



React



ArcGIS®

# Using ESRI JavaScript API with React JS and Vue JS

To Build Modern Web Applications for GIS-related Tasks

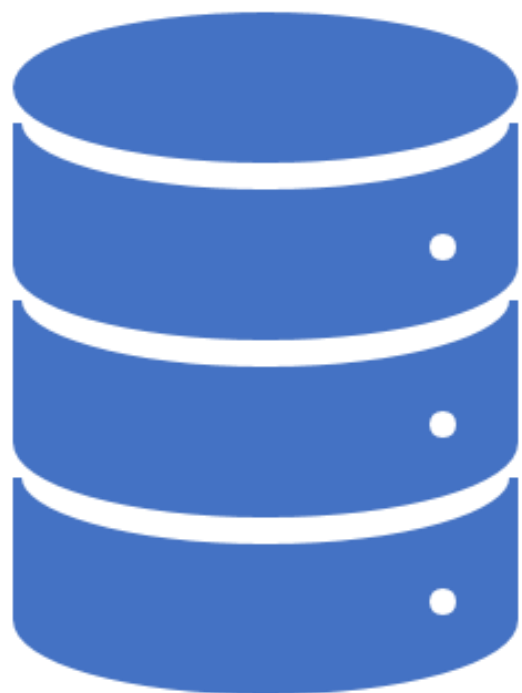


Vue.js

# About Me

## **Koffi Anderson, Koffi**

- Web development for the Library Data & Digital Services of University of Idaho
- Currently working on Inside Idaho Imagery Explorer and Idaho Rangeland Atlas web applications
- Majoring in Electrical Engineering & Computer Science (University of Idaho)



