🚗 Car Analysis Dashboard

Advanced Analytics for Automotive Industry Data

📥 Data Loading

[🔄 Load Data]

✓ News data loaded: (2006, 22)

✓ Reviews data loaded: (2152, 26)

✅ Data loaded successfully!

📊 Data Selection

Select Data Type: ⑦

📰 News Articles	⌄

🔍 Filters

📅 Date Range ⑦	📋 Source ⑦	😊 Sentiment ⑦
2012/10/03 – 2025/07/20	All ⌄	All ⌄

📊 Showing 2006 records after applying filters

☑ Overview & Metrics   😊 Sentiment Analysis   📝 Topic Modeling   🏷 Named Entity Recognition   🔍 Keyword Analysis   📊 N-gram Analysis   ⏰ Time Series Analysis   📋 Ra

⏰ Time Series Analysis - How Things Change Over Time

🎯 What is Time Series Analysis?

Time series analysis helps us understand **how things change over time**. We look at when news articles were published and when customer reviews were written to see patterns and trends in how people talk about cars throughout different time periods.

<table>
<tr><td>📈 **Timeline Charts**
When articles and reviews were published</td><td>📊 **Market Data**
Car usage patterns by region</td><td>📈 **Trend Insights**
What patterns tell us</td></tr>
</table>

📈 Publication Timeline   📊 Car Usage by Region

📊 Car Usage by Region - Where People Rely on Cars Most

📊 Understanding Car Usage by Region

This section shows **how much different areas rely on cars** based on official government data. This helps us understand:

- **Regional differences** - Which areas are most dependent on cars
- **Market opportunities** - Where car services might be most needed
- **Transportation patterns** - How people get around in different areas
- **Urban vs rural trends** - How car usage varies by location type

💡 *This information helps car companies, urban planners, and policymakers understand transportation needs across different regions*

📈 **Data Source**: Official Census 2021 data showing car/van availability by local authority across England and Wales

📊 Key Statistics - Car Usage Across Regions

These numbers show the overall picture of car usage across England and Wales:

📊 Average Car Dependency ⦾   🚗 High Car Usage Areas ⦾   🚇 Low Car Usage Areas ⦾

84.5%   **268**   **13**

🚗 Areas with Highest Car Usage

🚗 Understanding High Car Usage Areas

These are the areas where people rely on cars the most. This could be because:

- **Limited public transport** - Fewer buses, trains, or other transport options
- **Rural locations** - Longer distances between destinations
- **Urban sprawl** - Cities designed around car travel
- **Economic factors** - Areas where car ownership is more common

💡 *These areas represent strong markets for car-related services and products*

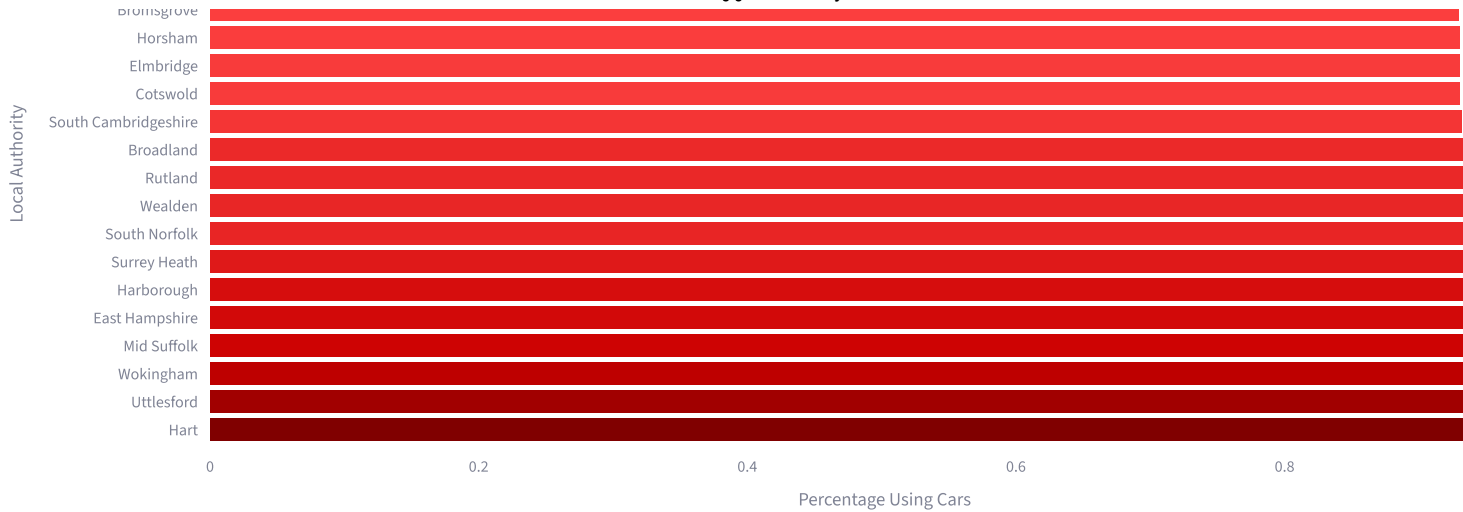**Top 20 Areas with Highest Car Usage (Sorted Biggest to Smallest)**

