

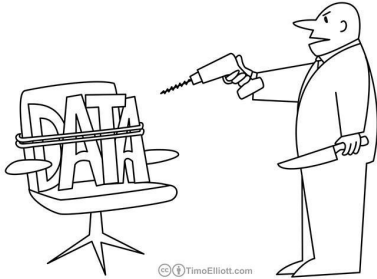


Implementing business strategies through YT Statistics

Daniel Setiawan
NYC Data Science Academy, 11/18



Brief Introduction



"If you don't reveal some insights soon, I'm going to be forced to slice, dice, and drill!"

- Youtube is the 2nd most-popular website after Google, and takes 37% mobile dominance.
- 1.8B datapoints / month can help make insightful business decisions.
- YT *trending videos* can analyze behavioral patterns in the average consumers.

Key Objectives

Effective Marketing

- Which region will provide the highest ROI for online advertisements?
- What marketing is most effective for consumers with different interests?

Energy Consumption

- When are consumers most likely to buy items online?
- Infrastructure requisites necessary for data center upkeep.

Trend Analysis

- How do we use viral data to predict consumer buying trends?
- Which products are consumers are likely to buy based on their interests?

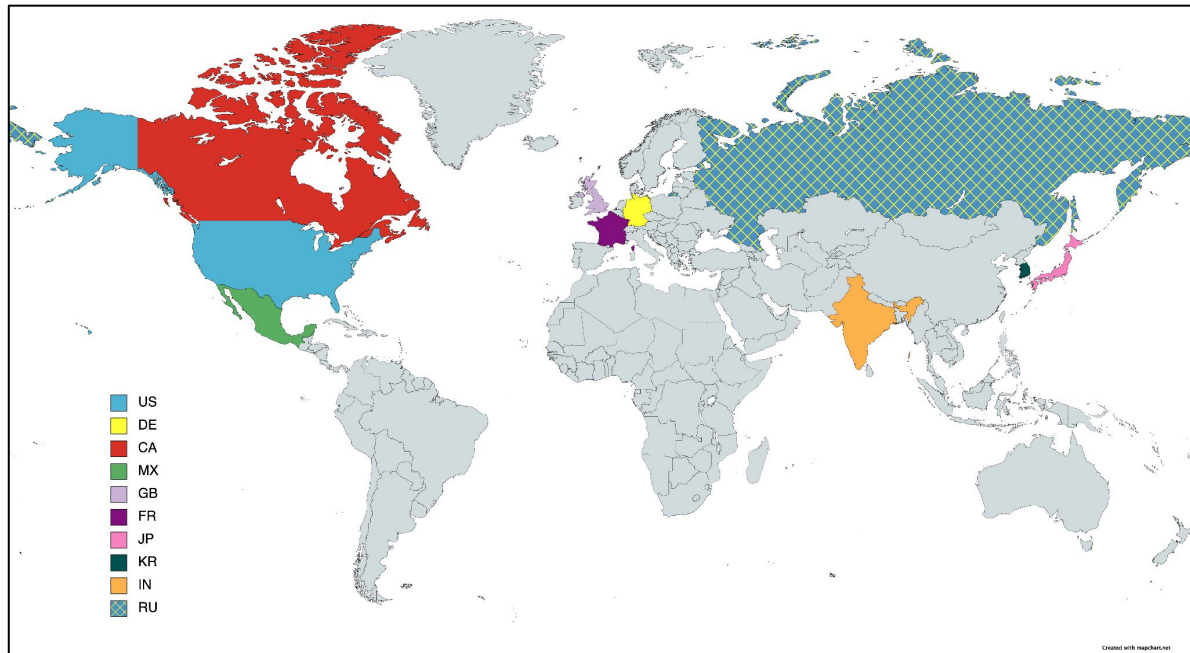
About the data

11 datasets.

10 countries.

8 months.

~400K observations.