# ESRI JavaScript API

# Overview

## ESRI Developer API capabilities

### Capability highlights



Display your data in 3D >



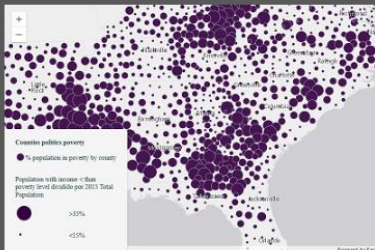
Work with basemaps >



Display and manipulate imagery >



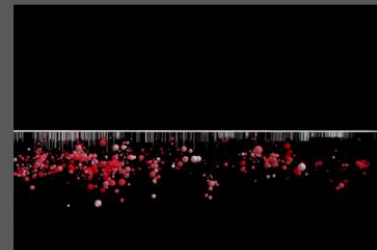
Perform analysis >



Visualize data by size >



Visualize data by color >

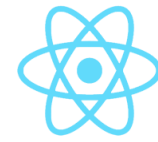


Interact with subsurface data >



Create realistic scenes >

# Why Use JavaScript Frameworks?



React



Vue.js



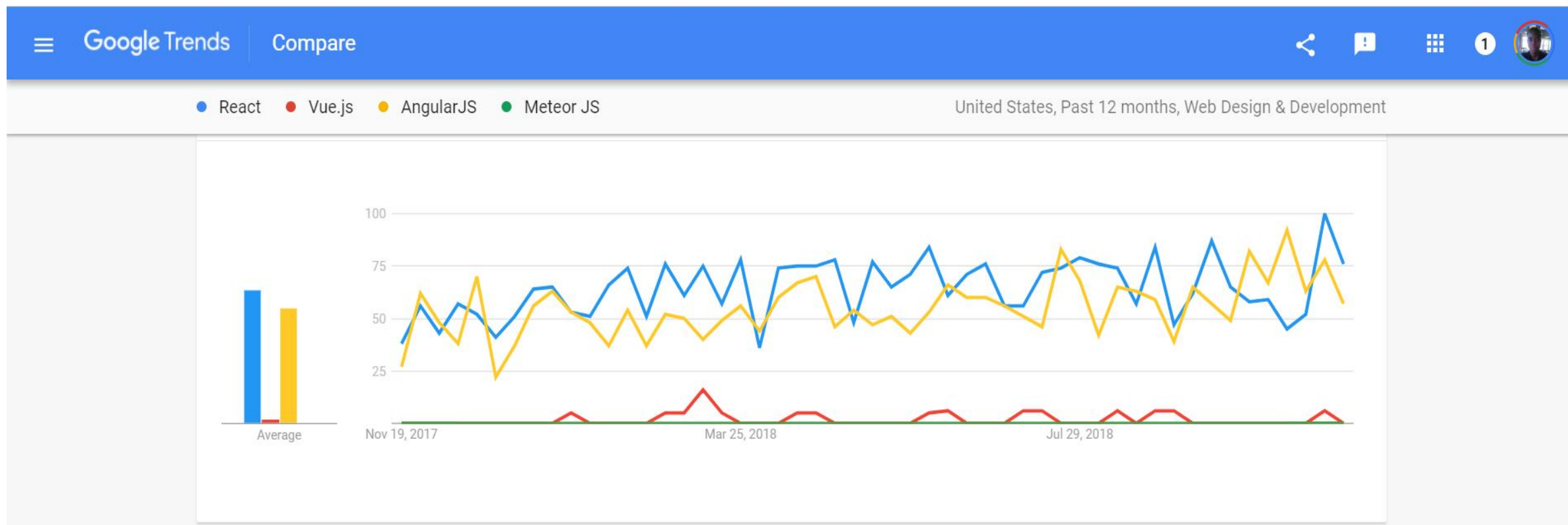
ANGULAR

METEOR

# Comparison

Development Tasks	Vanilla JavaScript	JavaScript Frameworks
Write complex, efficient and easy to maintain User Interface	Difficult	Easy
Keep the User Interface synchronized with the state of the application	Difficult	Easy
Code faster and increase development velocity by following convention	Low velocity	High velocity

