for JavaScript, Flex and Silverlight for building web applications.

None were getting much traction as they required you to learn programming.

Moxie Zhang changed all of that with his introduction of the Flex Viewer 2.0 in 2010.

Moxie came up with the brilliant concept of encapsulating large chunks of code into configurable widgets which can then be arranged within a viewer.

This opened the floodgates. All of a sudden anybody could publish fully functional and visually attractive web applications featuring a simple GUI *without having to write a single line of code!*

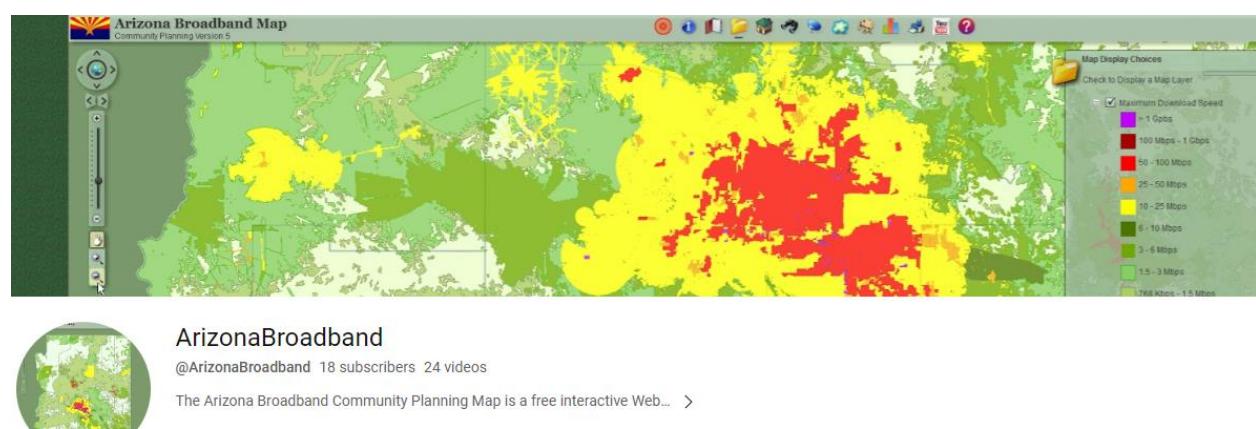
Robert Scheitlin, the Flex Guru, stepped in and created dozens of custom widgets and shared them for free on the ESRI Community Forums. Robert's most popular custom widget was the Enhanced Search Widget. It combined an Attribute Search, Graphical Search and Spatial Search under a single interface that was intuitive for beginners.

This was a powerful tool. It was a masterpiece. It had 50,000 lines of code.

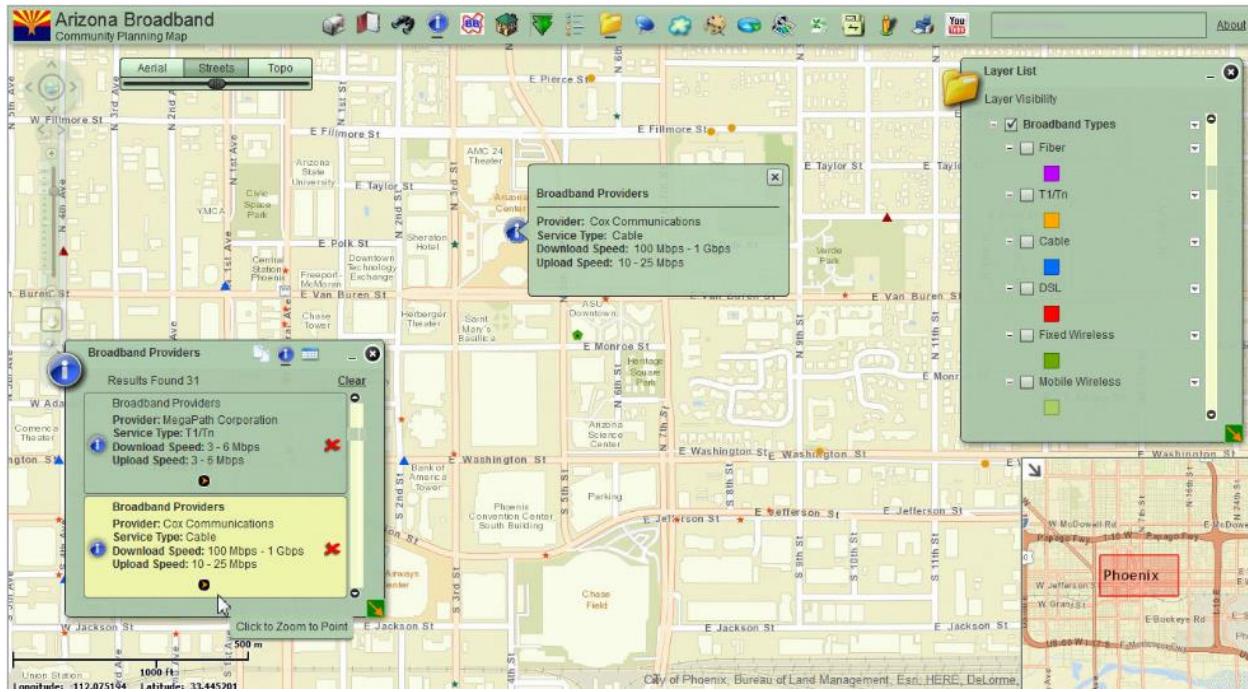
We used Robert's custom widgets to design our Arizona Broadband Map.

