



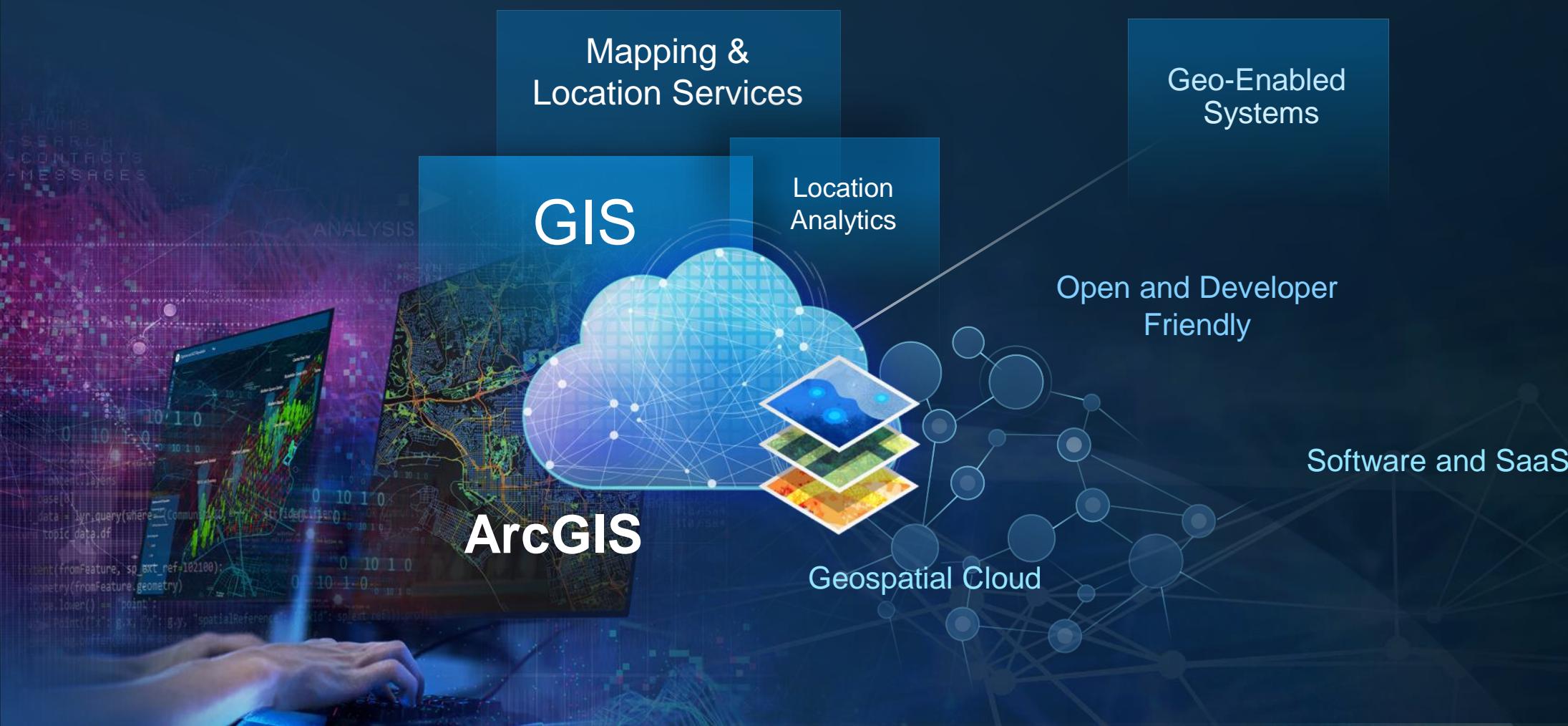
## Location Intelligence

Muhammad Zayyanul Afwani

[https://edu-smartcommunity.hub.arcgis.com/  
education@esriindonesia.co.id](https://edu-smartcommunity.hub.arcgis.com/education@esriindonesia.co.id)