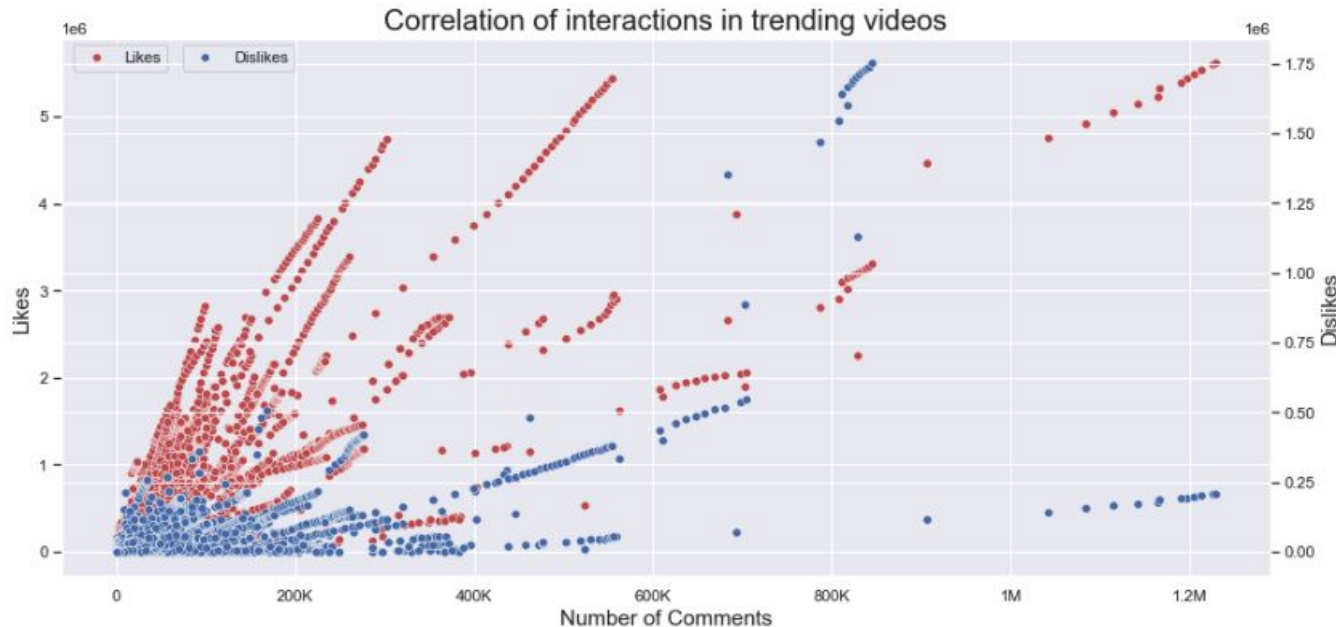


Effective Marketing

Comments vs. Likes

Analysis: Understand how *vocal* consumers are with their interests.

Analyzing video engagement lets you predict consumer opinions



What can we learn from this?

- Product marketing should utilize data to understand how engaged people will be based on their opinion.

