Electric Consumption Analysis: UK-Wide Commercial vs Domestic Usage, Regional Insights, and Wales Focus

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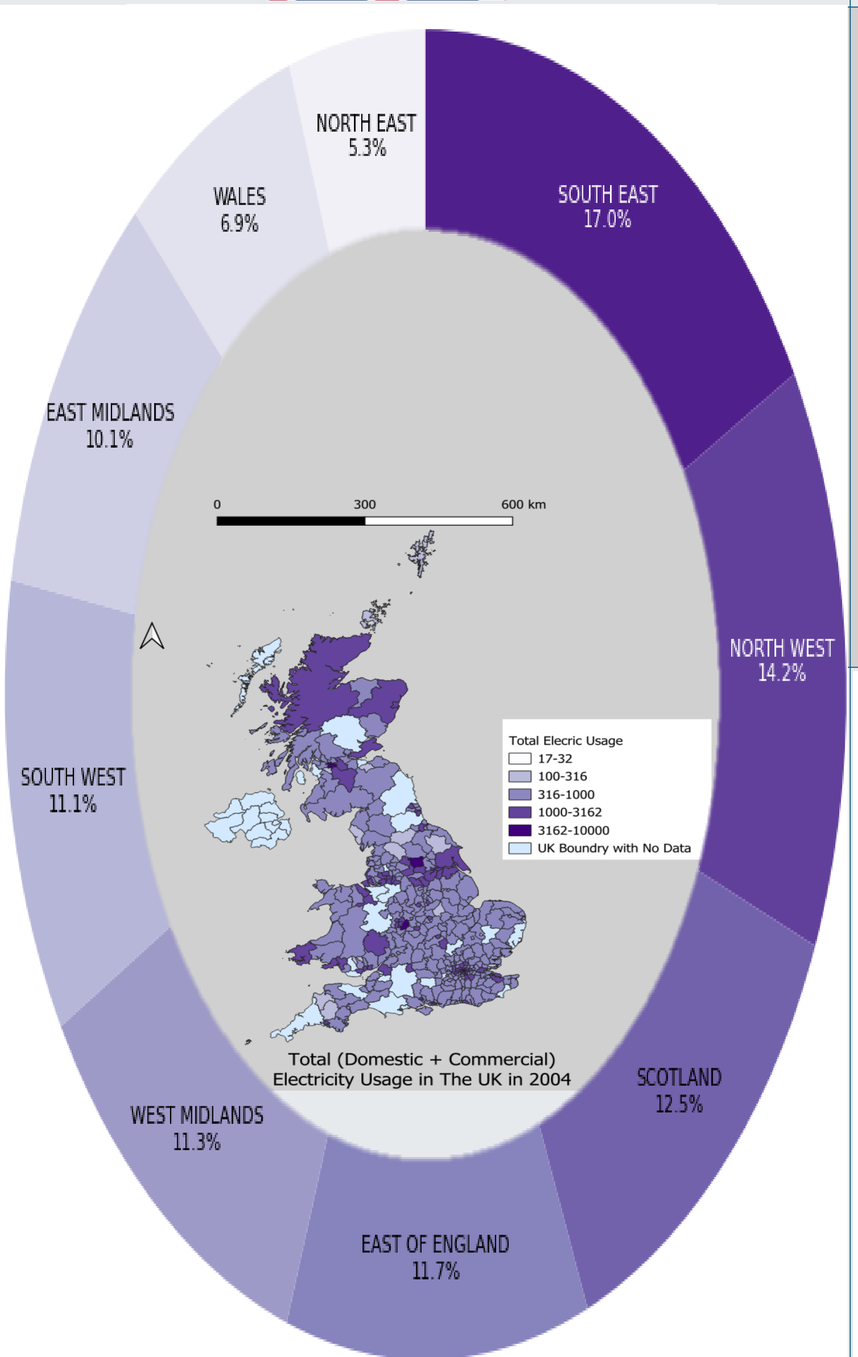
NOTE: Electricity usage measure are in *Giga Watts per Hour* (GWh)