Here are some video tutorials showing how this application worked.

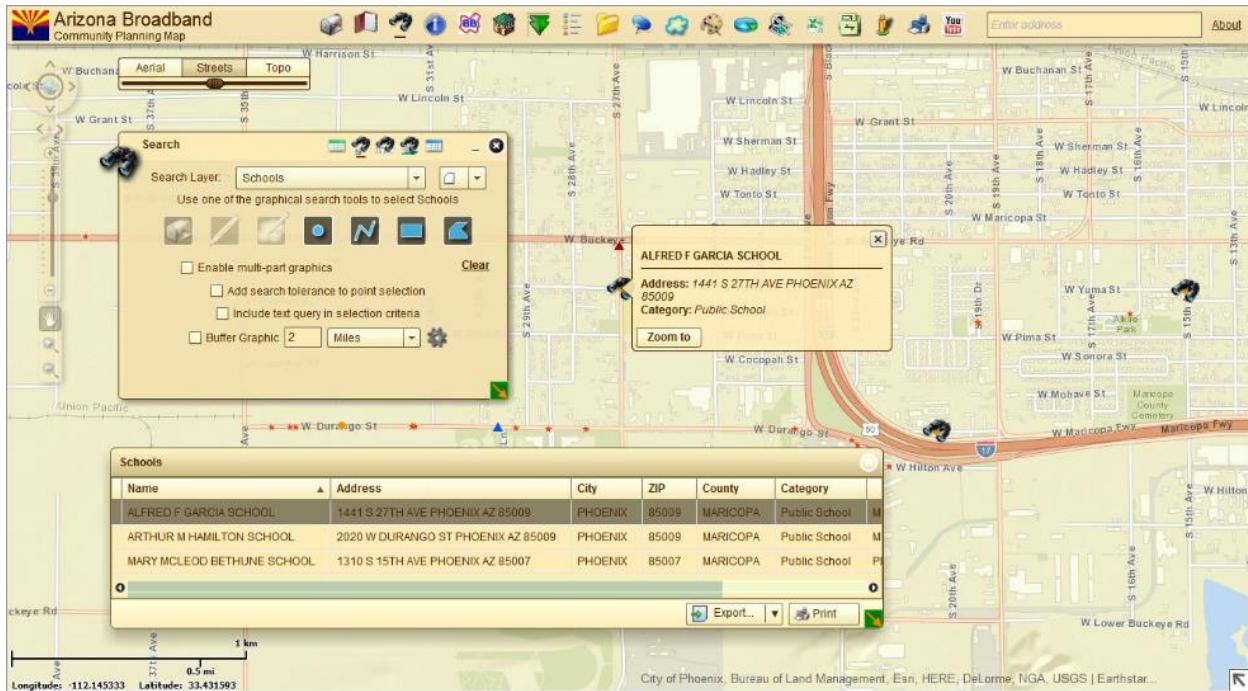
<https://www.youtube.com/user/ArizonaBroadband/videos>



This is a screenshot of the application.