Effective Marketing

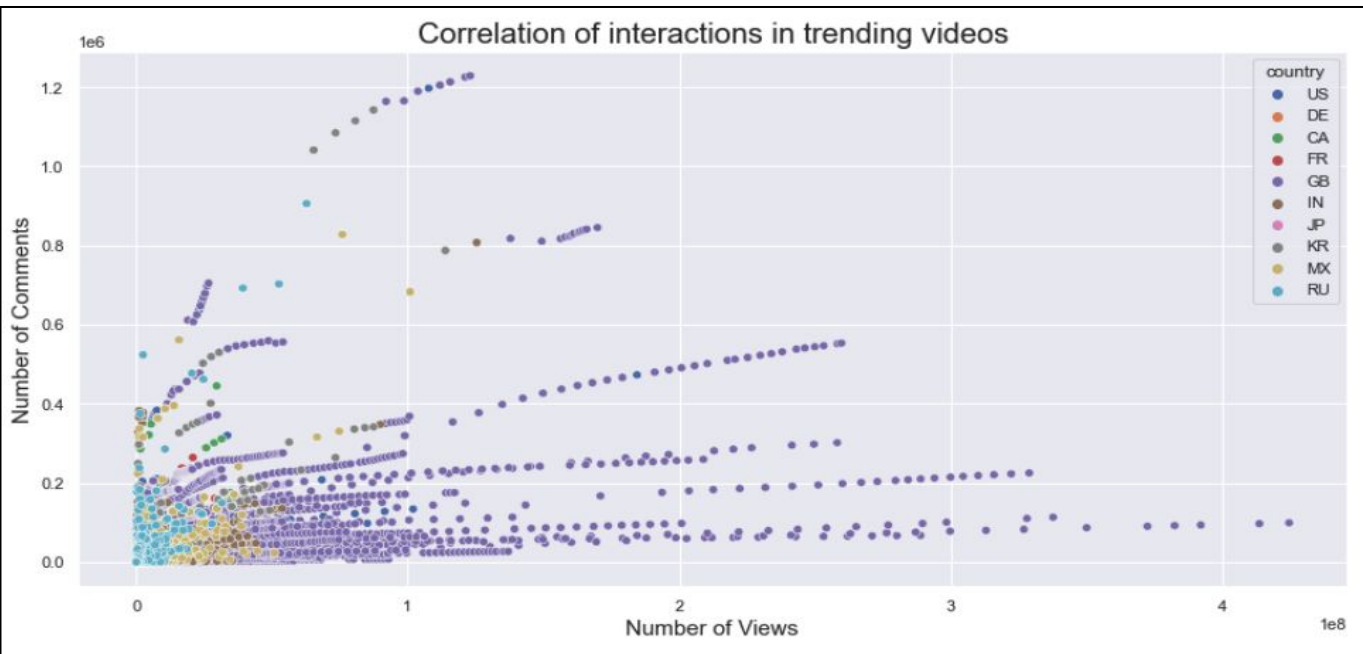
Views vs. Comments

Analysis: Understand how *vocal* consumers are with their interests.

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- Product marketing should utilize data to understand how engaged people will be based on their opinion.
- Engagement rates vary by region, and should be taken into account when calculating strategies.

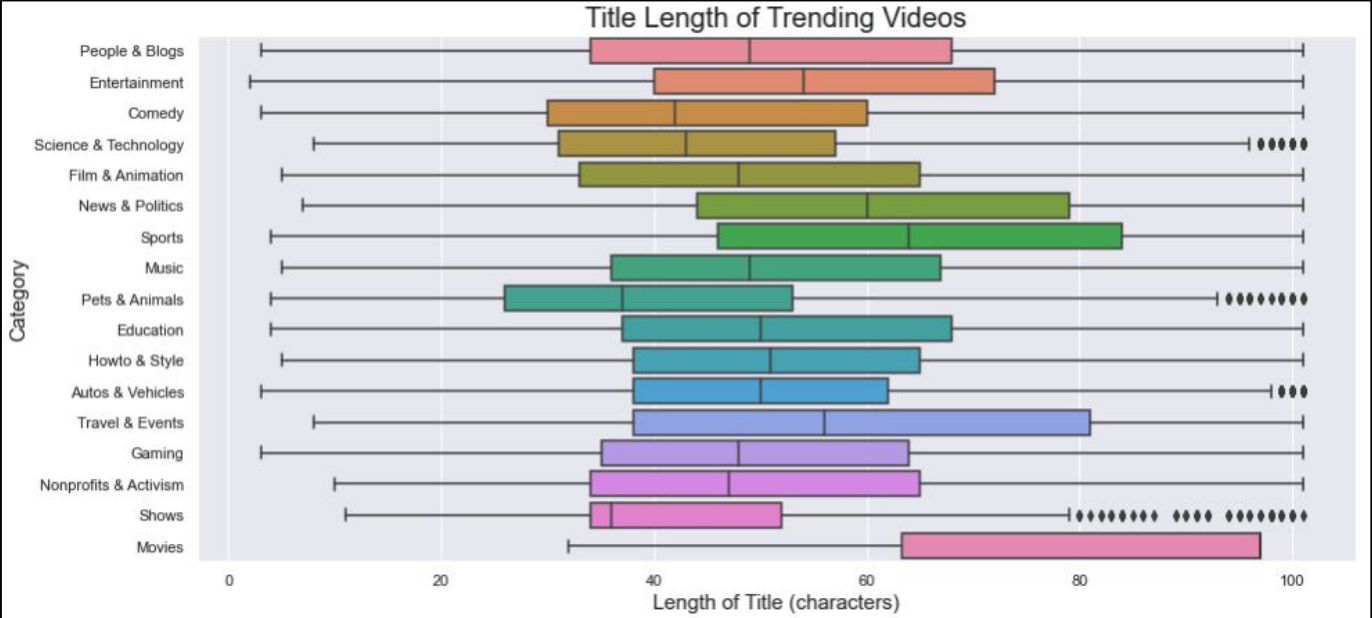


Effective Marketing

Title Length vs. Category

Analysis: Capturing consumer attentiveness in different industries

**Pairing data with non-trending videos could allow us to gauge how consumers react to certain categories*



Successful video titles can give a company insight on improving their product marketing.