# ArcGIS Vision

A Comprehensive Geospatial Platform – Supporting Multiple Communities



# ArcGIS Is Integrating Many Innovations

*Data Measurement*

Multidimensional

Real-Time Streaming

Big Data

Imagery & Remote Sensing

Drones

Sensors & IoT

Lidar

BIM

Unstructured

HD Mapping

Crowdsourcing

Reality Capture

Edge Devices

AI & ML

Network Architecture

Cloud  
Kubernetes

Mesh Networks

High Performance

Microservices

*Computing*

Distributed

Mobile

Cloud Native

Ultra High Bandwidth – 5G

Game Engines

PaaS

GPU

*Science*

Data Science

Open Science

Visualization

Real-Time

Modeling

Digital Exploration

Voxels

Spatiotemporal Analytics



# ArcGIS Is an Open Platform

Flexible



Interoperable



Clouds  
Private  
Public  
Hybrid  
Edge  
Devices



Customizable



*Successfully Integrated into Thousands of Systems*

# ArcGIS Capabilities Are Advancing MANY NEW INNOVATIONS

Data Management

Field Operations

Imagery & Remote Sensing

Application Development  
& Customization

Real-Time Visualization & Analytics

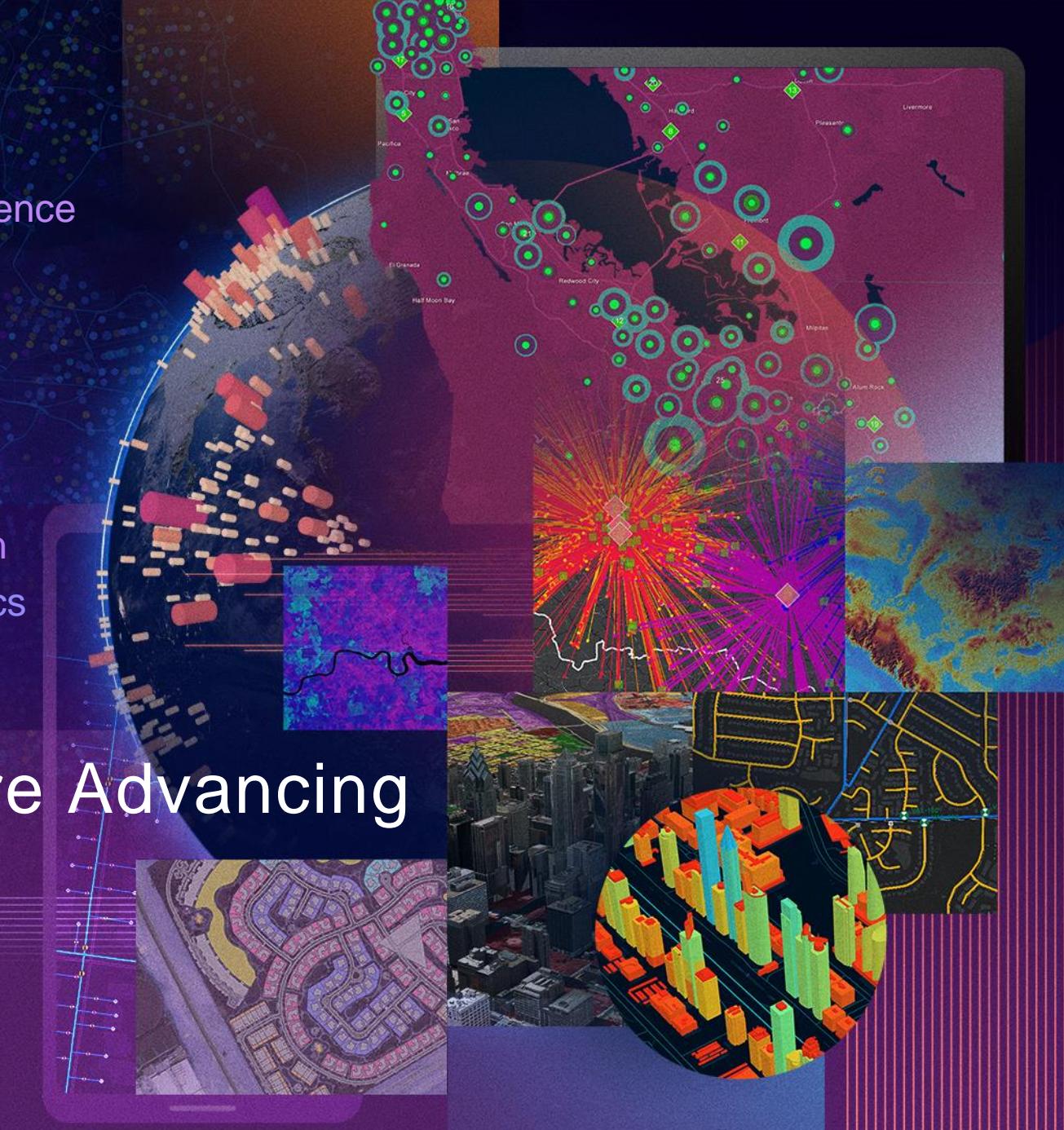
Mapping

AI & Machine Learning

Content

Spatial Analysis & Data Science

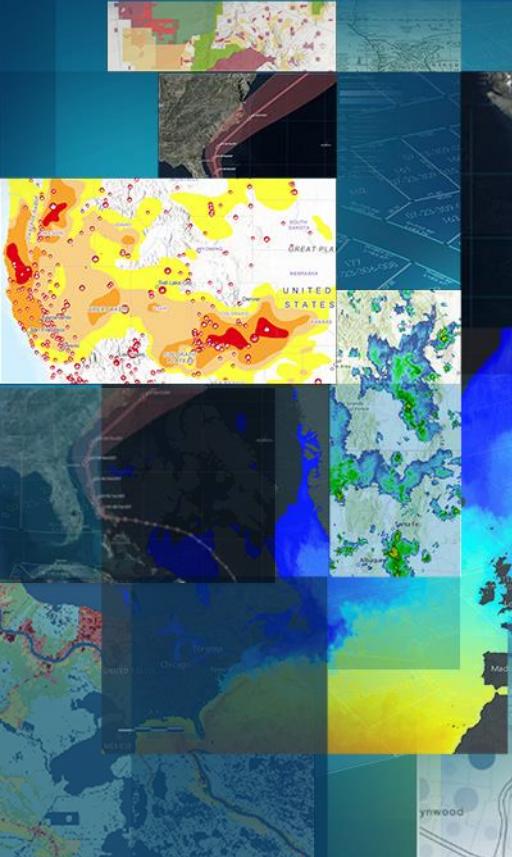
3D Visualization & Analytics



# ArcGIS Includes Ready-to-Use Content

Basemaps, Imagery and a Living Atlas of the World

## Living Atlas



Transportation Environment Business  
Landscape Habitats Hydro  
Infrastructure Movement  
**Basemaps Elevation**  
Boundaries Land Cover Traffic  
Imagery Oceans POI  
Demographics Weather  
Hazards Authoritative  
Community Content  
Soils

Updated Land Cover (NLCD)



Policy Maps



## New & Improved

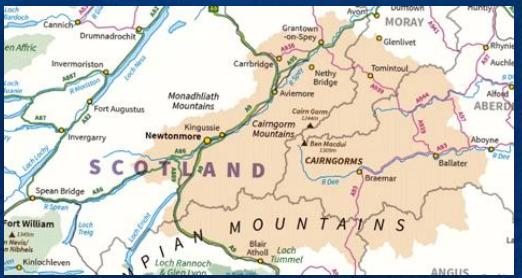
- Expanded POIs
- Better OSM Integration
- Global Demographics
- Enhanced Imagery
- New Content
  - Landcover Forecast
  - Biodiversity
  - Air Quality
  - Global River Flow
  - ...

