

CSULA Senior Design Workshop

Noah Sager

Product Engineer | ArcGIS API for JavaScript | Esri

@noashx

nsager@esri.com

About Me

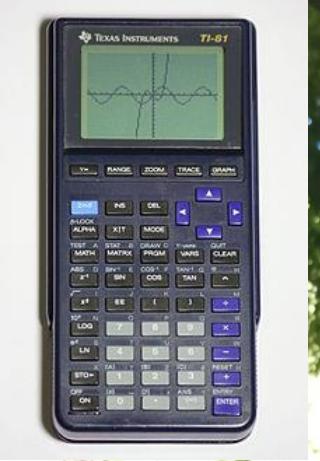
Bring on the Papers!



"Go for it! You have everything to

Bring On the Papers!
Esri UC Call for Papers Closes October 26

Do you have a GIS story to change the world? Cap your insights.





The background features a dark blue gradient with a subtle grid pattern. Scattered throughout are numerous 3D-style blue cubes of varying sizes, some with a light gray or white face, creating a sense of depth and technology.

Now To Business



What is...
Geography?



Everything is related.

Things that are closer
are more related than
things that are farther
away.



What is...

Geography?
GIS?



Geographic Information System (GIS) lets us visualize, question, analyze, and interpret data to understand relationships, patterns, and trends. GIS benefits organizations of all sizes and in almost every industry.



GIS is a
tool/science/technology
that collects, analyzes,
and visualizes spatial
relationships on a
computer*.



What is...

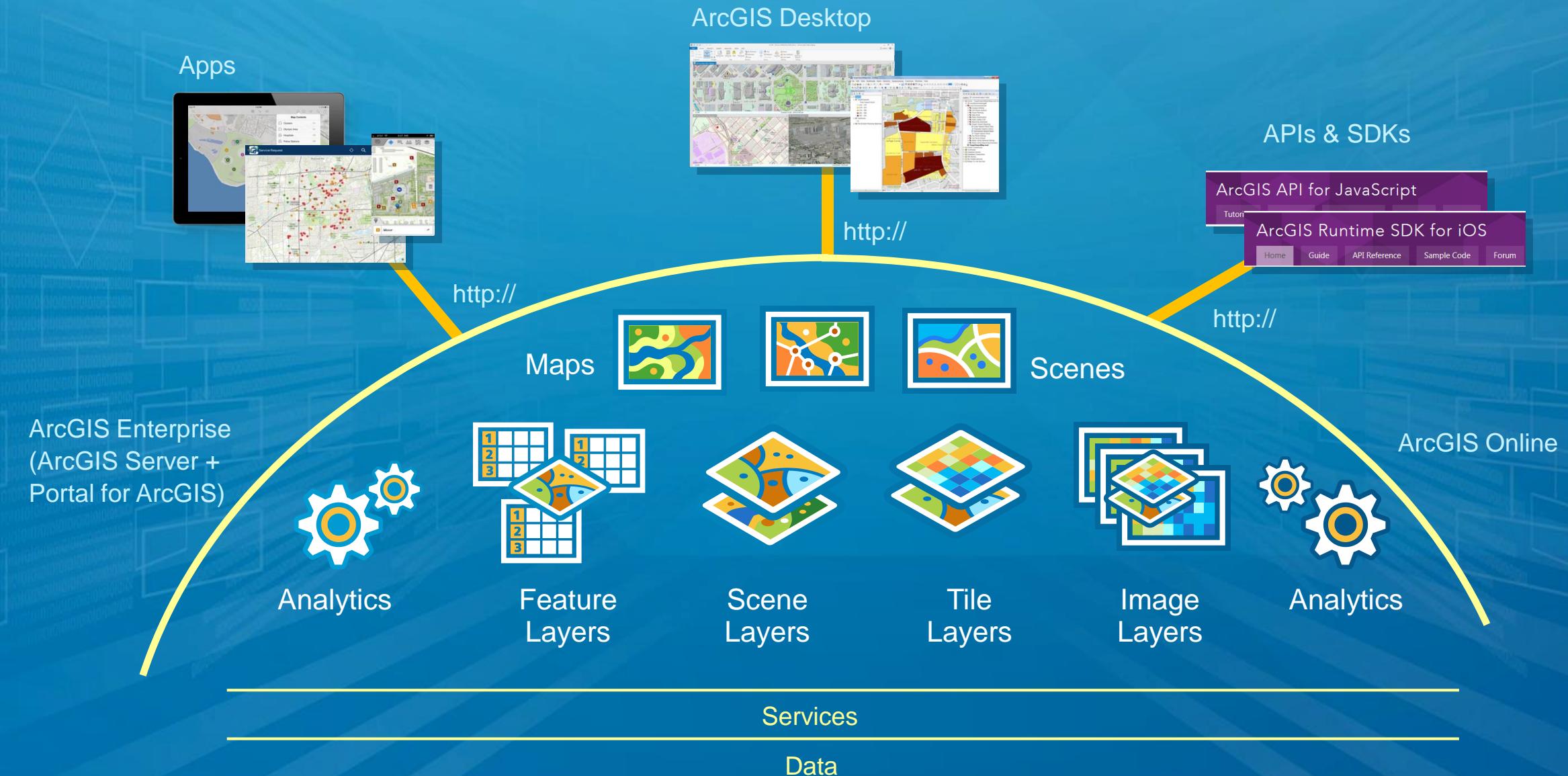
Geography?
GIS?
ArcGIS?



ArcGIS is an Esri GIS solution.

Desktop (Windows, Mac, Linux)
Mobile (Android, iOS, Windows)
Web (Chrome, IE, Opera, etc.)

The ArcGIS Platform





What is...

Geography?
GIS?
ArcGIS?
GIS Programming?



