Geospatial Data Visualization
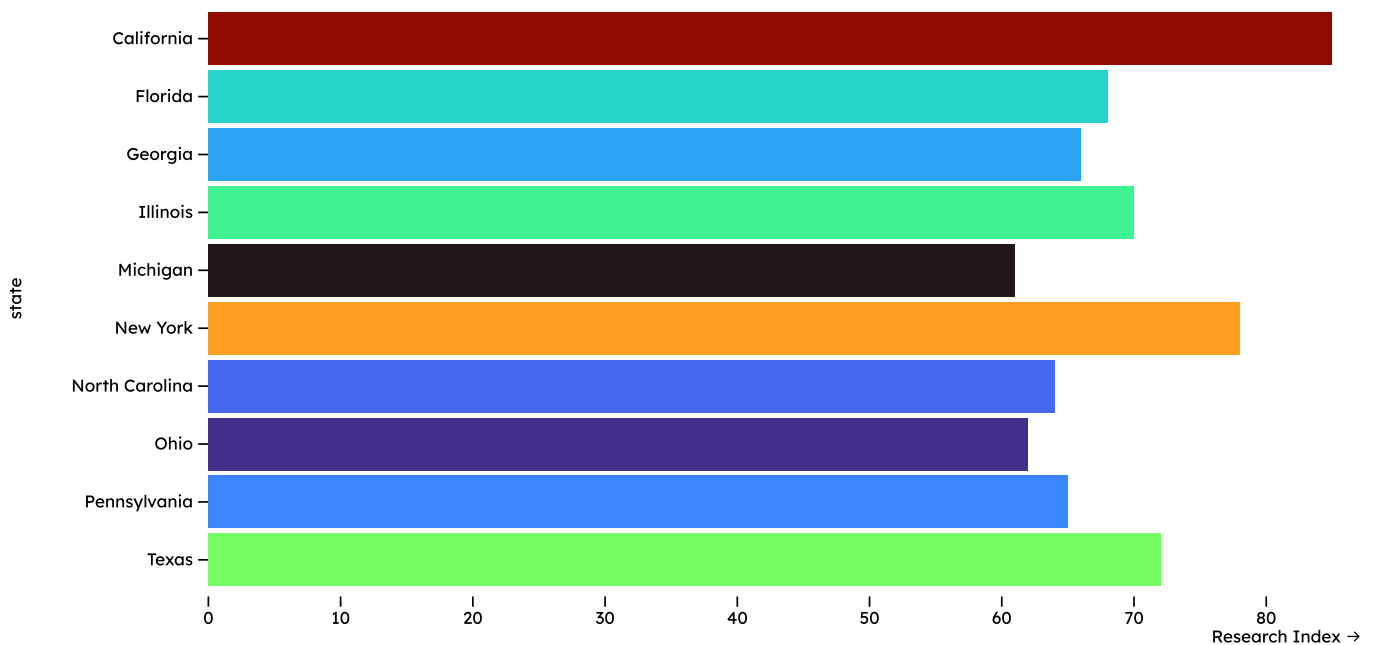
Geographic data visualization is essential for spatial analysis in research[1]. This page demonstrates mapping capabilities using Observable Framework.
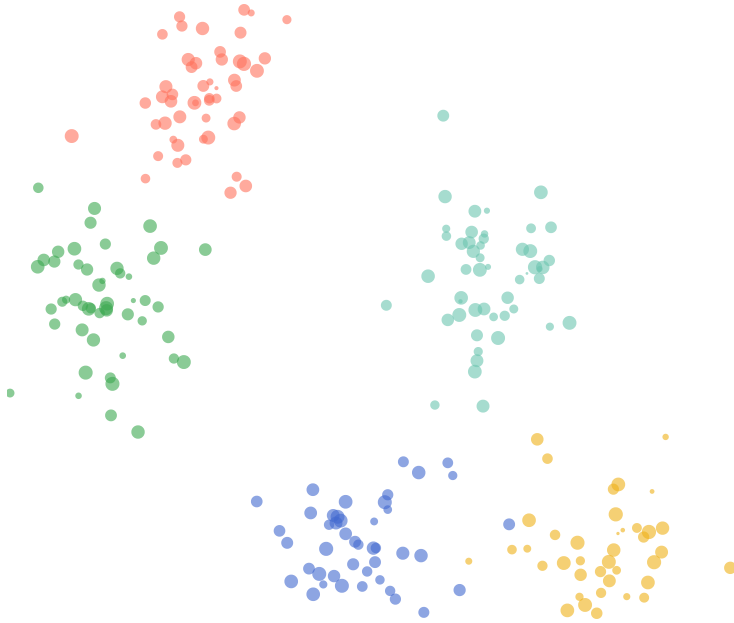
Choropleth Maps

Research Output by State

Top 10 states by population

Point Clustering

Research Site Locations

Clustered sampling sites across regions

Density Heatmaps

Research Activity Density

Kernel density estimation of point data

Geographic Patterns

Spatial analysis reveals patterns that might be hidden in non-geographic representations[2]. Key applications include:

- **Environmental Science:** Climate zones, pollution dispersion
- **Public Health:** Disease spread, healthcare accessibility
- **Economics:** Regional development, trade flows
- **Urban Planning:** Population density, infrastructure planning

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1. Geospatial visualization combines cartography with data visualization. See Tufte, E.R. (1983). The Visual Display of Quantitative Information for foundational principles.

2. Spatial autocorrelation and clustering analysis are fundamental to geographic data science. Anselin, L. (1995). Local indicators of spatial association—LISA. Geographical Analysis, 27(2), 93-115.