Introduction to GIS with ArcGIS Pro

Symbolizing Layers: Applying Different Symbology Methods

Session 8

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Lecture Outline

- Introduction & Recap (5 minutes)
- Applying Different Symbology Methods (45 minutes)
- Guided Exercise & Q&A (10 minutes)

Week 3: Coordinate Systems

- **Class 5:** Understanding Coordinate Systems
- **Class 6:** Managing Projections and Transformations

Week 4: Symbolizing Layers

- **Class 7:** Fundamentals of Symbology
- **Class 8:** Applying Different Symbology Methods 

Week 5: Controlling Feature Display and Selection

- **Class 9:** Selecting Features with Queries
- **Class 10:** Managing Feature Visibility
- **Milestone:** Assignment 1 (Data Creation and Mapping) will be assigned.

Recap of Season 7

- Symbology in ArcGIS Pro
- Layer Symbology

Different Symbology Methods

in ArcGIS Pro

Primary symbologies in ArcGIS Pro

Single symbol—Draw all features in a layer with a common symbol.

Unique values—Apply a different symbol to each category of features within the layer based on one or more fields.

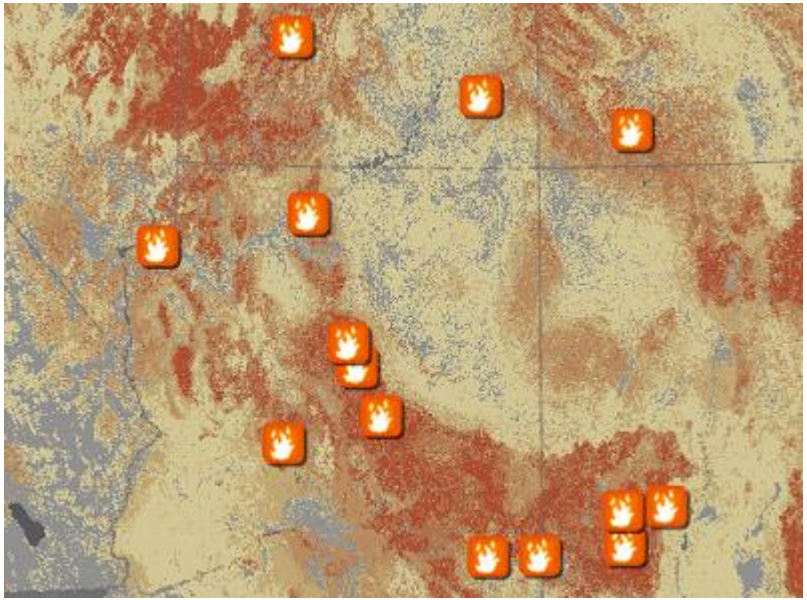
Graduated colors—Show quantitative differences in feature values with a range of colors.

Graduated symbols—Show quantitative differences in feature values with varying symbol sizes.

https://pro.arcgis.com/en/pro-app/latest/help/mapping/layer-properties/symbolize-feature-layers.htm