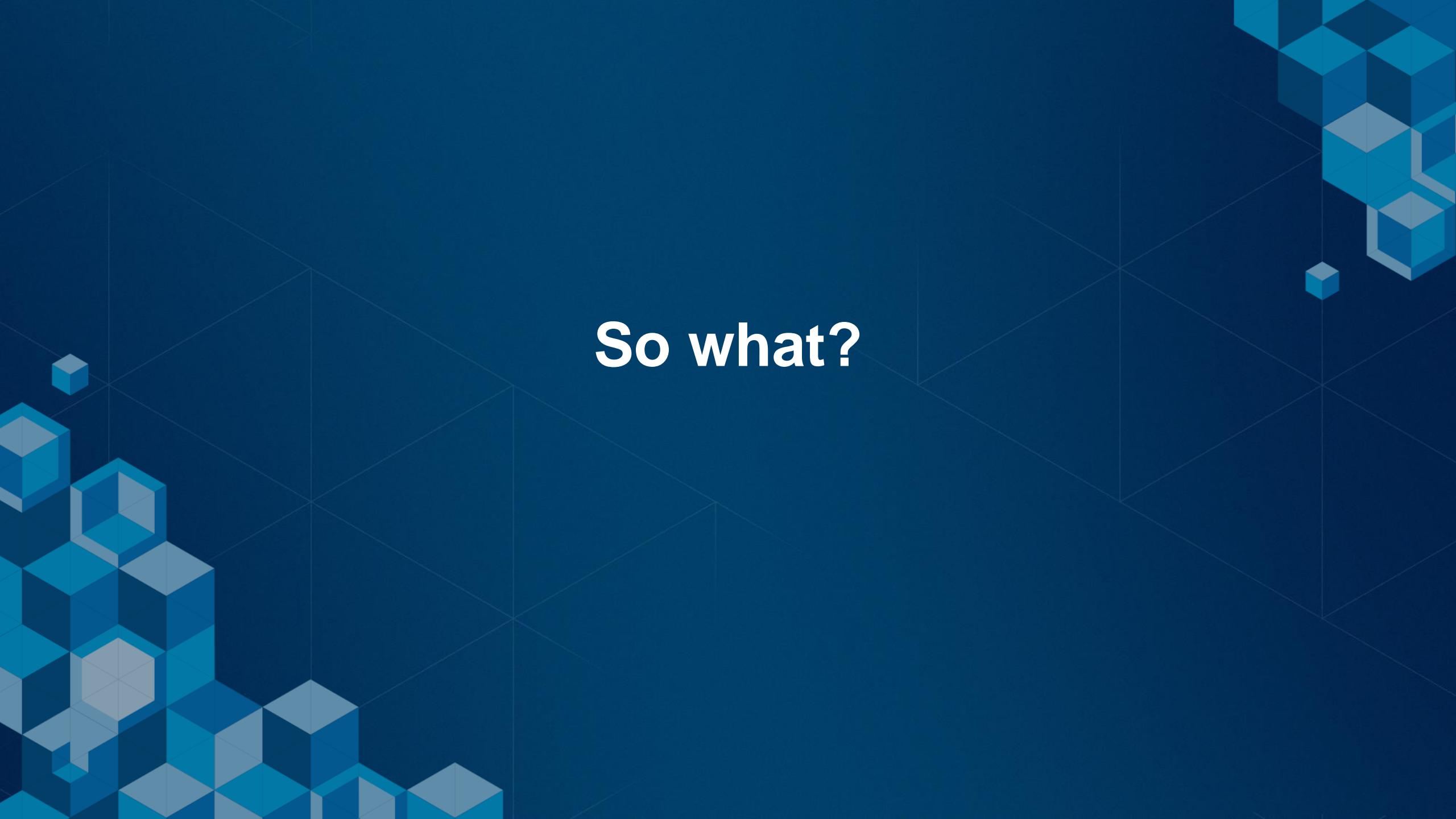
GIS Programming is a kickbutt way to solve geospatial problems in a creative and totally relevant/unique workflow.

A complete mapping and analytics platform for developers

[View Dashboard](#) [Start Developing Your App](#)

JS iOS .NET Python REST

ArcGIS for Developers Dashboard + ▾ Get Started Documentation Pricing Support Noah

The background features a dark blue gradient with a subtle grid pattern. In the bottom left corner, there is a cluster of blue cubes of various sizes and shades, some with hexagonal faces. In the top right corner, there is another cluster of similar cubes, with one prominent cube standing vertically.

So what?

Faulty trail app leaves tourist stranded overnight on a cliff face

North Shore News

By **Brent Richter** - October 9, 2018



Share on Facebook



Tweet on Twitter



North Shore Rescue says a tourist using a faulty trail map app on his phone was led astray into danger Monday evening.

The hiker, a 37-year-old man who was visiting from the U.K., was using the Maps.me app to navigate his way off Crown Mountain.





GATOR

Find address or place



Legend

- Sub-Tropical Depression
- Sub-Tropical Storm
- Tropical Depression
- Tropical Storm
- Hurricane

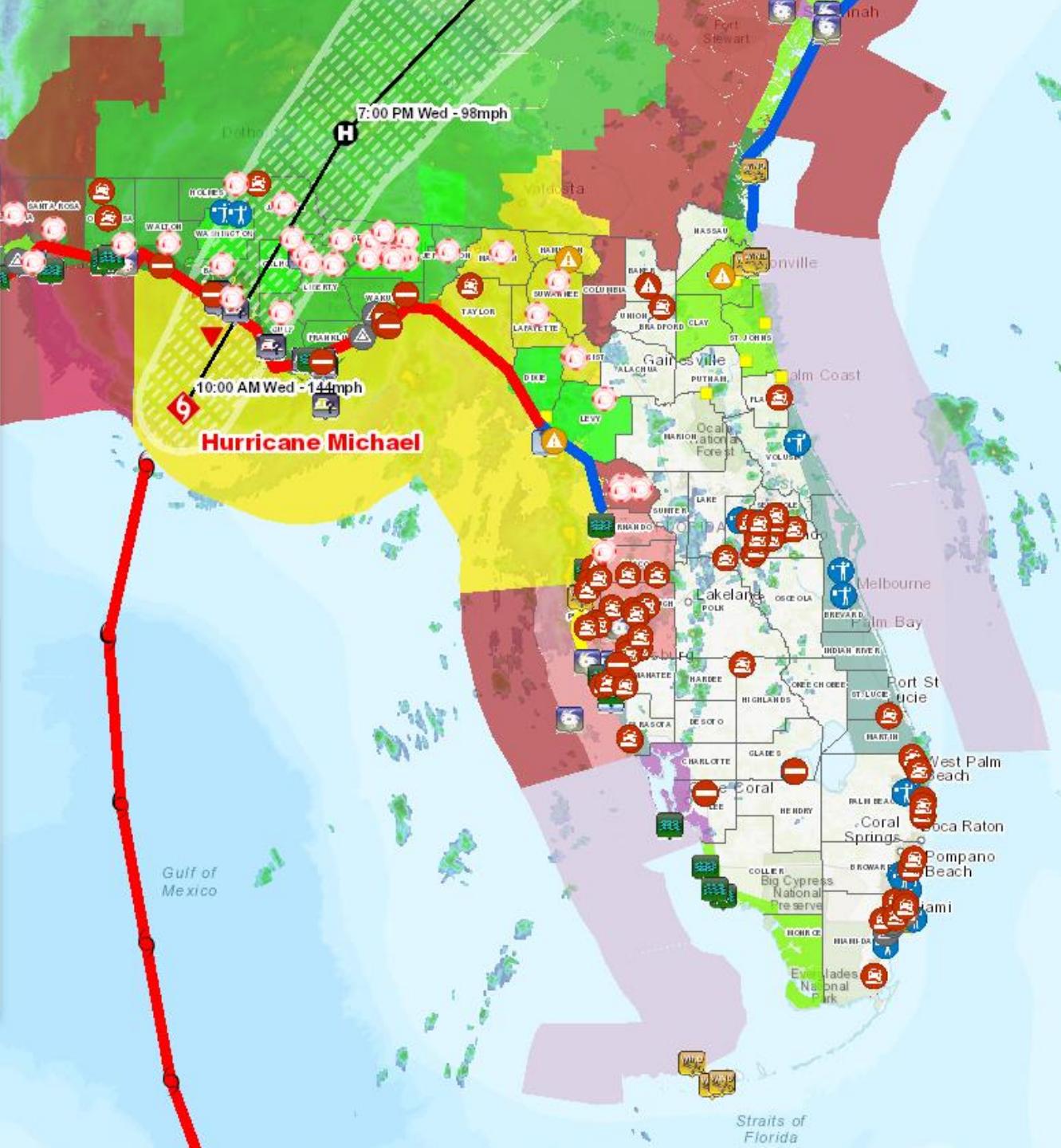
Past Track

- Post-Tropical Cyclone
- Wave
- Disturbance
- Low
- Sub-Tropical Depression
- Sub-Tropical Storm
- Tropical Depression
- Tropical Storm
- Hurricane