- Millions of Maps, Layers and Datasets
- Billions of Requests Daily

*Global Geographic Data . . .  
About Everything*

# Smart Mapping Enabling Everyone to Make Amazing Maps in a Browser

## Dynamic and Data Driven



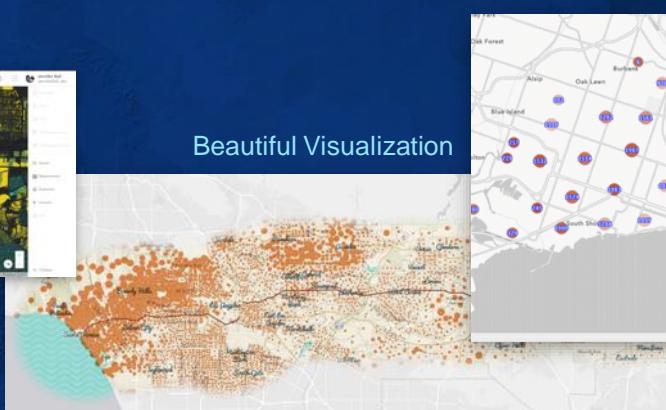
Layer Blending



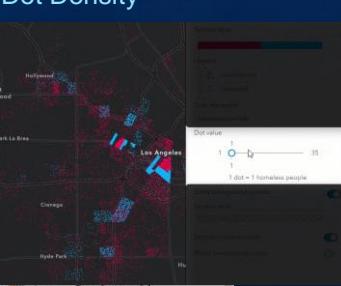
Data-Driven 3D



New Map Viewer

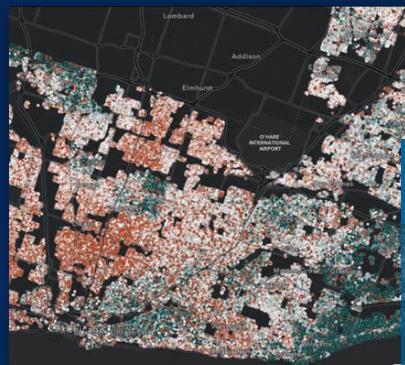


