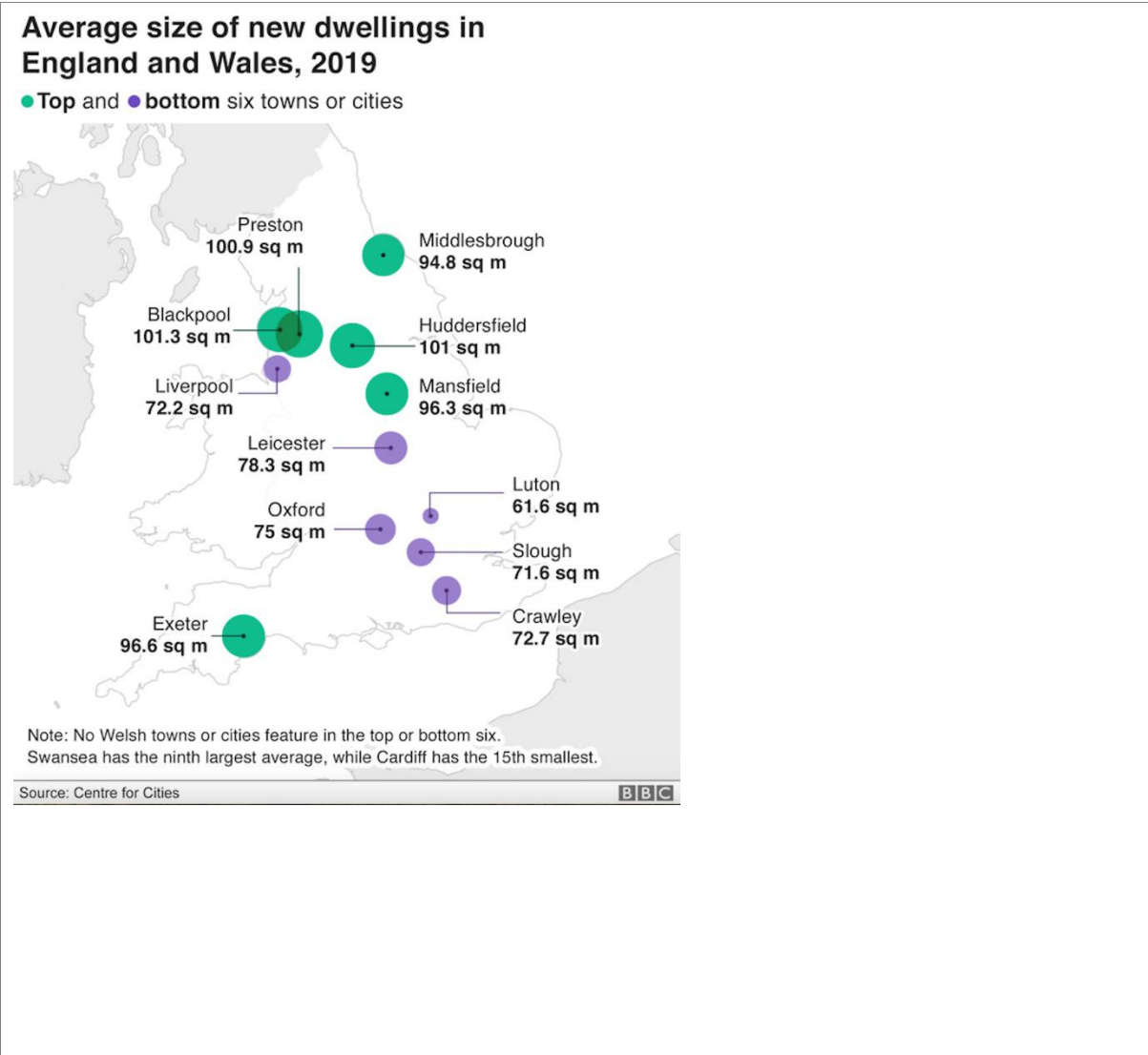


Visualization



## 1. Graph decoding

### Marks, Channels, and Mapping:

#### 1. Marks:

- **Points/Dots:** Used to indicate the location of cities.
- **Text:** Provides the average size of new dwellings in square meters for each city.
- **Color:** Green and purple colors to differentiate between the top and bottom six cities in terms of dwelling size.

#### 2. Channels:

- **Position:** The points are placed on a map according to the geographical location of each city.
- **Color:** Used to distinguish between the top six (green) and bottom six (purple) cities.
- **Size:** The text size appears uniform, but the numerical values vary to represent the different average sizes.

#### 3. Mapping between Data and Graphical Components:

- Each point on the map corresponds to a specific city.
- The text next to each point represents the average size of new dwellings in that city.
- The color of the point indicates whether the city is in the top or bottom six in terms of dwelling size.