River Conditions

Currently Flooding (Florida)

- Major Flooding
- Moderate Flooding
- Minor Flooding
- Near Flood Stage
- Normal
- Low Threshold



+ Find address or location -

Map tools: Location, Draw, Measure, Print, Share.

Search bar: Find address or location.

Scale bar: 400km / 300mi.

Coordinates: 52.467 -96.574 Degrees.

Source: Esri, DigitalGlobe.

About this application

About the map
Map legend

News Observations

- Active fire report (orange flame icon)
- Active perimeter (red outline icon)

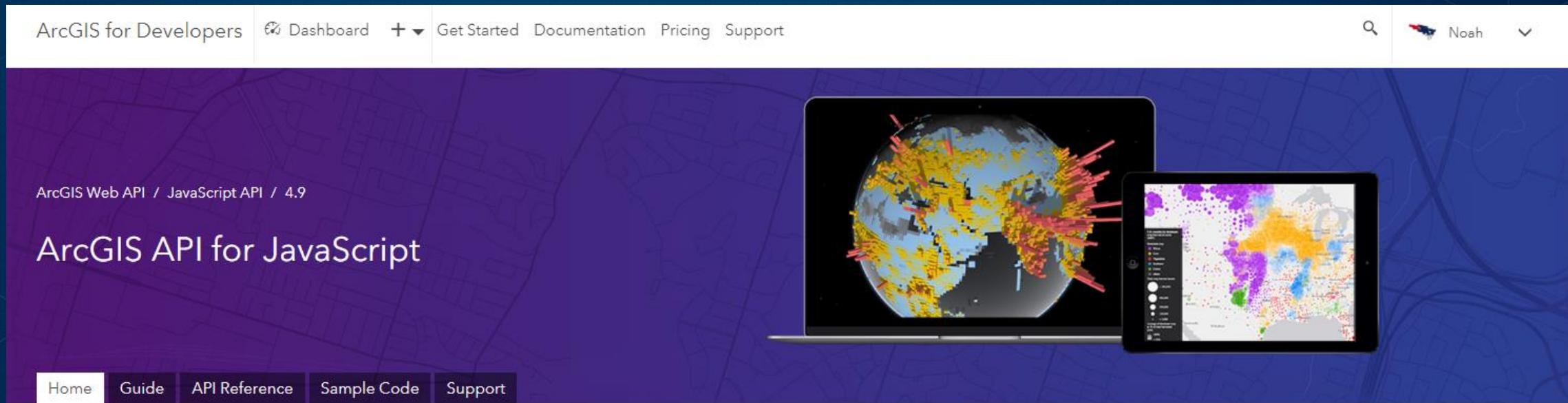
NWS Watches Warnings - Severe Events

- 911 Telephone Outage
- Administrative Message
- Air Quality Alert
- Air Stagnation Advisory
- Arroyo and Small Stream Flood Advisory
- Ashfall Advisory
- Ashfall Warning
- Avalanche Advisory

Calgary
Regina
Vancouver
Seattle
Washington
Portland
Oregon
Idaho
Wyoming
Salt Lake City
Nevada
Utah
Colorado
Sacramento
San Francisco
Fresno
Las Vegas
California
Los Angeles
Phoenix
Tucson
New Mexico
Tijuana
400km
300mi
52.467 -96.574 Degrees
Source: Esri, DigitalGlobe

ArcGIS API for JavaScript

<https://developers.arcgis.com/javascript>



The screenshot shows the ArcGIS API for JavaScript homepage. At the top, there's a navigation bar with links for ArcGIS for Developers, Dashboard, Get Started, Documentation, Pricing, and Support. A search icon and a user profile for Noah are also present. Below the header, a purple banner features the text "ArcGIS Web API / JavaScript API / 4.9" and "ArcGIS API for JavaScript". It includes images of a laptop and a tablet displaying maps. A menu bar below the banner has links for Home, Guide, API Reference, Sample Code, and Support. The main content area has a heading "Build 2D and 3D web apps!" followed by a paragraph about the 4.x series integrating 2D and 3D mapping. A "Learn about 4.9" button and some sample code are shown. To the right, a sidebar asks if you need a full-featured 2D app and provides a "Go to 3.26" button and a "Choosing a version" link.

ArcGIS Web API / JavaScript API / 4.9

ArcGIS API for JavaScript

Home Guide API Reference Sample Code Support

Build 2D and 3D web apps!

The 4.x series of the ArcGIS API for JavaScript integrates 2D and 3D into a single, easy-to-use, powerful mapping API. Create 3D maps as easily as 2D maps, seamlessly integrate your web GIS and build influential data-driven visualizations.

Learn about 4.9

```
// Reference the JavaScript API from our CDN and you are ready to get started:  
<link rel="stylesheet" href="https://js.arcgis.com/4.9/esri/css/main.css">  
<script src="https://js.arcgis.com/4.9/"></script>
```

Need to build a full-featured 2D web app with capabilities such as editing and support for all existing layer types?

Go to 3.26

Choosing a version ▶

Get the API | Release notes | FAQ | System requirements | View samples

Update FeatureLayer using applyEdits()

The map displays a dense cluster of incident locations in Riverside, California, marked by various icons such as red flags, green trees, orange cones, and blue question marks. The locations are scattered across several neighborhoods, including Redlands, Cypress Park, and Citrus Hill. A callout box titled "Report Incidents" contains the following information:

- Click Add incident button
- Click on the map to create the incident
- Change the incident type

Add incident

Or

Select an incident to edit or delete.