It was possible to change the Theme from Sage Green to Desert Sand with one line of code.



ArcGIS Online was released in 2012. This was the brainchild of **Sud Menon** to create a simple online interface to collect, organize, manage, share, map, visualize and analyze all forms of Geospatial Data. This was a smashing success. In a few short years it has become the world's largest mapping platform.

After Steve Jobs banned the use of Flash on mobile devices and Microsoft dropped support for Silverlight, JavaScript was the only pathway moving forward. JavaScript was supported natively on all modern browsers. JavaScript Apps could run on these browsers without having to download a plugin.

All Flex Apps needed to be retooled using JavaScript.

Moxie once again came to the rescue. Retaining the same concept as the Flex Viewer, Moxie released the **Web AppBuilder** in 2014. This product revolutionized the world of Web Mapping.

This product allowed any GIS Analyst to convert a Web Map on ArcGIS Online into a mobile friendly Web Application featuring a rich collection of widgets with just a few mouse clicks. The developer edition allowed you to add custom widgets further extending the capabilities.

There are over half a million Web AppBuilder Applications on ArcGIS Online alone with thousands more created with the Developer Edition.

Robert Scheitlin took the time to learn the JavaScript 3.x API and ported all his custom widgets from Flex to JavaScript. We shall always remain thankful to Robert for his generosity. His Enhanced Search Widget is the centerpiece of all our Web Apps.

While the Web AppBuilder became a runaway success and the default platform for designing responsive web apps, Moxie had a grander vision to take Web Mapping Technology to the next level.

Moxie released the **ArcGIS Experience Builder** in 2020. One could now apply the concept of widgets and themes to build complete websites with multiple pages rather than being limited to a single web app.

The Experience Builder Framework supports true drag & drop functionality offering complete flexibility on how you design the layout of each page supporting dynamic charts, tables, images and lists that update as the user interacts with the various elements.

It is built upon JavaScript SDK 4.x and supports seamless switching between 2D and 3D datasets.

The Experience Builder interface is deceptively simple. It hides all the complex programming that happens behind the scenes. It took a team of 40 developers toiling for 3 years to make this magic happen.

What is the future of Web Mapping?

With every iteration starting with ArcIMS, the technology has become simpler and more powerful.

The Experience Builder platform will carry us through 2030 as more widgets are added. It will soon reach parity with the Web AppBuilder and eventually eclipse it.

There is a high probability the successor to the Experience Builder may include an AI component.

Imagine this.

All Experience Builder projects require you to start by selecting a Template. There are over 60. What if the AI driven technology becomes smart enough to examine your map services and decide what is the best way to present your data on the web and create a fully configured website for you?

What if you could say, “Build me a website that allows me to compare all the historical aerials with tools to zoom to a specific address or parcel and display all the relevant details.”

The possibilities with AI are tantalizing.

Should you transition from WAB to EXB?

The ArcGIS Experience Builder is ESRI's next generation Web Mapping Platform.

It is the successor to ESRI's Web AppBuilder for ArcGIS.

All development on the WAB Developer Edition will stop in July 2024. There would be no more bug fixes.

All development on the WAB ArcGIS Online Edition will stop in the 4th quarter of 2025.

Do not be alarmed!

All your existing WAB apps on AGOL will continue to work after the end of 2025. You just would not be able to update them as the WAB AGOL Edition would be retired at the end of 2025.

What would happen to the over half a million WAB Apps on AGOL?

If they are running fine and you have no need to update them, you have nothing to worry about.

However, if you foresee the need to make changes to your existing WAB Apps on AGOL you should move to the Developer Edition of WAB. It supports the same collection of standard widgets as the AGOL edition with the additional advantage of allowing custom widgets.

The final version of the WAB Developer Edition after July 2024 will always be available for download at:

<https://developers.arcgis.com/web-appbuilder/>

You can keep using the Developer Edition of WAB indefinitely.