## 2.

## Graph critique

### Effectiveness and Issues:

#### 1. Positive Aspects:

- The map clearly shows the geographical distribution of the data.
- The use of different colors (green and purple) makes it easy to distinguish between cities with larger and smaller average dwelling sizes.
- Text annotations provide exact values, which is useful for detailed analysis.

#### 2. Issues:

- The map may become cluttered and hard to read due to overlapping text and points, especially in densely populated areas.
- Colorblind users might have difficulty distinguishing between the green and purple points.
- The size differences between the cities are not visually emphasized apart from the color and text, which might not be the most effective way to convey the data.

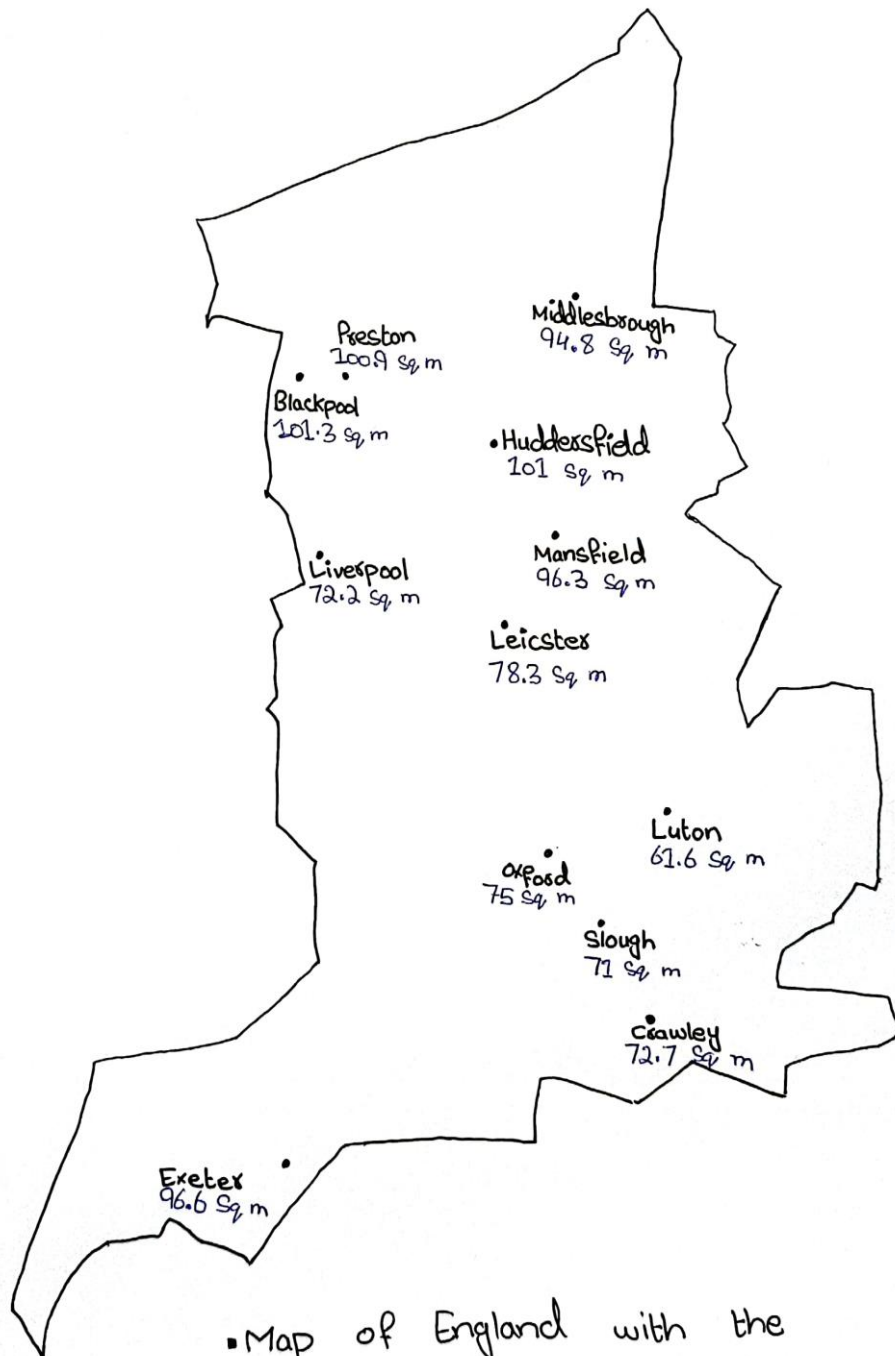
### 3.