City of Riverside, County of Riverside, Esri, HERE, Garmin, INCREMENT P, NGA, USGS | Esri, HERE

Powered by Esri

Edit rivers and waterbodies

https://developers.arcgis.com/javascript/3/samples/ed_simpletoolbar/

Edit Hydrography

Wildfire Response Points

- MediVac Site
- Aerial Hazard
- Camp
- Division Break
- Drop Point
- Fire Origin
- Fire Station
- First Aid Station
- Helibase
- Hot Spot
- Lookout
- Mobile Weather Unit
- Safety Zone
- Spot Fire
- Water Source

Wind Speed Direction

Wildfire Response Polygons

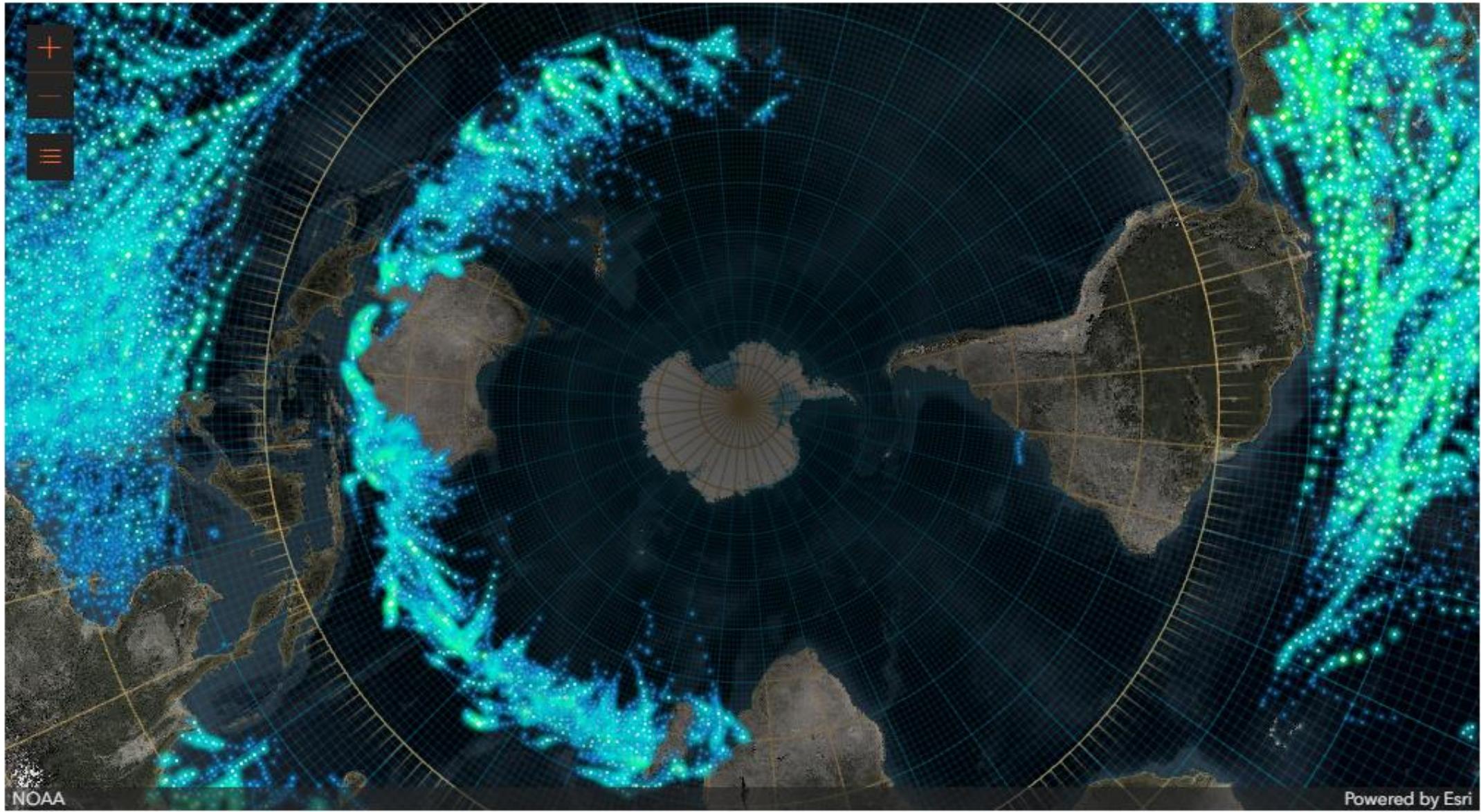
- IR Heat Perimeter
- IR Intense Heat Area
- Maximum Manageable Area (MMA)

The map displays a satellite view of Chase County State Park and surrounding land. Key features include Chase State Fishing Lake & Wild, Praher Creek, Spring Creek, and Buck Creek. A large red polygon, labeled 'IR Heat Perimeter', covers the eastern part of the state park and extends into adjacent land. Within this perimeter, several red arrows indicate fire movement or spread. A smaller red polygon, labeled 'IR Intense Heat Area', is located near the center of the state park. Numerous blue dashed arrows point generally towards the north and northwest from the state park area. Various other symbols are scattered across the map, including purple triangles for aerial hazards, white circles with 'T' for MediVac sites, blue crosses for first aid stations, and yellow triangles for safety zones. A legend on the left provides a key for these symbols.