What can we learn from this?

- Consumers have different attention thresholds based on their interests.
- Headline and description count play a crucial role in successful product marketing.

Effective Marketing

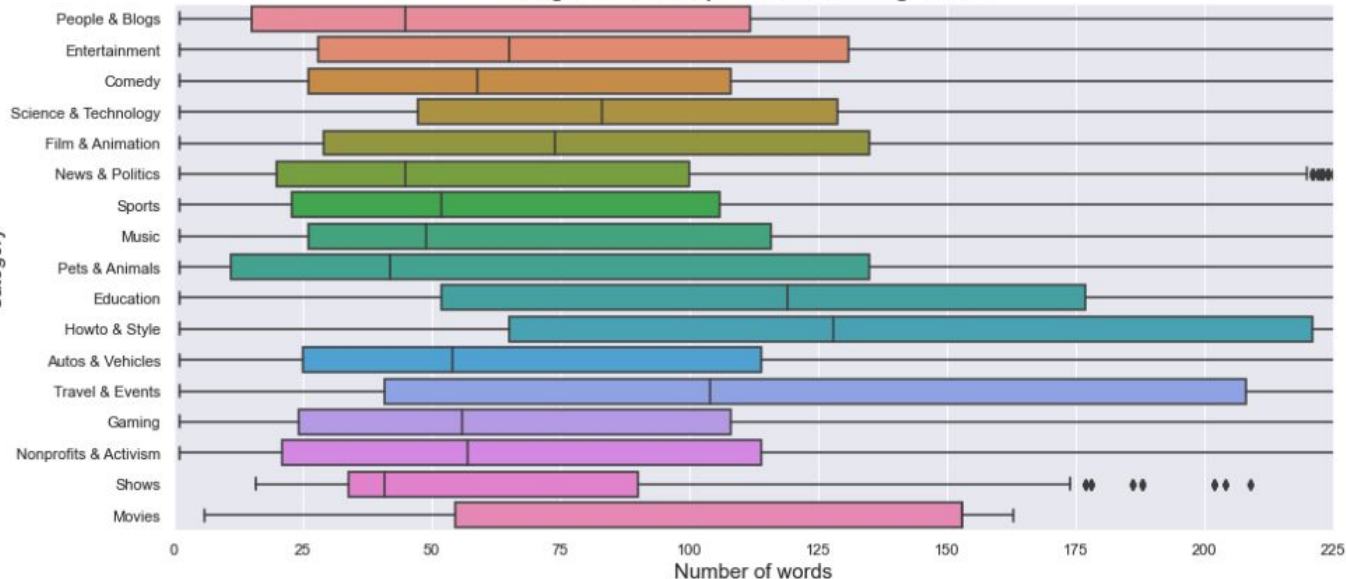
Description Length vs. Category

Analysis: Understand the goldilocks of product marketing.

Writing the perfect product description is a balancing act involving word length.