The Developer Edition of WAB depends on the JavaScript 3.x API. It does not contain a copy.

You can use the JavaScript 3.x API hosted on ArcGIS Online or ArcGIS Enterprise. You can even host this on your own server.

ESRI has no plans to shut down the JavaScript 3.x API Servers on ArcGIS Online. In fact, previous versions of the JavaScript API 2.x and 1.x are still available on ArcGIS Online.

You can keep using the Enterprise Edition of WAB till 2030.

The final version of the Enterprise Edition of WAB will be released in the first half of 2025. After that ESRI will continue to offer 5 years of product support until 2030.

To further put your mind at ease, here are the responses from **Jianxia**:

"As I understand, these WAB Developer Apps will continue to work indefinitely, until a point in time where a future browser update may cause issues."

Correct.

"Hypothetically speaking, let's say we run our existing WAB Developer Apps till 2027. Let's also assume there are no browser updates that break the applications."

Yes, your existing apps built with developer edition will continue running under that assumption.

Will ESRI shut down their JavaScript 3.x API servers at some point in time?

I am not aware of any plans to shut down JavaScript 3.x API in ArcGIS Online. In fact, previous versions of JavaScript API like 2.x and 1.x are still available in ArcGIS Online. I would worry more about the browser updates in the future than availability of JavaScript 3.x API in ArcGIS Online

Does this even matter for the WAB Developer Apps? Are they fully self-contained? Or do they depend on the ESRI JavaScript 3.x servers to function?

It matters. WAB developer edition does not contain a copy of JavaScript API and depends on the JavaScript API to work properly. However, you can use developer edition connecting to JavaScript 3.x API hosted in ArcGIS Online, ArcGIS Enterprise, or your own server.

Hope this helps. Have a good weekend.

Jianxia

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THE SCIENCE OF WHERE™

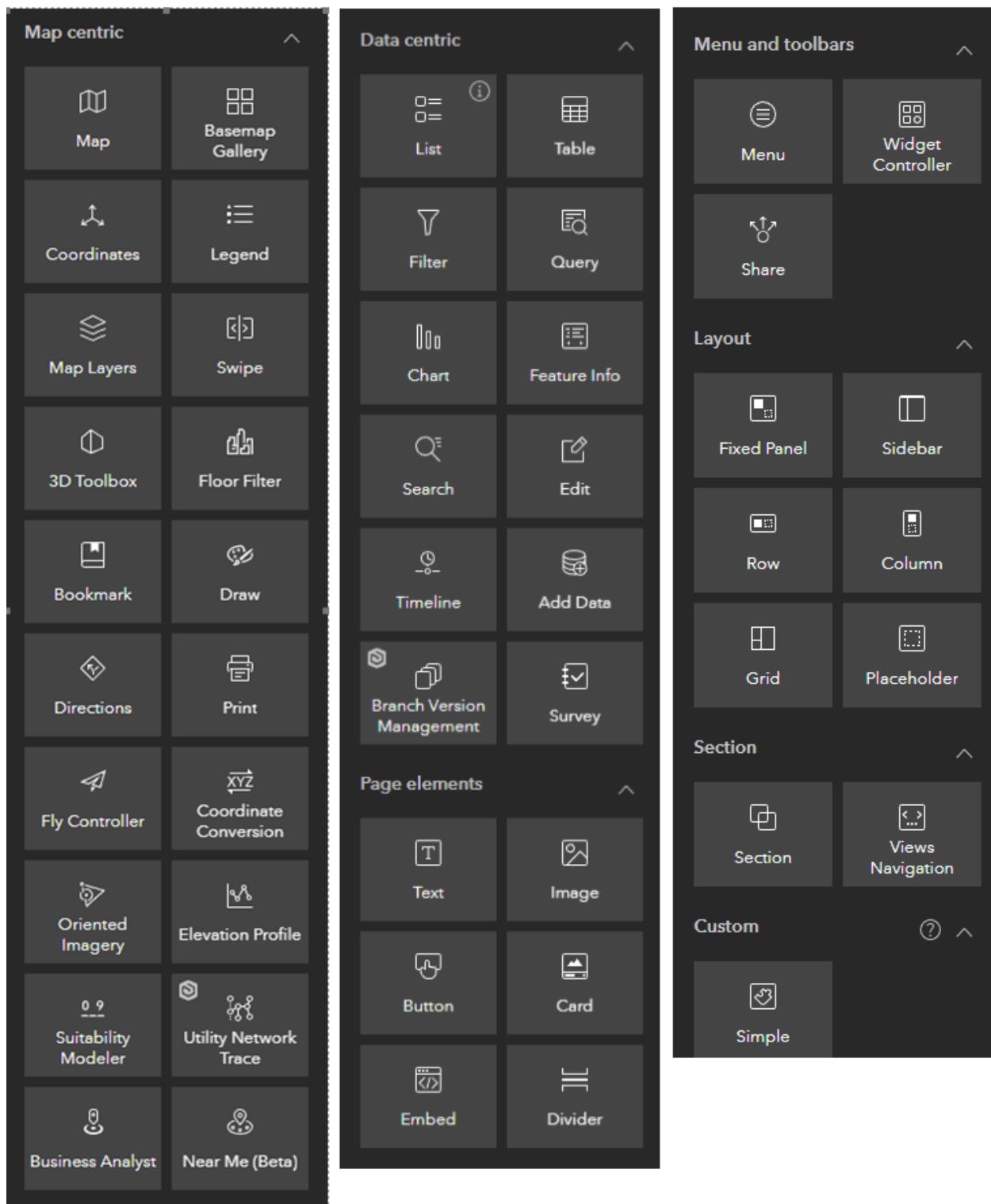
Should you transition your existing WAB apps to EXB?