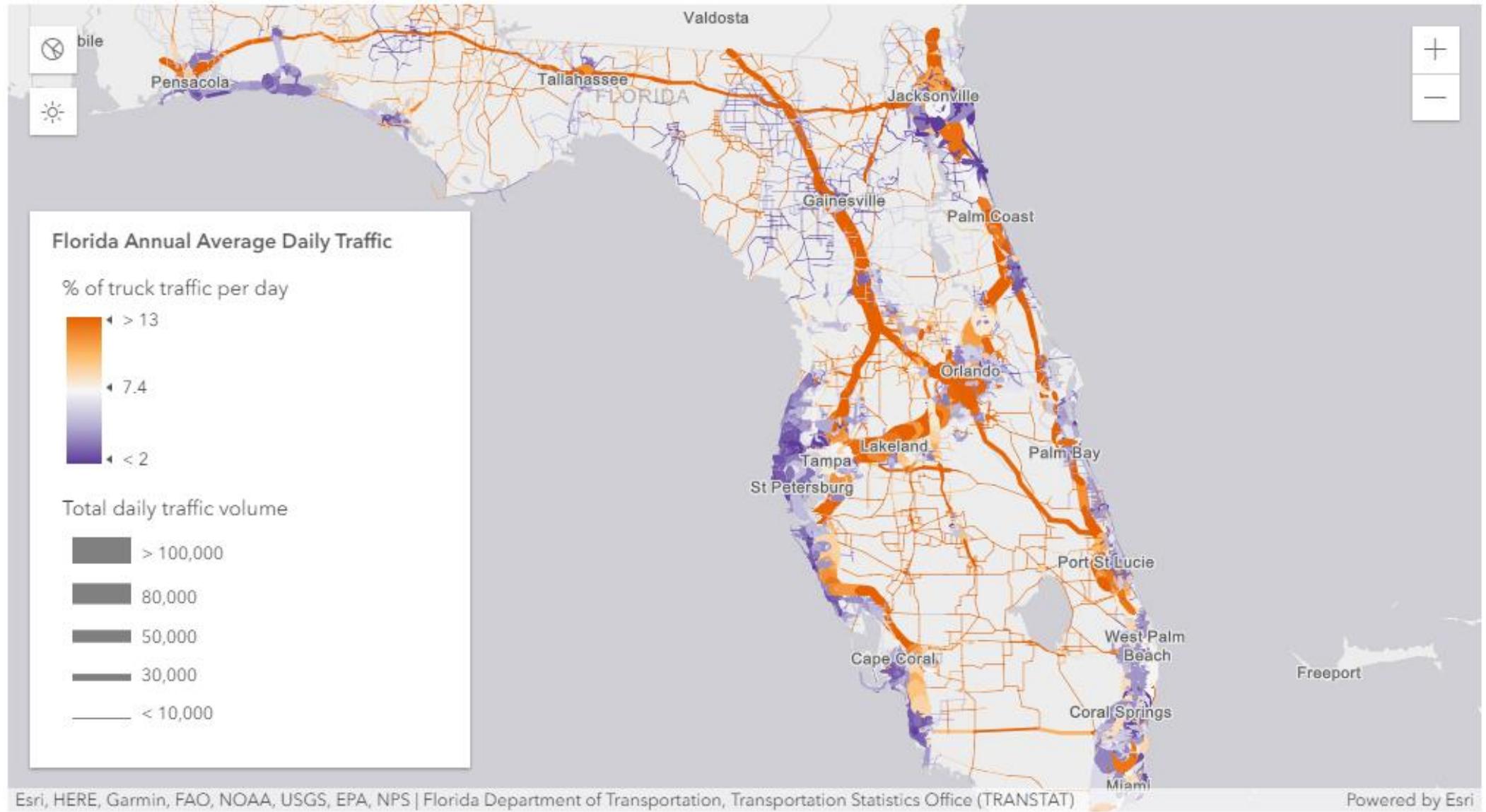
POWERED BY esri

USDA FSA | Esri, HERE, Garmin

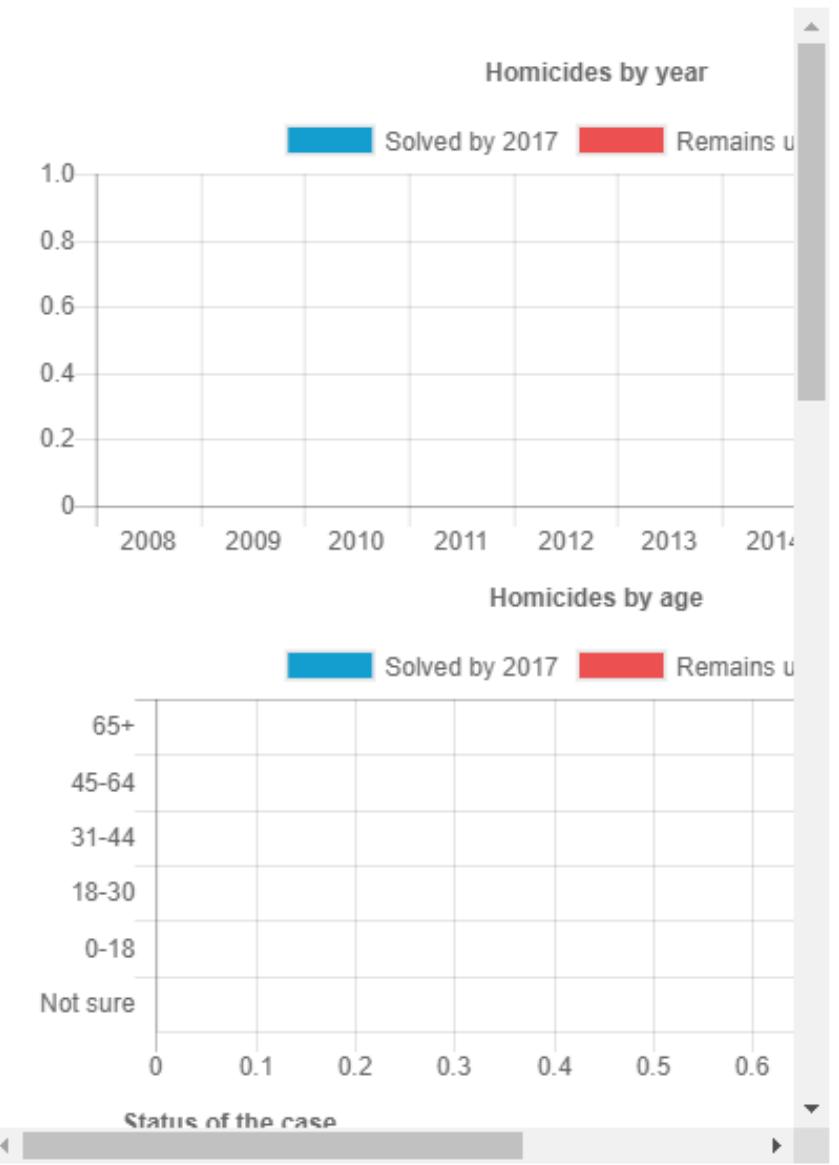
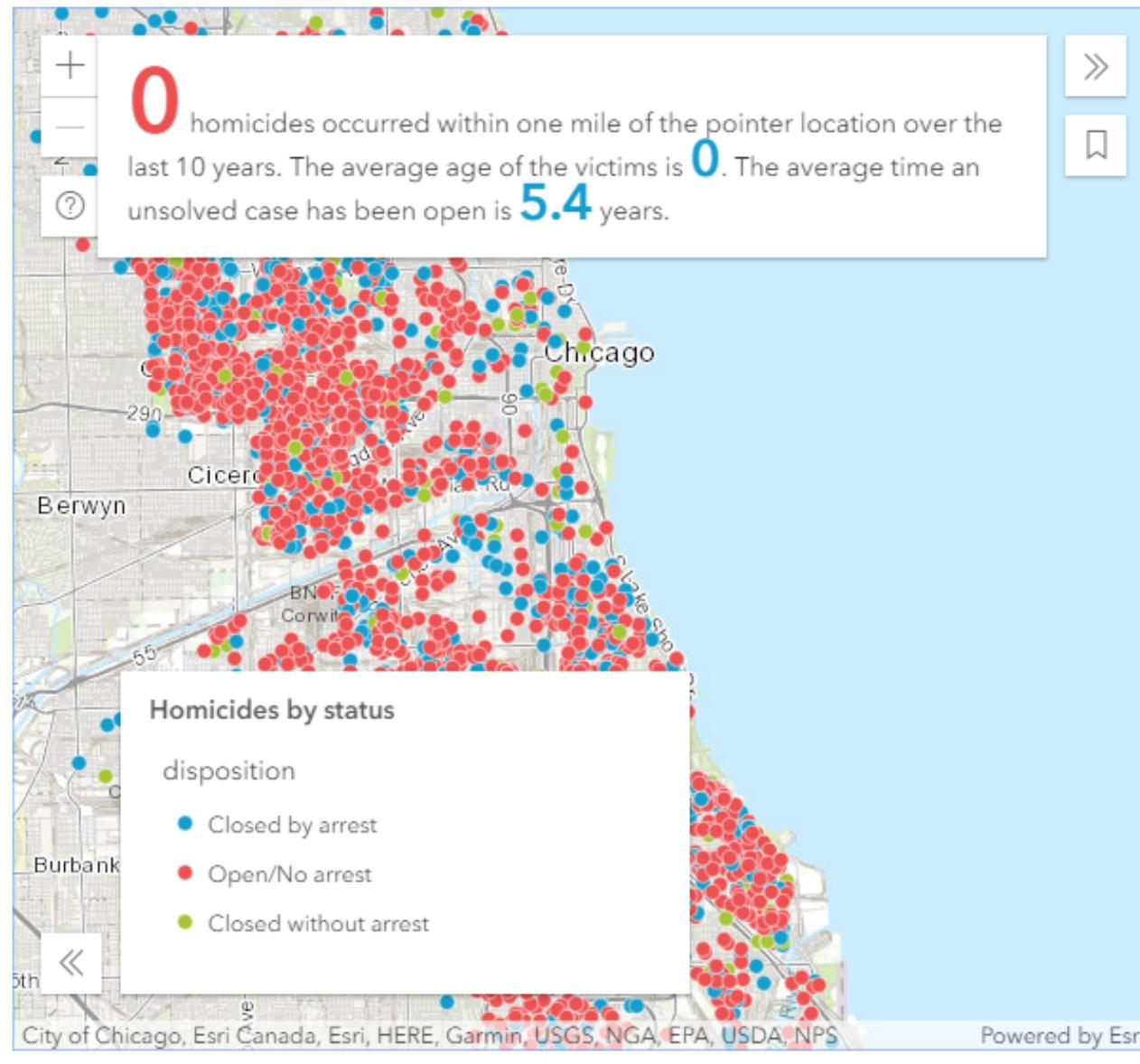
CSVLayer - Project points on the fly