Beautiful Visualization



Dot Density

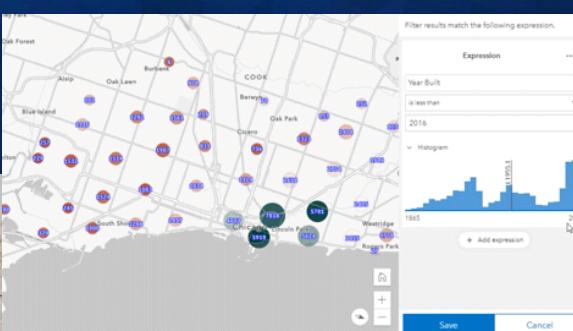
Dynamic Clustering



New & Improved

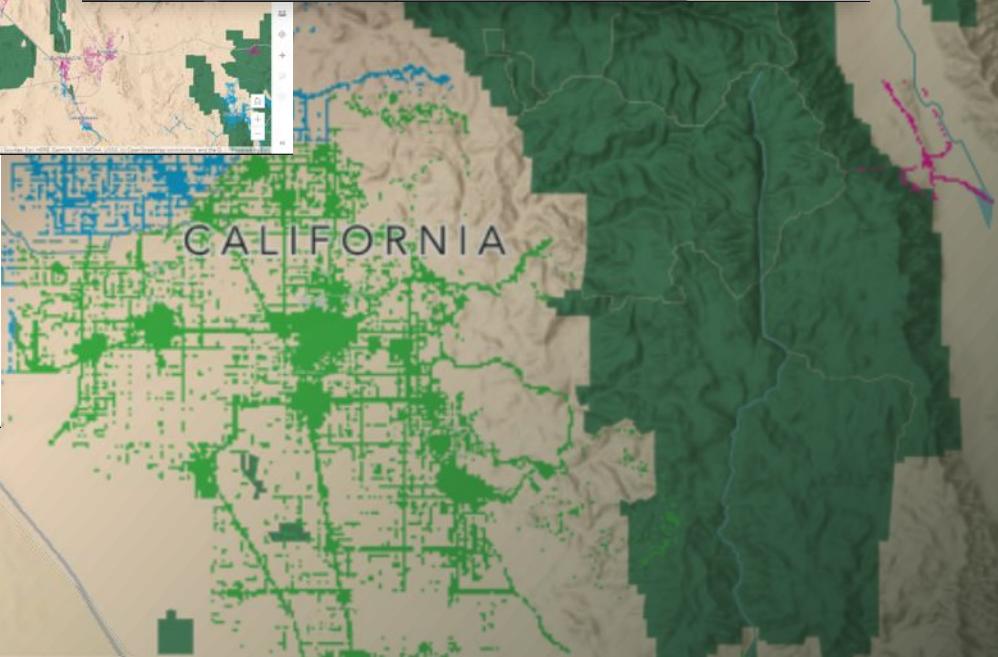
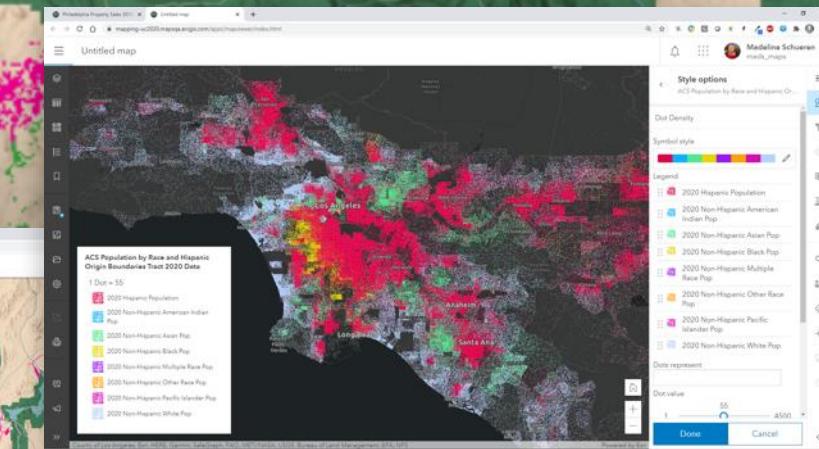
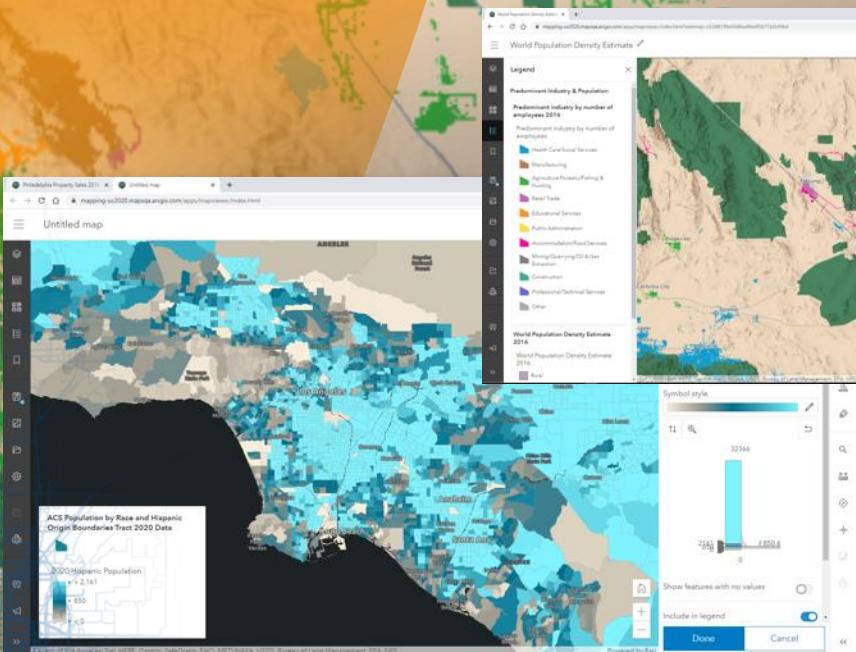
- Map Viewer
- Dot Density
- Dynamic Clustering
- Layer Blending
- Vector Feature Tiles
- Integrated Charting
- Performance
- No Feature Limits