Mole Valley	
Maldon	
Waverley	
South Oxfordshire	
Bromsgrove	

🚗 Car Analysis Dashboard

Percentage Using Cars

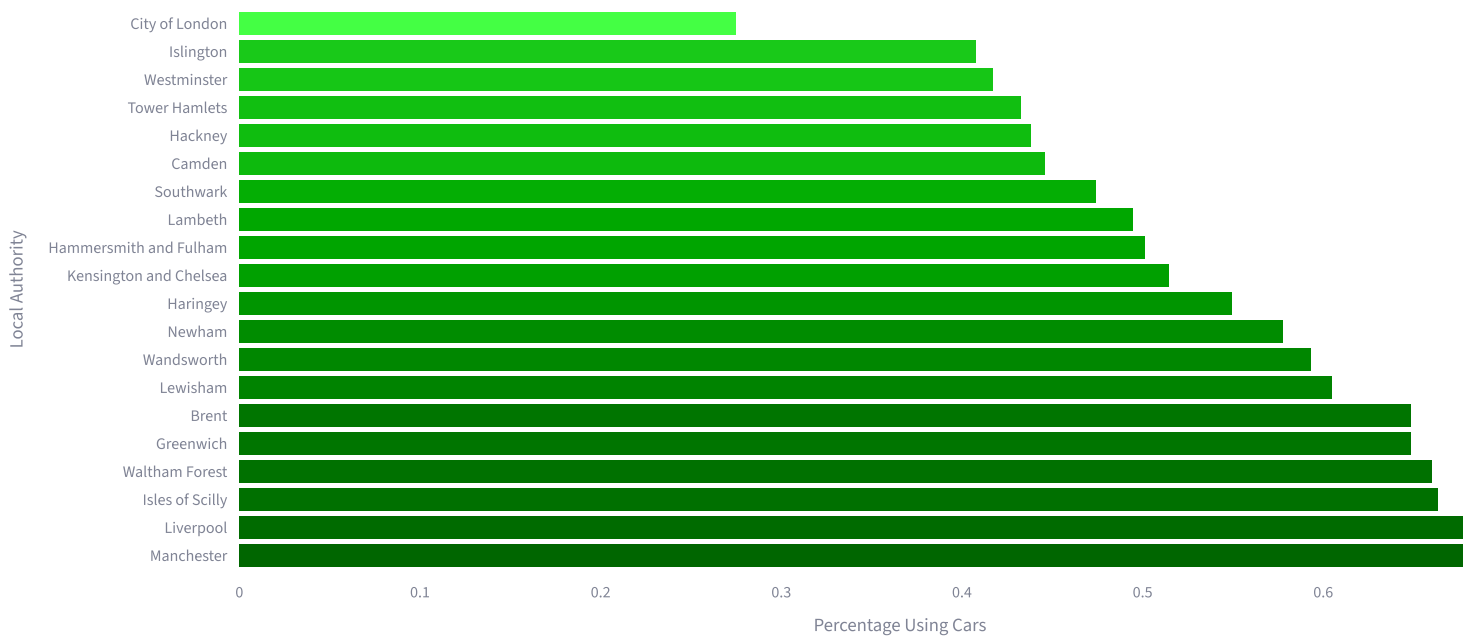## 🚆 Areas with Lowest Car Usage

🚆 Understanding Low Car Usage Areas

These are the areas where people rely on cars the least. This could be because:

- **Excellent public transport** - Good bus, train, and other transport systems
- **Urban centers** - Dense cities where walking and cycling are easier
- **Alternative transport** - Strong cycling infrastructure or other options
- **Environmental focus** - Areas promoting sustainable transport

💡 *These areas might be good markets for electric vehicles, car-sharing services, or alternative transport solutions*

Top 20 Areas with Lowest Car Usage (Sorted Biggest to Smallest)

Percentage Using Cars

🎯 What This Data Means for Business and Planning

🎯 Business and Planning Insights

Understanding car usage patterns helps different organizations make better decisions:

🚗 For Car Companies:

- **High usage areas** ({len(high_dependency_areas)} locations) are prime markets for car sales and services
- **Low usage areas** might be good for electric vehicles or car-sharing services
- **Average usage** of {avg_dependency:.1%} shows strong overall car market potential

🏛 For City Planners:

- **High dependency areas** may need better public transport investment
- **Low dependency areas** show successful sustainable transport strategies
- **Regional differences** help identify where transport improvements are most needed

📈 Key Takeaway

The data shows that **{avg_dependency:.1%} of households across England and Wales rely on cars**, indicating a significant market for automotive services and products. Understanding regional differences helps target resources and services where they're needed most.

🚗 **Car Analysis Framework** - Advanced Analytics for Automotive Industry Data

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