Domestic **Energy** INDUSTRIAL

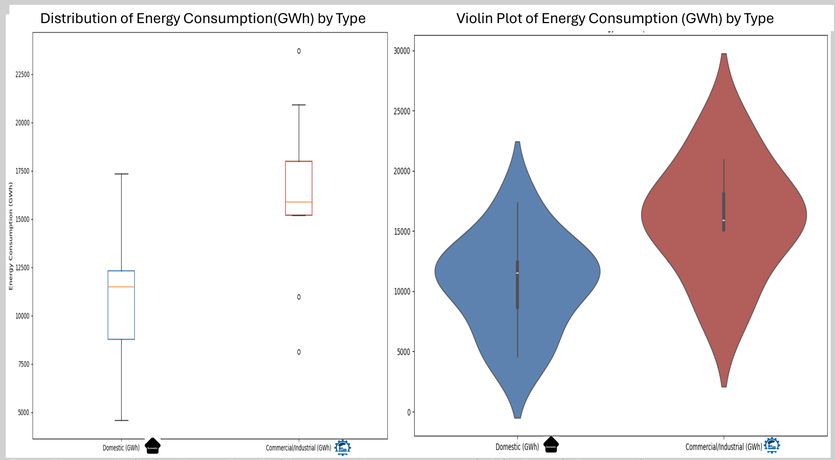
Usage Across the UK



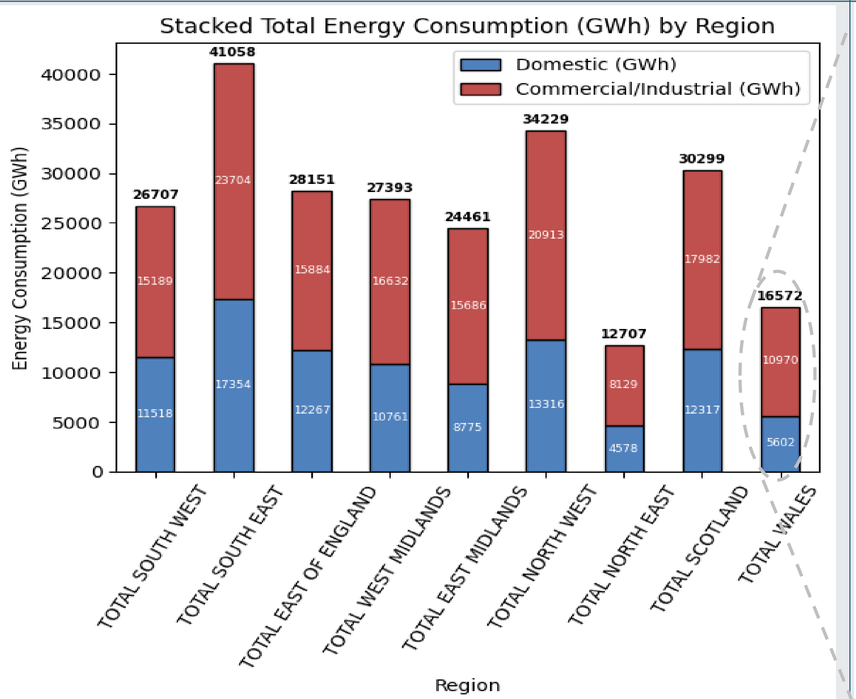
Aggregated Regional Data Analysis

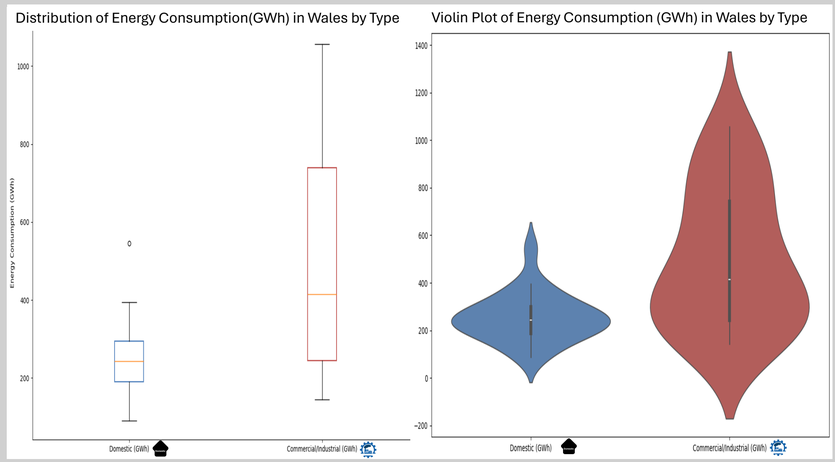
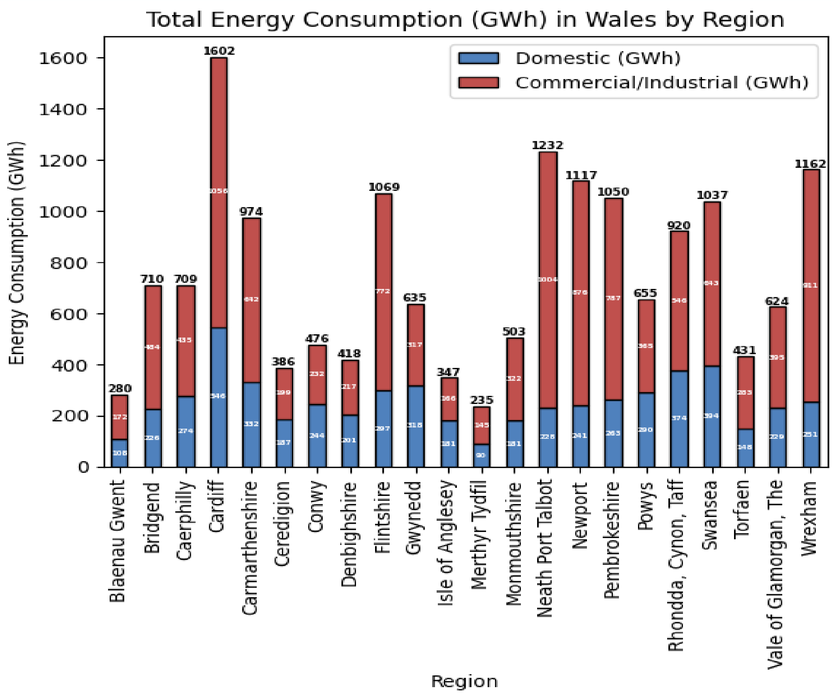
Box Plots:
- Display data distribution through quartiles.
- Show the median and highlight potential outliers.
- Offer a clear overview of data spread but limited distribution shape detail.

Violin Plots:
- Combine box plot features with kernel density estimation.
- Provide a comprehensive view of data distribution, including frequency variations.



Box plots and violin plots clearly illustrate that commercial/industrial usage is greater than domestic usage. The box plot for commercial/industrial usage reveals outliers at both the higher and lower ends of the data.



Detailed Study of Wales (Cymru)

A comparison between the overall UK and Wales shows that, while industrial usage is higher in both regions, Wales has a larger gap between industrial and domestic usage.