Exploratory Mapping



# ArcGIS Online Map Viewer

Madeline Schueren



# Mapping and Cartography Improved Tools and Technology

## New & Improved

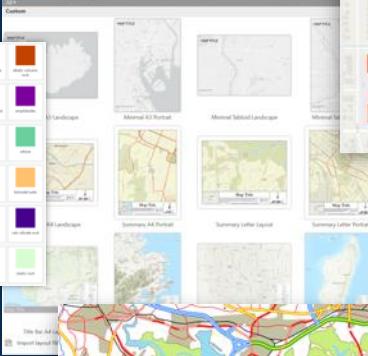
- Map Graphics
- Chart Symbols
- Color Management
- Illustrator Export
- Generalization
- Bivariate Mapping
- Map Series

## Symbology, Annotation and Processing

### Chart Symbology



### Modern Layout Templates



### Map Graphics



### Bivariate Symbology

### Color Management

### Vector Tile Style Editor



### Automated Symbol Lookup



### Export to Illustrator



### Slope Hachures



### Generalization

### Map Series Using Bookmarks

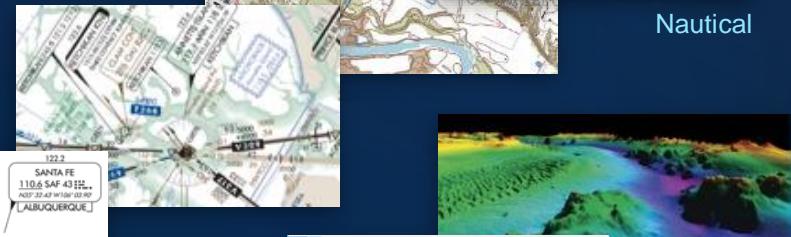


## Automated Map and Chart Production

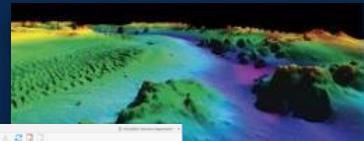
### Topographic



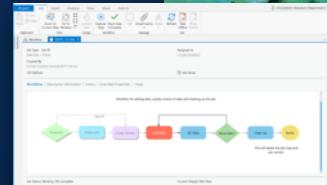
### Aeronautical



### Nautical



### Bathymetry



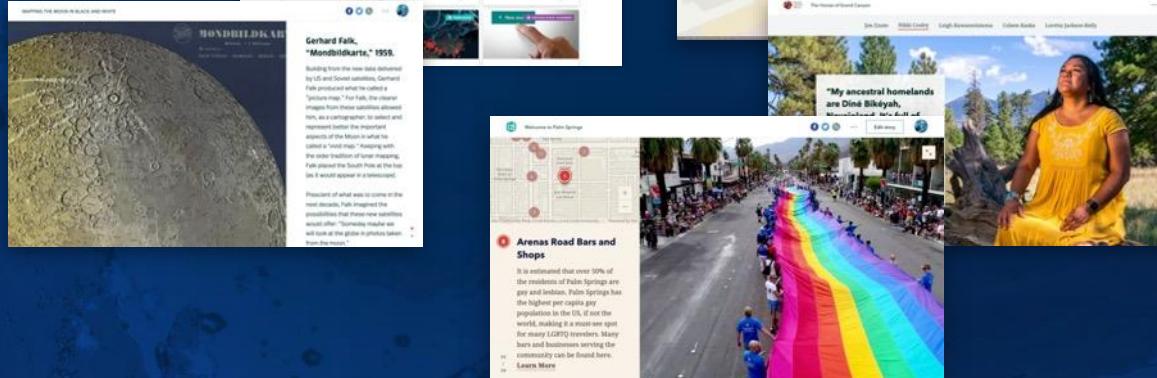
### Workflow Management & Quality Control