The Web AppBuilder for ArcGIS was released in 2010. It is a mature and stable product. It has gone through numerous bug fixes and enhancements. The current version is 2.28.

You are free to leverage the functionality of over 60 Standard Widgets plus dozens of Custom Widgets designed by third party developers.



Contrast this with the widgets available for EXB version 1.12



The choice of using **WAB** or **EXB** should be carefully evaluated on a case by case basis.

If your objective is to build a *single* Web Mapping Application that utilizes the full functionality of existing WAB custom widgets like Robert Scheitlin's Enhanced Search Widget and the Identify Widget, then the Developer Edition of the Web AppBuilder is your best choice.

WAB is a mature and stable platform. If you have existing WAB apps built with the Developer Edition of WAB, keep them. They should run indefinitely until a browser update breaks them.

Although you are limited to creating single Web Apps you can still embed them within a multi-page website.

Here is a tutorial on how to create a website using **Mobirise**, the world's number one Website Builder.

<http://davidapps.net/mobirise/help>

The screenshot shows the Mobirise User Guide website. The top navigation bar includes a logo, a search bar, and links for 'Menu', 'Index', and 'Search'. The main content area has a title 'Overview' and a sub-section 'Mobirise is a free Website Builder.' It also features links for 'Previous page', 'Next page', and 'Print version'. The left sidebar contains a list of links under the heading 'Overview', such as 'View a Demo', 'Install Mobirise', 'Launch Mobirise 4', 'Create New Site', 'Add a Menu', 'Add the Full Screen Intro Header', 'Congratulations! You have created a Responsive Website', 'Preview the Website', 'Preview your website in a browser', 'Publish your Website', 'View your Website in Chrome', 'Change the Page Title', 'Inspect your Published Website', 'Export your Website', 'Configure the Menu', 'Configure the Full Screen Intro Page', 'Test your Intro Page', 'Add a Map Gallery', 'Save to User Block', 'Add a second Page', 'Add Intro with Background Video', and 'Set the link to your GEOFORTEX page'. At the bottom of the page, there is a copyright notice: '© 2019 Maricopa County'.

If on the other hand, your goal is to build a complete *multi-page* website with interactive charts, tables, lists, images with seamless switching between 2D and 3D maps with the freedom to create your own page layouts, menus with easy integration with other ESRI mapping apps like Story Maps and Survey 123, then you should use the Experience Builder. If you wish to add Custom Widgets, you would need to use the Developer Edition of the Experience Builder.

