

Clustering and geospatial analysis – Lesson overview

Clustering and geospatial analysis are critical components of data science, particularly in understanding **spatial relationships and patterns** within data. By applying clustering techniques to geospatial data, analysts can **uncover hidden structures** and make **meaningful interpretations of geographic phenomena**. This involves processing large datasets, employing statistical methods to group similar data points, and visualising complex geospatial information in a comprehensible manner.

In this lesson, we'll explore the **practical aspects of clustering and geospatial analysis**. We'll start by learning how to **process and cluster census data**, focusing on identifying patterns and relationships. Using the **GeoPandas** Python library, we'll introduce the essentials of **geospatial data plotting**, including how to manipulate attributes like size and colour to create multidimensional visual representations.

Learning objectives

- Process and cluster census data to uncover patterns.
- Utilise GeoPandas to plot and manipulate geospatial data.
- Create multidimensional plots adjusting attributes like size and colour to reveal deeper insights.
- Understand and apply various clustering techniques to geospatial datasets.
- Interpret and utilise external resources to extend knowledge and applications of geospatial analysis techniques.

 Video

 Examples

 Knowledge questions

 Exercise