## ArcGIS Pro

**StoryMaps** Transformational Platform – Storytelling for Everyone

## Exponentially Growing

- Over a Million Published
  - 3,000+ New Stories/Day
  - Millions of Views/Day



## Storytelling with Maps (Geojournalism)



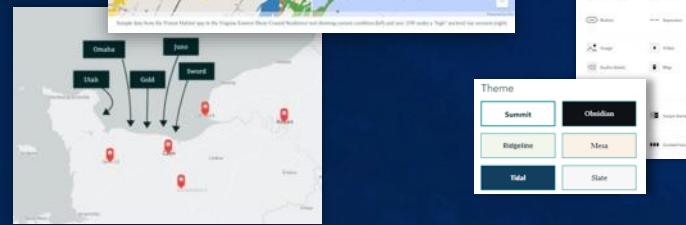
## New Innovations



## Integrates Any Web Map



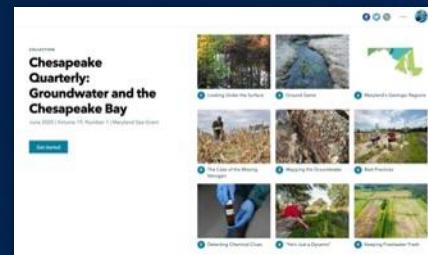
## One-Click Design Themes



Express Maps – Simple Drawing Tools



Mobile  
Optimized

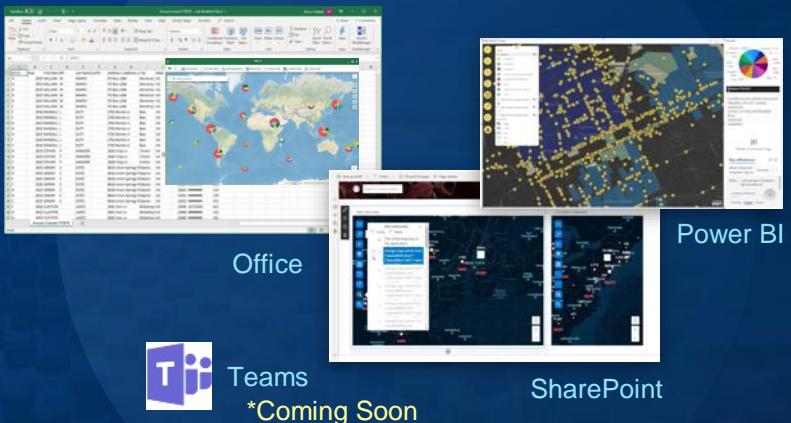


## Collections – Groups of StoryMaps

*... Now on Online and Enterprise*

# Embedded Mapping Maps for Focused Products and Workflows

## Maps for Microsoft



## Knowledge Workers

Open Integration

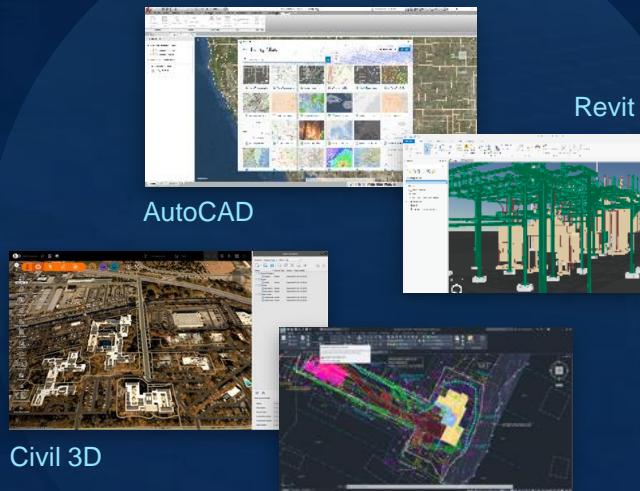
## Maps for Adobe



## Graphic Professionals



## Maps for Autodesk



## Designers & Engineers

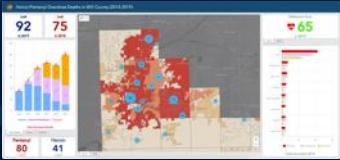
# Dashboards Dynamic Visual Reporting

- Easy to Configure
- Ready to Use
- Interactive
- Flexible
- Highly Scalable

Visualize Trends



Monitor Status



## New & Improved

- Mapping
- Arcade Support
- Data Sources
- Summary Statistics
- Performance

Manage Performance



## Coming Improvements

- Mobile Native
- Accessibility
- Filtering
- Visualizations

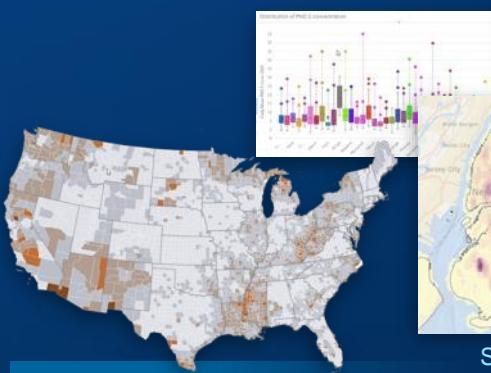


Providing Situational Awareness . . .  
Anywhere, Anytime and on Any Device

# Location Analytics

## Intuitive and Interactive Visual Analysis

### ArcGIS Insights



- Scheduling
- Presentation Options
- Analysis (Clustering, Density Ratio . . .)
- Graphics
- Web & Export Options
- Desktop Versions

*Easy to Learn and Use*



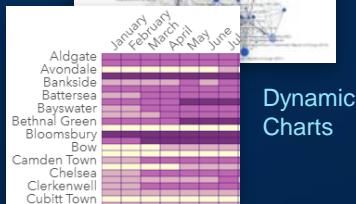
#### Labeling



#### Link Analysis



#### Smart Mapping



#### Dynamic Charts



#### Auto-Generated Models



#### Integrated Reporting

### Advanced Analysis

Statistical  
Spatiotemporal  
Link / Graph  
Python / R Scripting . . .