Multivariate data exploration



Query statistics client-side by distance



Esri Leaflet

A lightweight set of tools for using ArcGIS services with [Leaflet](#).

[Examples](#)[API Reference](#)[Download](#)[Terms](#)

Career Opportunities



STUDENTS AT ESRI

INNOVATION, COLLABORATION, PROFESSIONAL AND
PERSONAL GROWTH

Whether you are looking to gain hands-on experience to add to your résumé or you're ready to launch your career, you'll find this and much more at Esri.

New Grads

Internship Program

Student Assistantship Program

30 POSITIONS

Job Category

CAREERS HOME

JOB SEARCH

RECRUITING EVENTS

STUDENTS & GRADS

BENEFITS



<https://community.esri.com/community/esri-young-professionals-network>



Products

Industries

About

Support



Sign In

GeoNet

The Esri Community

Home

My News

Browse GeoNet ▾

Communities ▾

ArcGIS Ideas

GeoNet Resource Hub

Log in



All Places >

Esri Young Professionals Network

Actions ▾



Overview

Esri UC

FedGIS

Regional Events

Activity

Content

People

Subspaces

Calendar

<https://community.esri.com/groups/geodev>

The screenshot shows the Esri Geo Developers group page. At the top, there's a banner image of a group of people in a conference room. Below the banner, the group name "Geo Developers" is displayed, along with navigation links for "Activity", "Content", "People", and "Calendar". On the right side of the header, there are "Actions" and an information icon.

The main content area features a purple circular profile picture of the Earth. To its right are three smaller map images: a world map showing the Tyrrhenian Sea, a San Francisco Crime Map, and a map of New York City with red and yellow lines. Below these are the group's statistics: Tweets (1,999), Following (1,877), Followers (4,438), Likes (1,123), and Lists (3).

The left sidebar contains the group's bio: "For our unique GeoDev friends, a special Twitter account. We hope to meet you at a #GeoDev Meetup, tech conference, hackathon or the #DevSummit." It also lists the location as Redlands, CA, the website as developers.arcgis.com, and the joining date as August 2010. There are "Tweet to" and "Message" buttons at the bottom of this sidebar.

The central column has tabs for "Tweets", "Tweets & replies", and "Media". A tweet from "Esri GeoDev" (@EsriGeoDev) is shown, mentioning a presentation at a #GeoDev Meetup in Portland, Maine. Below the tweet are two small images: one of a person at a podium and another of a group of people seated around a table.

The right sidebar is titled "Who to follow" and lists three accounts: "ArcGIS Enterprise" (@ArcGl...), "Amy Niessen" (@AmyNiessen), and "Esri Globe" (@EsriGlobe). Each account has a "Follow" button next to it.

@EsriGeoDev



Support

Contact Support

USA +1-888-377-4575

Search Esri Support



Products ▾

Knowledge Base

Downloads

Other Resources ▾

Manage Cases

Request Case

Start Chat

Desktop

ArcGIS Desktop

Industry Focused Extensions

Data and Workflows Extensions

Enterprise

ArcGIS Server

Server Components

Portal for ArcGIS

and more...

Online

ArcGIS Online

Developers

Web APIs

Native Runtime SDKs

ArcGIS Engine

and more...

Apps

Web Apps

Mobile Apps

Plug-in Apps

and more...

More Products

Business Analyst

Esri CityEngine

Content

and more...



Contact Tech Support

Please select a country/region

United States

Esri Headquarters

380 New York Street
Redlands, CA 92373-8100

Email support@esri.com

Phone +1-909-793-3774

Toll-free +1-888-377-4575

Fax +1-909-792-0960

Website <http://support.esri.com>

Support Web Form <http://support.esri.com/en/webform>

Developers

Web APIs

[ArcGIS API for JavaScript](#)

Native Runtime SDKs

[ArcGIS Runtime SDK for .NET](#)

[ArcGIS Runtime SDK for Android](#)

[ArcGIS Runtime SDK for iOS](#)

[ArcGIS Runtime SDK for Java](#)

[ArcGIS Runtime SDK for macOS](#)

[ArcGIS Runtime SDK for Qt](#)

[ArcGIS Runtime SDK for Windows Mobile](#)

ArcGIS Engine

[ArcGIS Engine](#)

[ArcGIS Engine for Linux](#)

Desktop SDKs

[ArcGIS Explorer SDK \(.NET\)](#)

[ArcGIS Pro SDK \(.NET\)](#)

[ArcObjects SDK \(.NET\)](#)

[ArcObjects SDK \(C++\)](#)

[ArcObjects SDK \(Java\)](#)

Web AppBuilder for ArcGIS (Developer Edition)

[Web AppBuilder for ArcGIS \(Developer Edition\)](#)

Scripting and Automation

[ArcGIS Python API](#)