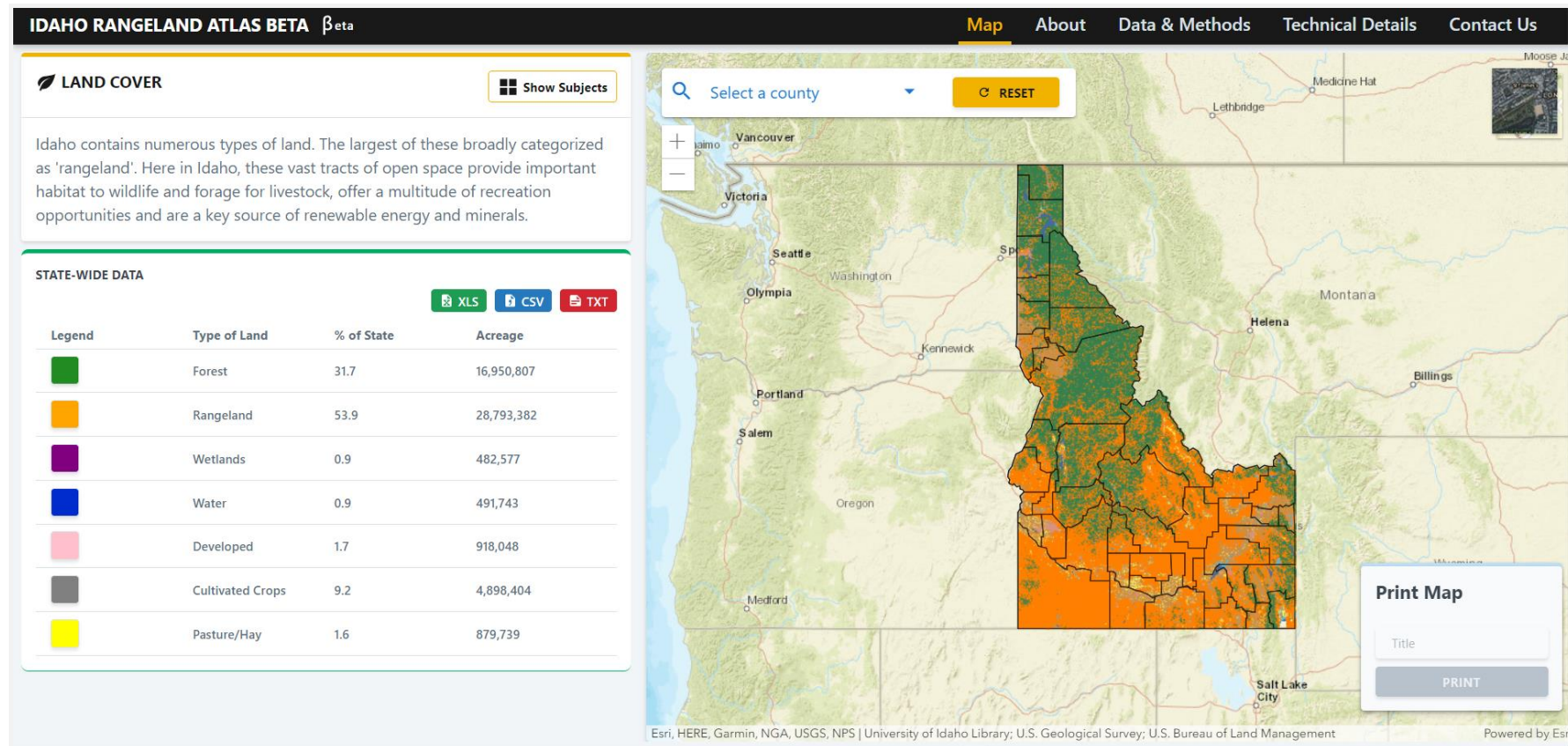
# JavaScript Frameworks Trend





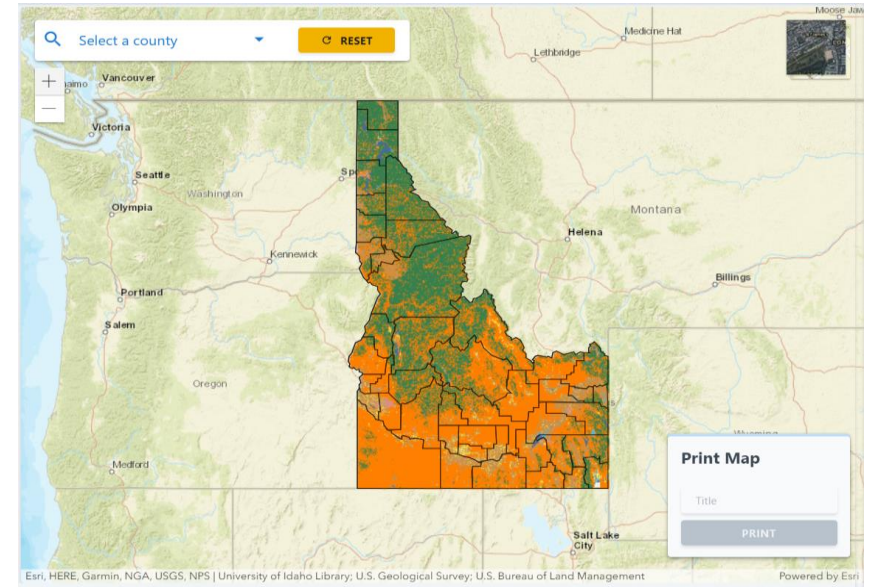
# Using ESRI JavaScript API with Vue

## Idaho Rangeland Atlas Web Application





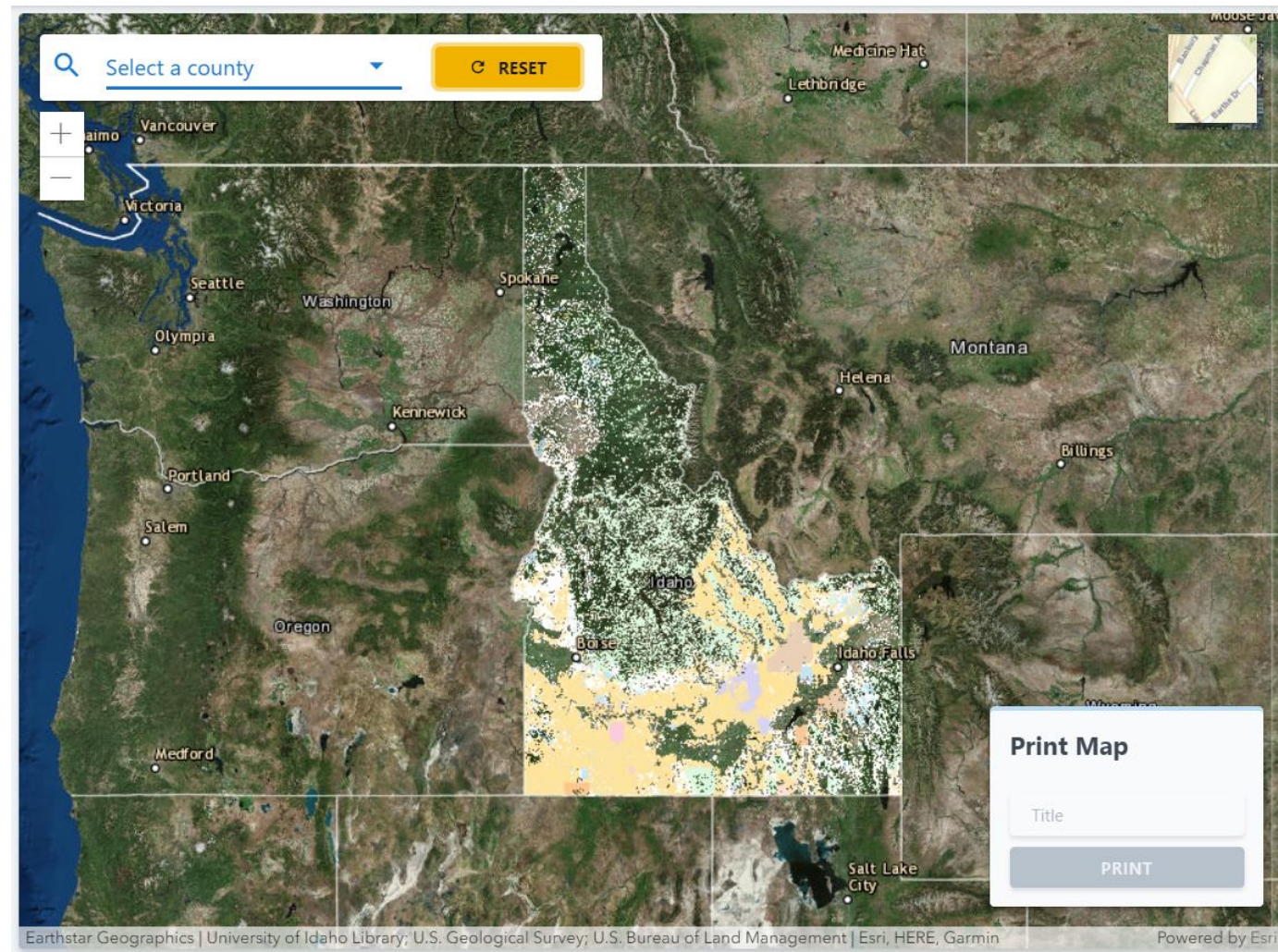
# Presenting Geographic Data with Web Components



STATE-WIDE DATA			
<div>XLS CSV TXT</div>			
Legend	Type of Land ↓	% of State	Acreage
	Forest	31.7	16,950,807
	Rangeland	53.9	28,793,382
	Wetlands	0.9	482,577
	Water	0.9	491,743
	Developed	1.7	918,048
	Cultivated Crops	9.2	4,898,404
	Pasture/Hay	1.6	879,739