### Visual Analytics

Maps, Charts and Tables  
Exploratory Analysis  
Dynamic Interactions . . .

### Data

Dynamic Cleaning  
Compound Joins  
Calculations  
GeoEnrichment . . .

### Interactive Reports

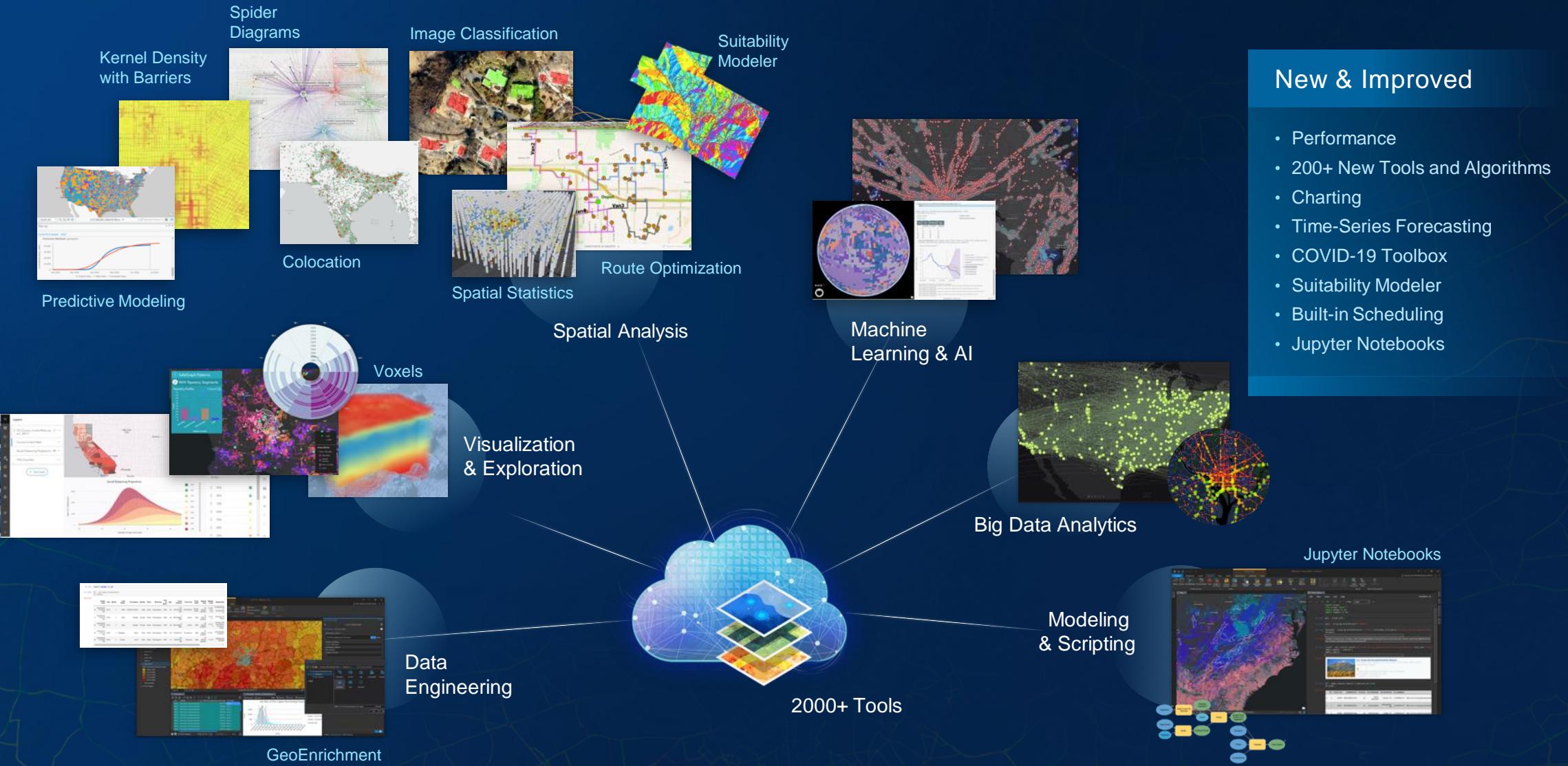
Sharing (Internally and Publicly)  
Embed in Web Pages  
Scheduled Updates . . .