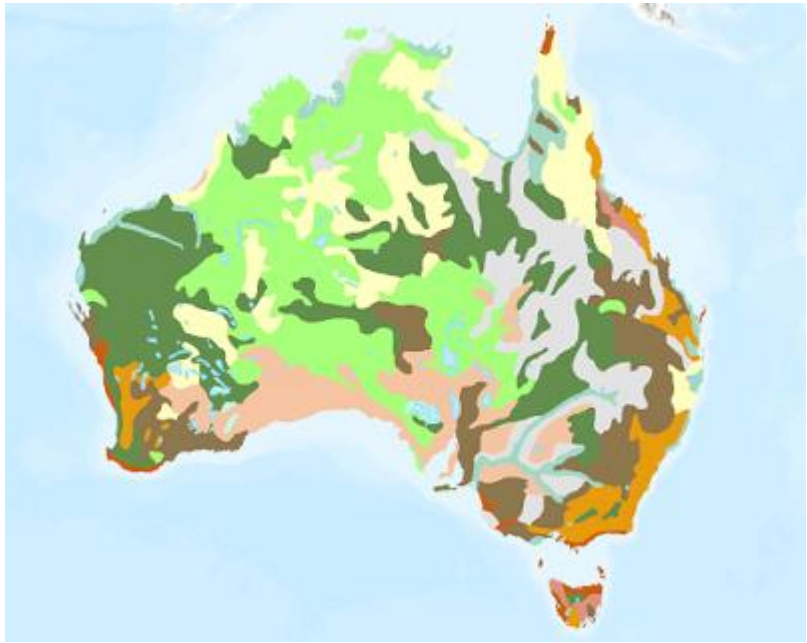
Single symbol

- Single symbol symbology applies the same symbol to all features in a layer.
- This symbology is used for drawing a layer with only one category, such as county boundaries.



Unique values

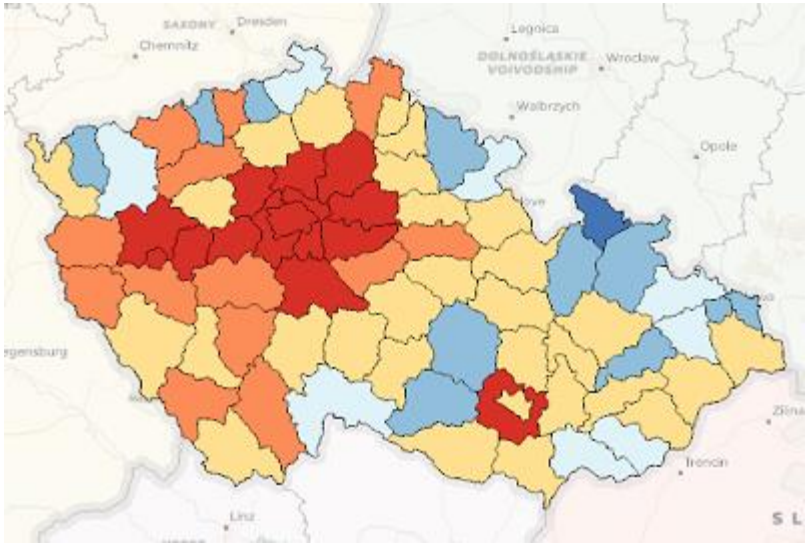
- Unique values symbology symbolizes feature layers into qualitative categories.
- Examples include habitat types, planning zones, voting preferences, and soil classifications.



Graduated colors

Graduated color symbology is used to show a quantitative difference between mapped features by varying the color of symbols.

Data is classified into ranges that are each assigned a different color from a color scheme to represent the range.



Bivariate colors

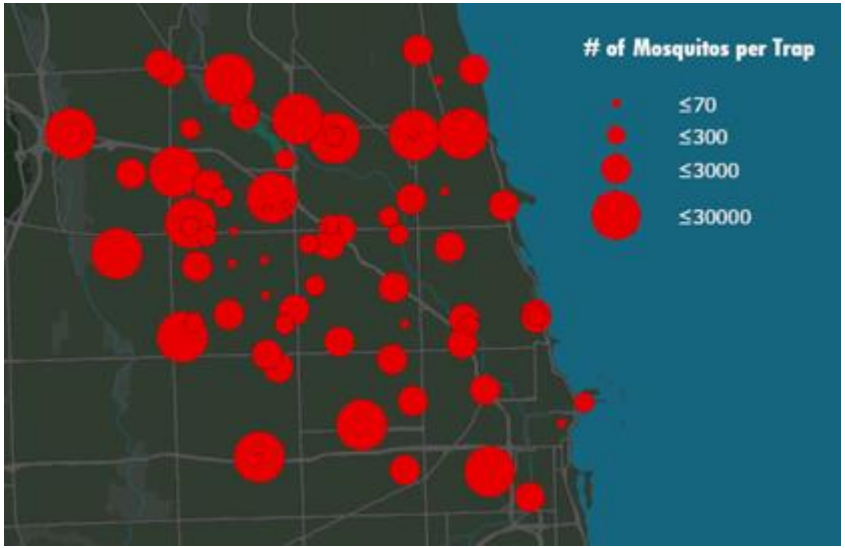
- Bivariate colors symbology shows the quantitative relationship between two variables in a feature layer.
- This type of symbology uses bivariate color schemes to visually compare, emphasize, or delineate values.