Hackathons

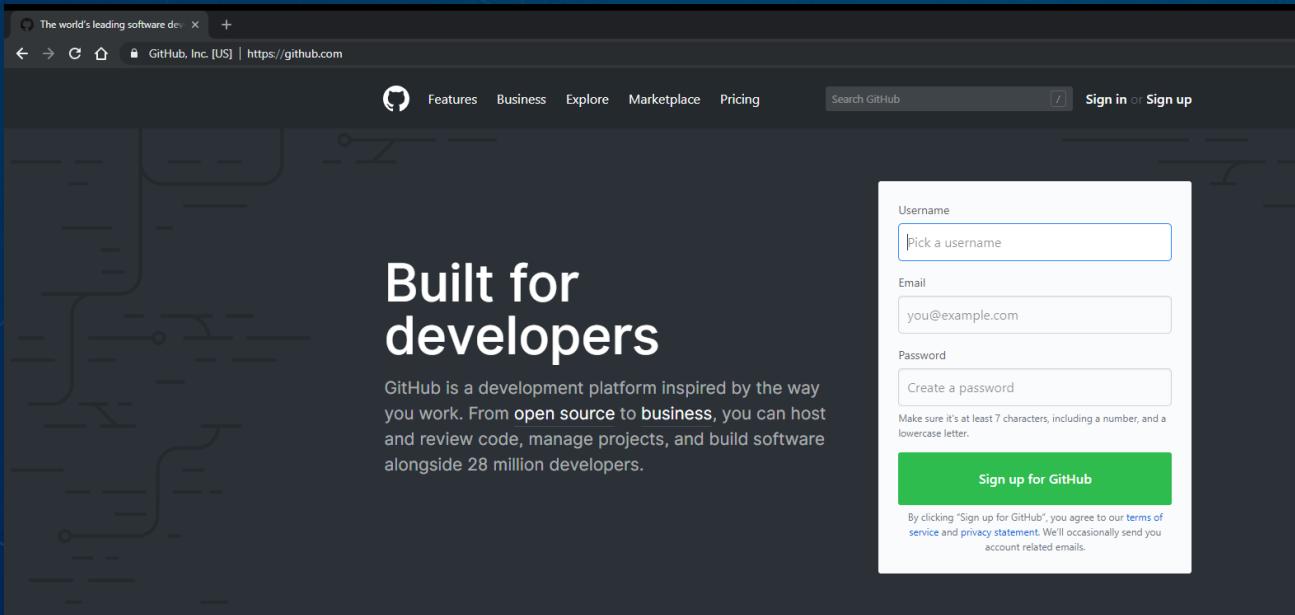


Outreach

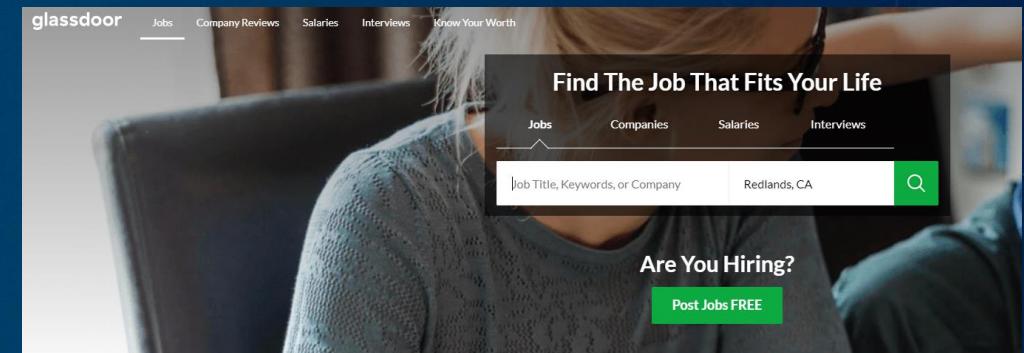


Unsolicited Advice

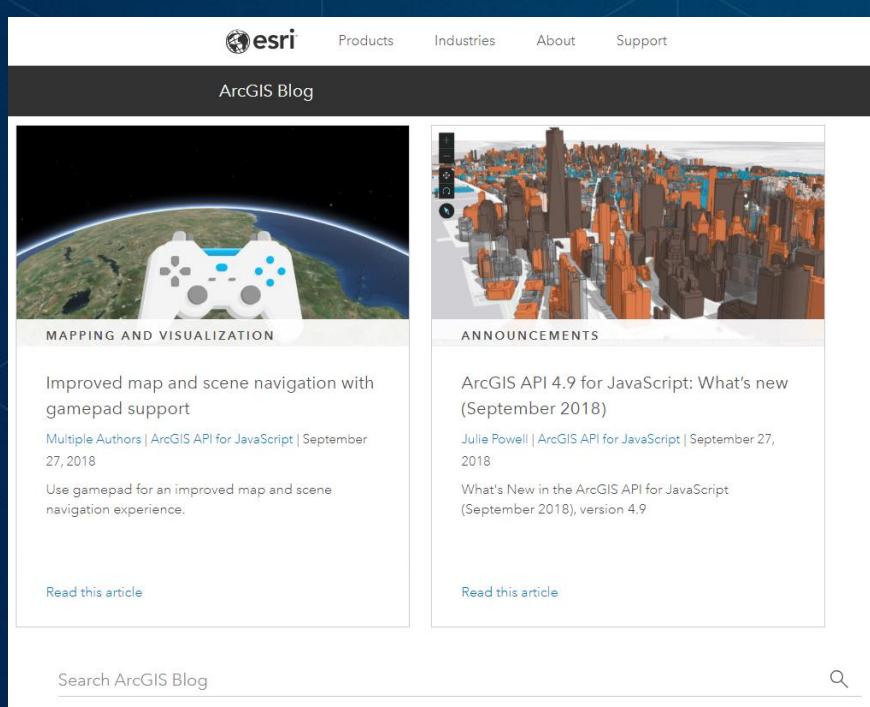
The world's leading software dev + GitHub, Inc. [US] | https://github.com