### Graph redesign

Here's the redesigned visualization in the form of a bar chart:

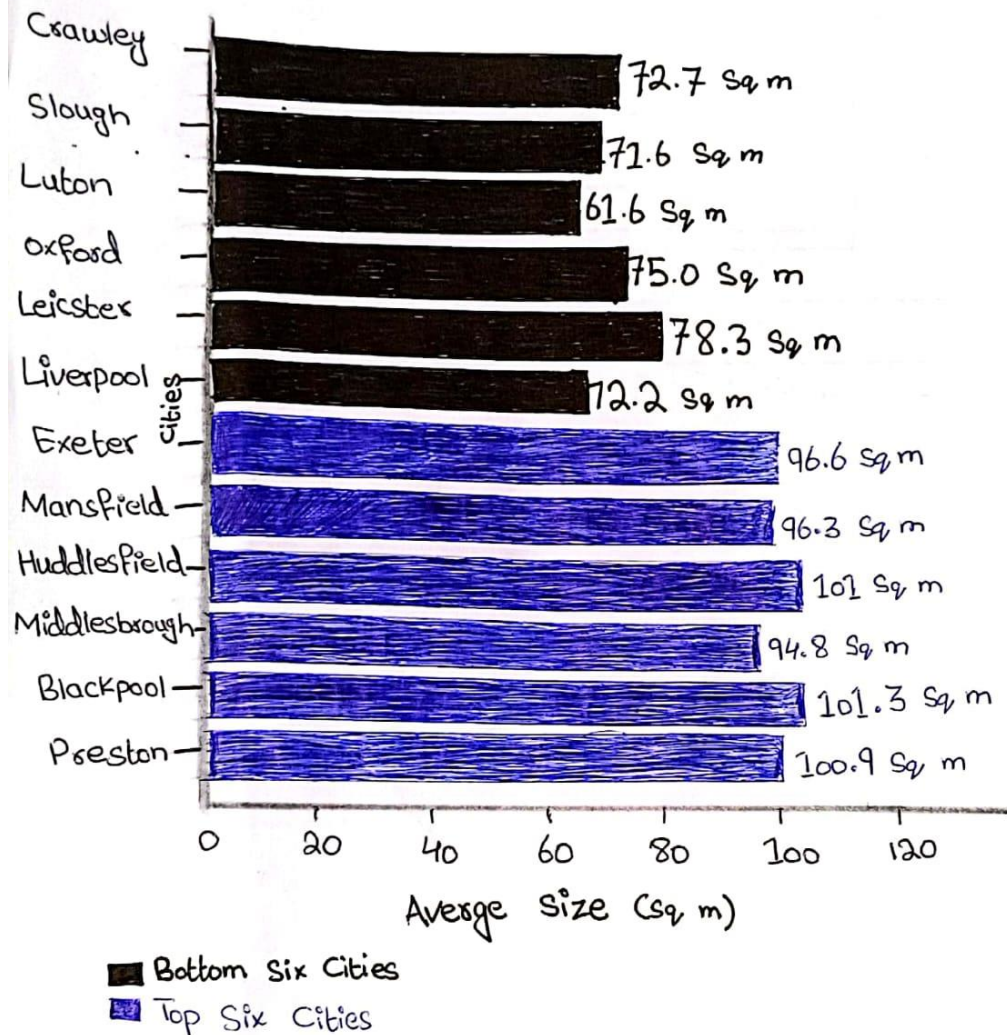
- **Blue bars** represent the top six cities in terms of average dwelling size.
- **Black bars** represent the bottom six cities.
- **Text annotations** next to each bar indicate the average size of new dwellings in square meters.

## Correct Geographical Representation of Cities.



- Map of England with the cities having new dwellings and in 2019.

Average Size of New Dwellings in England and Wales, 2019 in the form of Box Chart.



## Graph Redesign Explanation

### Redesign Goals:

- Improve readability and clarity.
- Enhance visual differentiation between data points.
- Ensure accessibility for colorblind users.
- Emphasize the magnitude of dwelling sizes effectively.

### Redesigned Visualization in the Form of a Bar Chart:

#### 1. Clear Comparison:

- The bar chart format allows for a straightforward comparison of average dwelling sizes across different cities.
- Each city is represented by a horizontal bar, making it easy to compare lengths and understand relative sizes.

#### 2. Color Scheme:

- Colors are chosen to be distinguishable for colorblind users, with blue representing the top six cities and black representing the bottom six cities.
- This ensures that all users can differentiate between categories effectively.

#### 3. Avoidance of Clutter:

- The bar chart eliminates the issue of overlapping points and text, as each city has its own distinct bar.
- Text annotations are placed at the end of each bar to clearly indicate the average dwelling size.

#### 4. Visual Emphasis:

- The length of each bar is proportional to the average dwelling size, providing a clear visual representation of the data.
- This makes it easy to see which cities have larger or smaller average dwelling sizes at a glance.

This bar chart format provides a clear comparison of average dwelling sizes across the cities, making it easy to see which cities have larger or smaller average dwelling sizes. If you need further modifications or another type of chart, let me know!