Empowering Spatial  
and Business Analysts

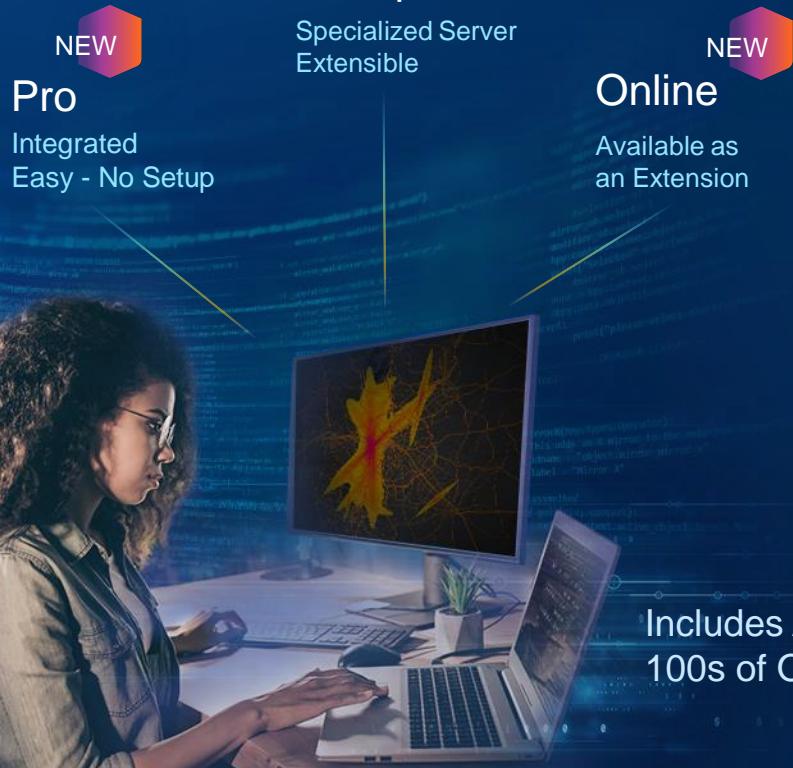


# Spatial Analysis and Data Science

Solving Problems & Advancing Science



# Jupyter Notebook Integration for Modeling and Automation



## ArcGIS Notebooks

Includes ArcGIS Python Libraries and  
100s of Open Science Libraries

ArcGIS Pro

ArcGIS Online

A screenshot of ArcGIS Pro showing a map of a coastal area with various layers. Below it is a screenshot of ArcGIS Online showing a map and a notebook interface.

ArcGIS Python Libraries

Notebooks gallery

A screenshot of the ArcGIS Python Libraries interface showing a map and a notebook titled "Prediction: Identify urban heat islands". Below it is a screenshot of the "Notebooks gallery" showing several thumbnail previews of notebooks.

Notebook Gallery

## New & Improved

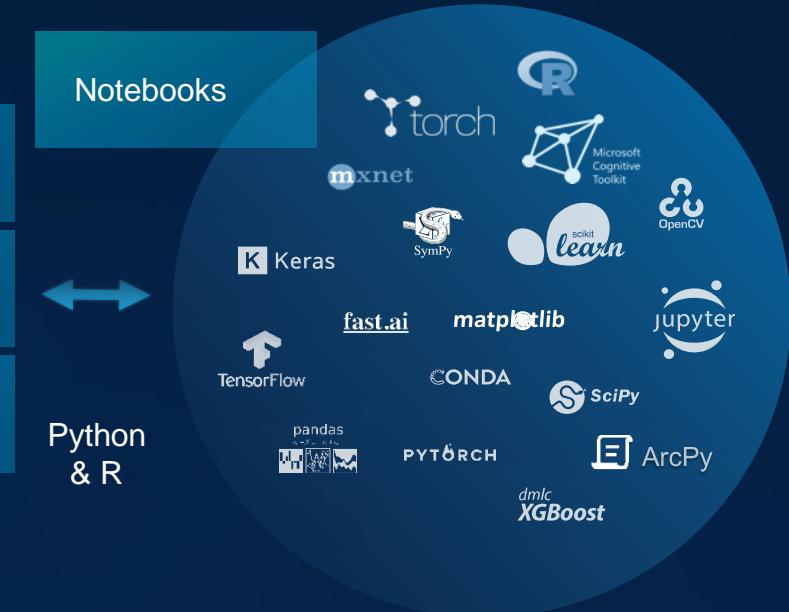
- Pro & Online
- Scheduling
- Parameterization
- Deep Learning Models
- Notebook Gallery

*Scripting Processes and Workflows*

AI, Machine Learning and Deep Learning New Opportunities for Innovation

# New & Improved

- Easy to Use
  - Spatiotemporal Machine Learning
  - Deep Learning on Many New Data Types
  - Pre-Trained Models Included



# Open Source Data Science Ecosystem

*Automating Processes & Making GIS Smarter*

**Jika ingin mempelajari lebih lanjut pemanfaatan data science dibidang geospasial menggunakan ArcGIS silahkan mengunjungi link berikut:**

**Free lesson:**

<https://data-scientist-learngis.hub.arcgis.com/ArcGIS>

**Python API for Data Scientist:**

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



esri

THE  
SCIENCE  
OF  
WHERE