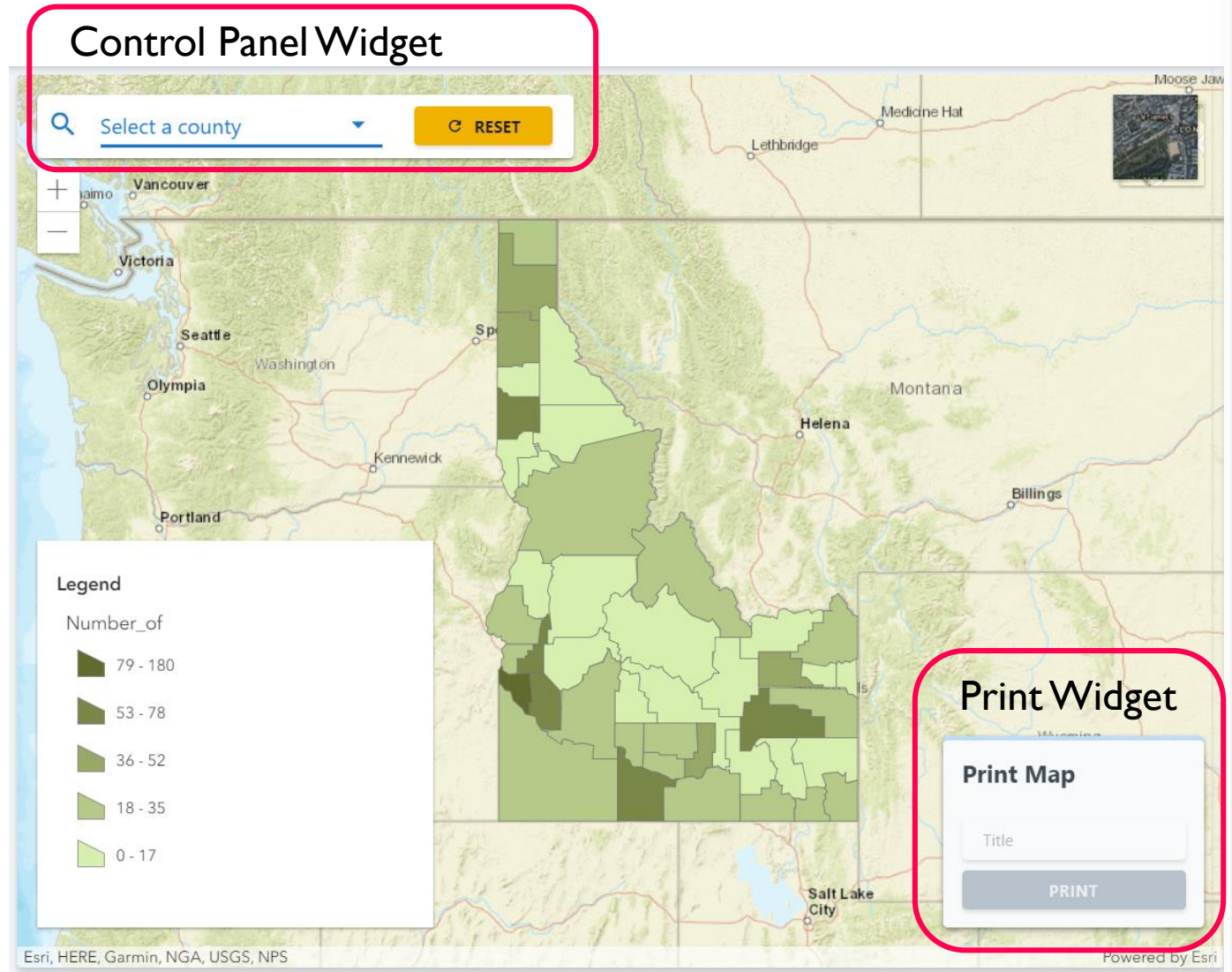
# Applying Raster Functions to Web Map

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# Creating Custom Widgets for Web Map