Graduated symbols

Graduated symbols are used to show a quantitative difference between mapped features by varying the size of symbols.

Data is classified into ranges that are each then assigned a symbol size to represent the range.

For instance, if your classification scheme has four classes, four symbol sizes are assigned. The color of the symbols stays the same.



Dot density

Dot density symbology is one way to represent quantities in polygons on a map.

With dot density symbology, the data you symbolize is not classified. Instead, quantitative values for one or more fields are represented as a collection of point symbols (typically solid circles or dots) in each polygon.

Each dot represents a constant number of things, people, or other quantifiable phenomena.

The dots are equally sized, even when multiple fields are symbolized together in a layer.

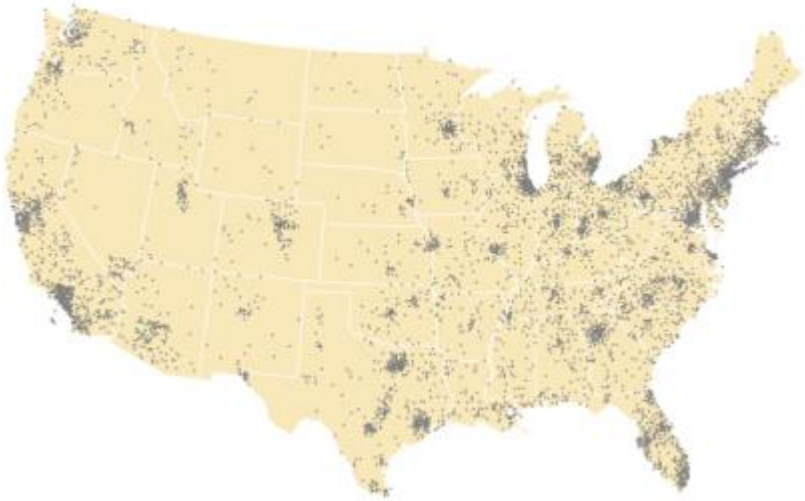


Chart symbology

A chart is a type of statistical graphic that represents data.

Charts can be used as multivariate symbology in ArcGIS Pro to show quantitative differences between attributes, with each part of the chart representing an attribute value that contributes to the overall whole set of values.

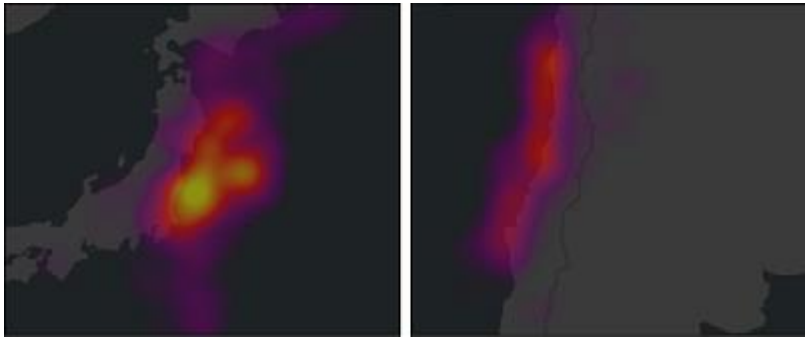
Chart symbology can be used with point, line, or polygon features.

For example, you can use pie chart symbols to represent the ethnicity of a district in a city.

Heat map symbology

Heat map symbology draws point features as a dynamic, representative surface of relative density.

Use heat map symbology when you have many points that are close together and cannot be easily distinguished.



Exercise

Exercise

1. Create a layer with unique values symbology method.
2. Create a lery with graduated symbols symbology method.

Sample Shapefiles - City of Newcastle, Australia

https://classroom.google.com/c/NzkxNDA4MzgwOTE3/m/ODAzNjU5NTY0Mzc0/details

Preview for Season 9

Controlling Feature Display and Selection: Selecting Features with Queries

References

Symbolize feature layers in ArcGIS Pro

https://pro.arcgis.com/en/pro-app/latest/help/mapping/layer-properties/symbolize-feature-layers.htm