The EXB platform was launched in 2020. It is still in its infancy going through 4 updates each year. New widgets are being added while existing widgets are being enhanced with new functionality with every release. It is in a constant state of flux. It will likely reach parity with the WAB platform within a year or two and then eclipse it to become the new standard for Web Mapping.

EXB utilizes all the new capabilities of the new Map Viewer in ArcGIS Online. If you need to group layers, EXB is the way to go.

Personally, I love the Experience Builder!

The Experience Builder Platform is the next milestone in Moxie's grand vision to bring Web Mapping to the masses. The User Interface is more intuitive and elegant than the Web AppBuilder featuring over 60 templates plus offering you the capability to design the layout of every page and window.

I did not realize the true power of the Experience Builder until I took the **Building Web Apps with ArcGIS Experience Builder** class from Rudy Prosser, Senior Instructor at ESRI.

<https://www.esri.com/training/catalog/63dd4da15b71755a052729f8/building-web-apps-with-arcgis-experience-builder/>

The screenshot shows the Esri Academy course catalog interface. At the top, there is a navigation bar with links for Home, Esri Academy, About, Catalog (which is underlined), Certification, My Academy, and Help. Below the navigation bar, there are links for Course Catalog, Courses by Schedule, Courses by Location, New and Retired Training, and Learning Plans. The main content area has a dark blue background with white text. It features the text "Instructor-Led" followed by the course title "Building Web Apps with ArcGIS Experience Builder". Below the title, there is a "Register" button, a row of five small globe icons, and three small icons (heart, plus, and arrow). At the bottom of this section, it says "Next class starts Sep 12". In the bottom right corner of the main content area, it says "2 Days (16 Hours)".

For anyone getting started on the Experience Builder, this 2-day virtual training course is an absolute must.

A lot of design thought went behind the Experience Builder. You can make an attractive, interactive, mobile friendly website in a matter of hours without writing a single line of code.

Although the EXB Interface appears very simple with its modest collection of drag & drop widgets, a lot of fancy code gets created behind the scenes. It took a team of 40 developers working for 3 years to make this magic happen.

For someone seeking to develop Custom Widgets for EXB, there is a steep learning curve. You have to learn the following programming languages:

- JavaScript
- TypeScript
- CSS
- HTML

You have to learn the following frameworks:

- ArcGIS Map SDK for JavaScript 4.x (Core GIS Application Functionality)
- React Framework (Application and Widget Logic)
- Redux Framework (State Management)
- Bootstrap 4 (User Interface)

It can get expensive for small organizations to retain full time programmers on their staff for the sake of building custom widgets. A cheaper alternative may be to contact ESRI Professional Services to have them build these Custom Widgets for you.

<https://www.esri.com/en-us/arcgis/services/overview>

On behalf of our Experience Builder Community I would like to thank Moxie Zhang, Jianxia Song and the entire WAB/EXB development team for all their hard work and programming wizardry in making these magical tools for us.

They are a joy to use!

Best regards,

David Das, GISP
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Resources

Download ArcGIS Experience Builder, Developer Edition

<https://developers.arcgis.com/experience-builder/>

ArcGIS Experience Builder Community

<https://community.esri.com/t5/arcgis-experience-builder/ct-p/arcgis-experience-builder>

ArcGIS Experience Builder Custom Widgets by Robert Scheitlin

<https://community.esri.com/t5/experience-builder-custom-widgets/tkb-p/eb-custom-widgets-tkb-board>

ArcGIS Experience Builder Custom Widgets

<https://community.esri.com/t5/experience-builder-custom-widgets/gh-p/eb-custom-widgets>

ArcGIS Experience Builder SDK Resources

<https://github.com/Esri/arcgis-experience-builder-sdk-resources>

Download Node.js

<https://nodejs.org/en/download>

Download Microsoft Visual Studio Code

<https://code.visualstudio.com/download>

Download Notepad++

<https://notepad-plus-plus.org/downloads/>

GitHub – Create an Account

<https://github.com/>

Download Git for Windows

<https://github.com/git-for-windows/git/releases/download/v2.42.0.windows.2/Git-2.42.0.2-64-bit.exe>