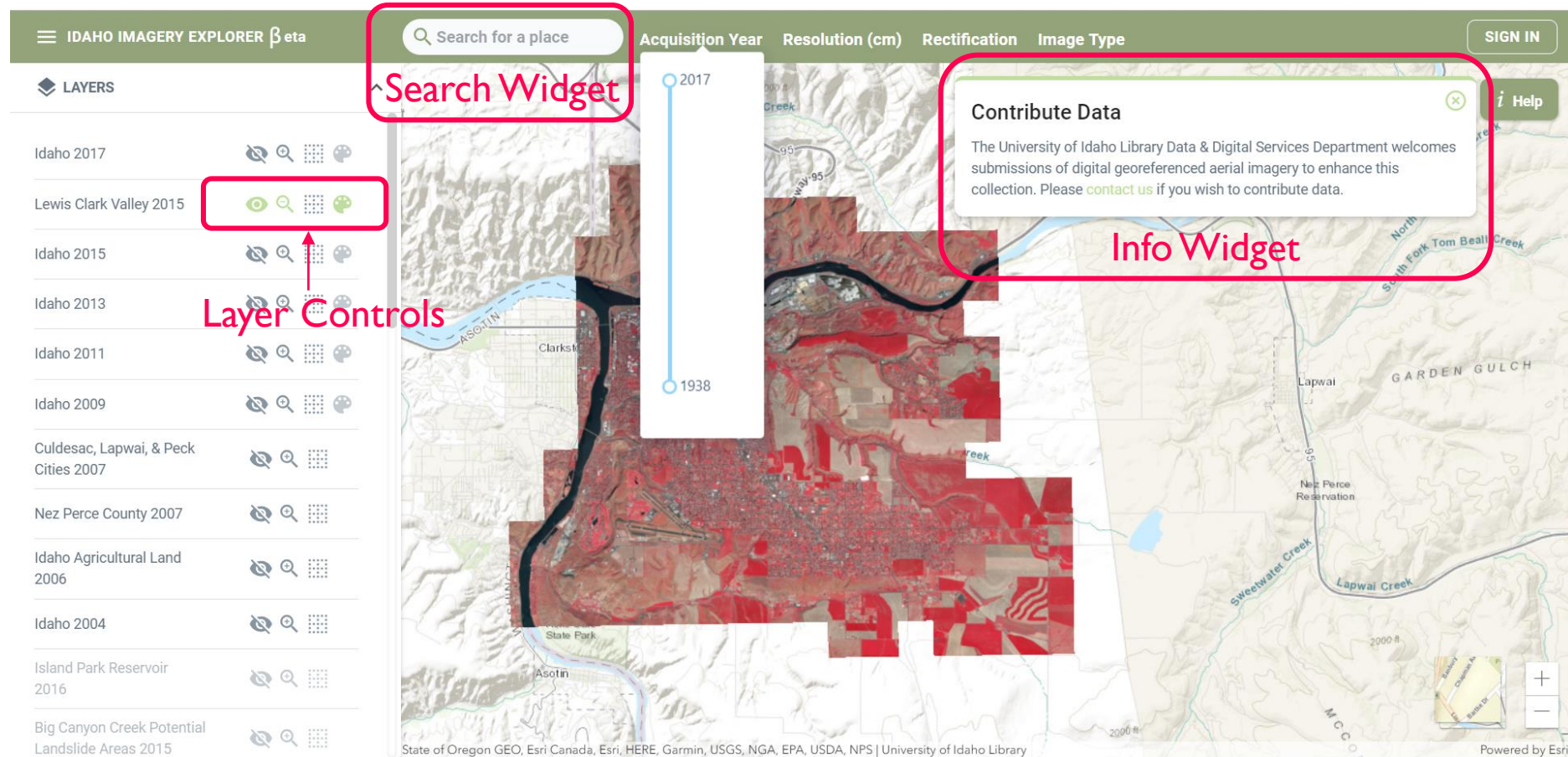
# Using ESRI JavaScript API with React

## Idaho Imagery Explorer Web Application






# Creating Custom Widgets and Controls



# Authentication and Security

Imagery Explorer wants to access your ArcGIS Online account information

Sign In



Username

Password

☐ Keep me signed in

SIGN IN

CANCEL

[Forgot password?](#)



[Forgot username?](#)

OR

Sign in with

ENTERPRISE LOGIN

Sign in with

Imagery Explorer developed  
by:



University of Idaho

The University of Idaho is a nationally-recognized research institution committed to student success and academic excellence that delivers one of the best educational values in the Pacific Northwest.



# Thank You

Koffi Anderson Koffi

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# References

- “ArcGIS API for JavaScript.” System Requirements | ArcGIS API for JavaScript 4.8, [developers.arcgis.com/javascript/](https://developers.arcgis.com/javascript/).
- “React – A JavaScript Library for Building User Interfaces.” – A JavaScript Library for Building User Interfaces, [reactjs.org/](https://reactjs.org/).
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