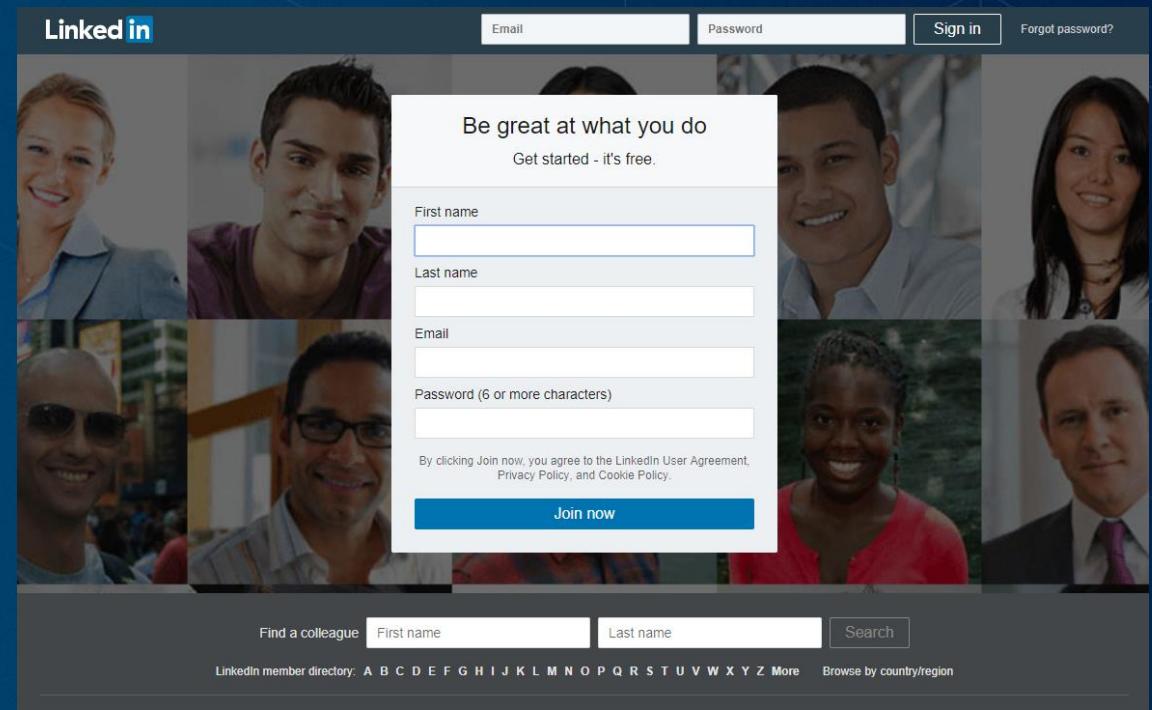
The GitHub homepage features a dark background with a faint circuit board pattern. On the left, there's a large white text area with the heading "Built for developers". Below it, a paragraph explains GitHub as a development platform. To the right is a sign-up form with fields for Username, Email, and Password, followed by a green "Sign up for GitHub" button and a small terms of service/privacy statement.



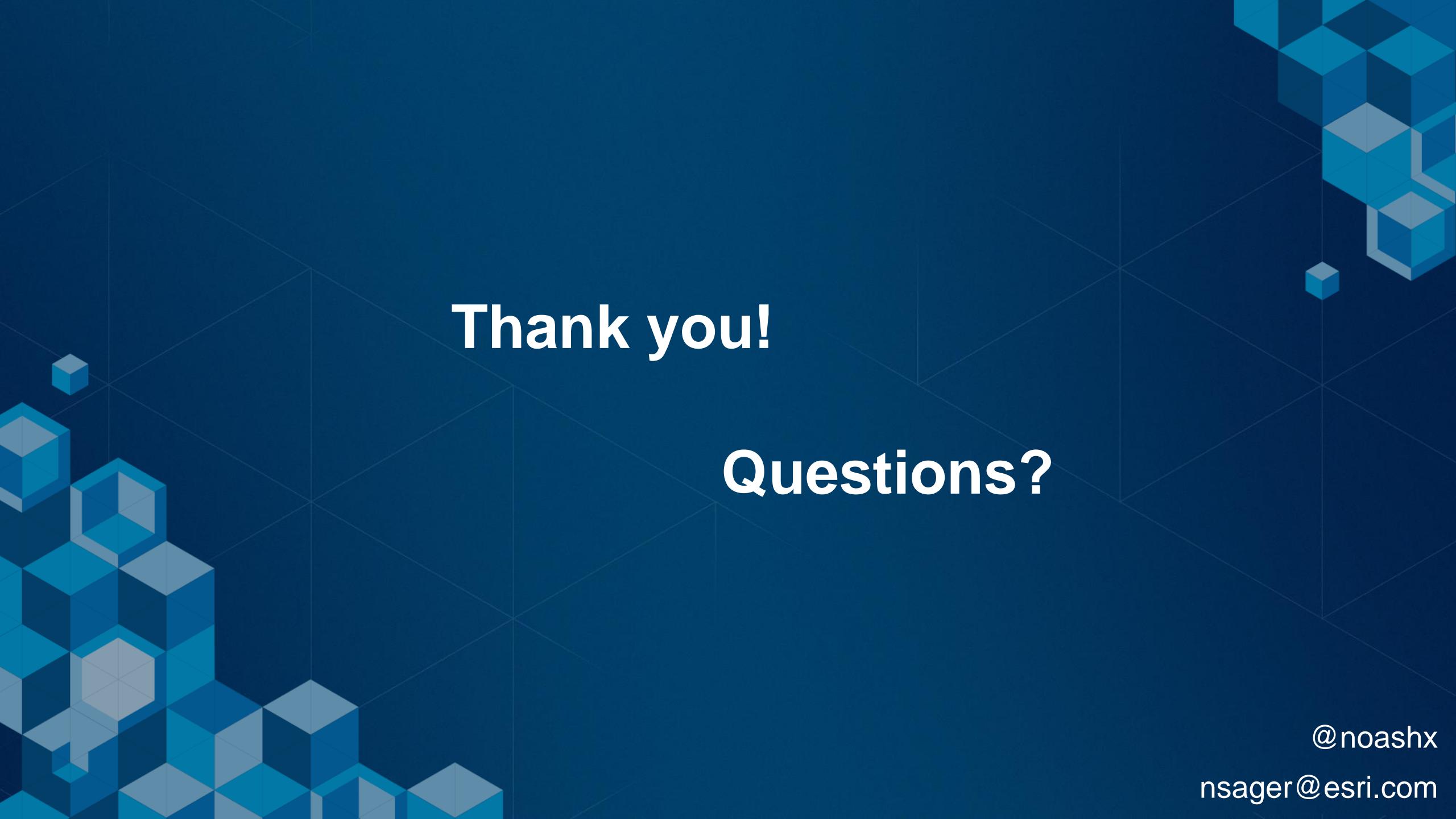
The Glassdoor homepage has a blue header with the company logo and navigation links: Jobs, Company Reviews, Salaries, Interviews, and Know Your Worth. A large banner features a woman in a blue top. Below the banner, a search bar allows users to enter a job title, location (Redlands, CA), and a "Post Jobs FREE" button.



The ArcGIS Blog homepage shows two main articles. The first, "Improved map and scene navigation with gamepad support", includes a thumbnail of a game controller over a globe, was written by Multiple Authors on September 27, 2018, and has a "Read this article" button. The second, "ArcGIS API 4.9 for JavaScript: What's new (September 2018)", includes a thumbnail of a 3D city model, was written by Julie Powell on September 27, 2018, and also has a "Read this article" button. The page also features a search bar at the bottom.



The LinkedIn homepage features a dark header with the LinkedIn logo, a "Sign in" button, and a "Forgot password?" link. A central call-to-action box encourages users to "Be great at what you do" with a "Get started - it's free." button. To the right, there are several user profile pictures. A "Join now" button is prominently displayed. At the bottom, there are search fields for "Find a colleague", "First name", "Last name", and a "Search" button, along with a footer navigation menu.



Thank you!

Questions?

@noashx

nsager@esri.com