**Pairing data with non-trending videos could allow us to gauge how consumers react to certain categories*

Length of Description in Trending Videos



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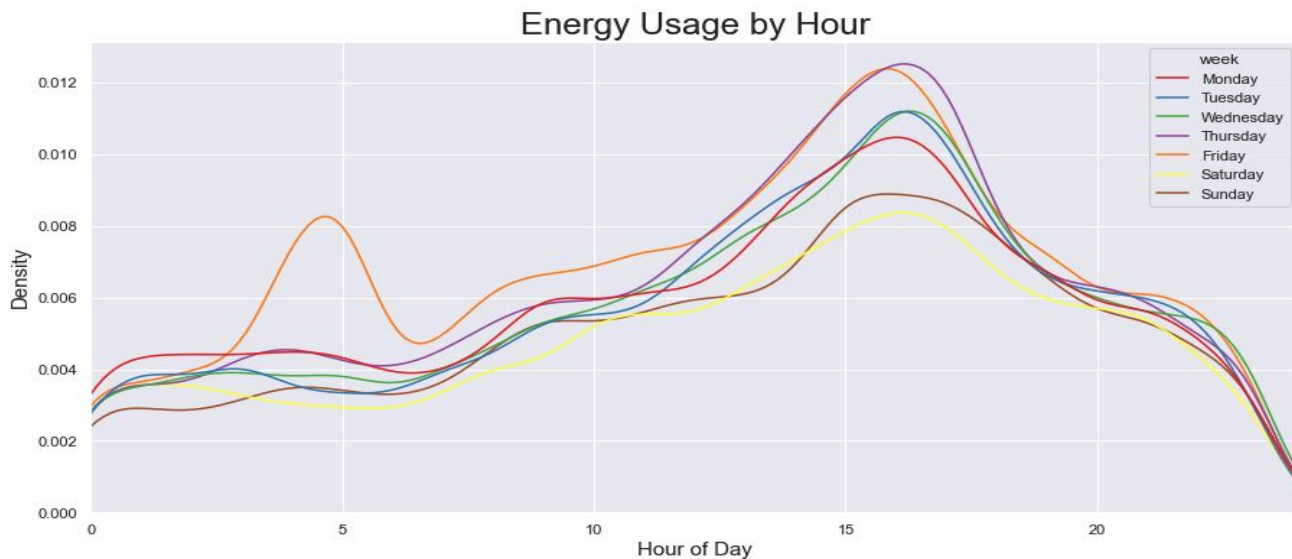
Energy Consumption

Energy usage vs. Density

Analysis: When are consumers more likely to buy certain products?

What type of bandwidth support is needed throughout the week?

When consumers are more relaxed, they're more likely to buy things they don't need.



What can we learn from this?

- Online ads can aim to target viewers during peak times in the day when they're most relaxed.
- Data centers can make decisions on which days will have the least impact during equipment maintenance.

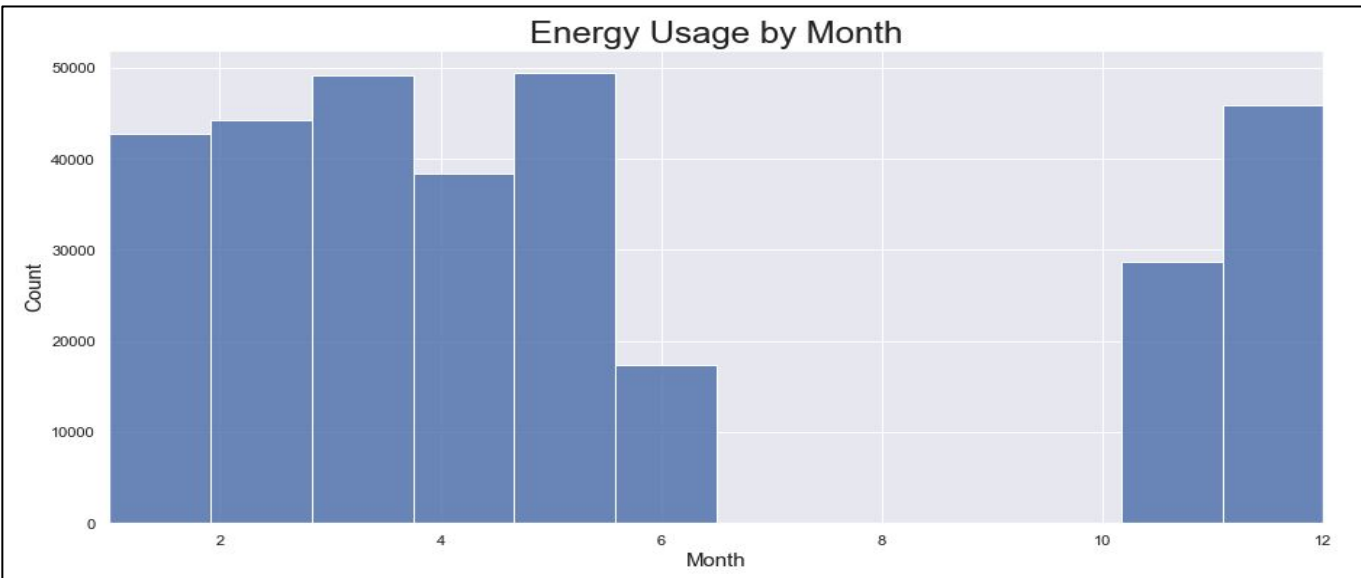
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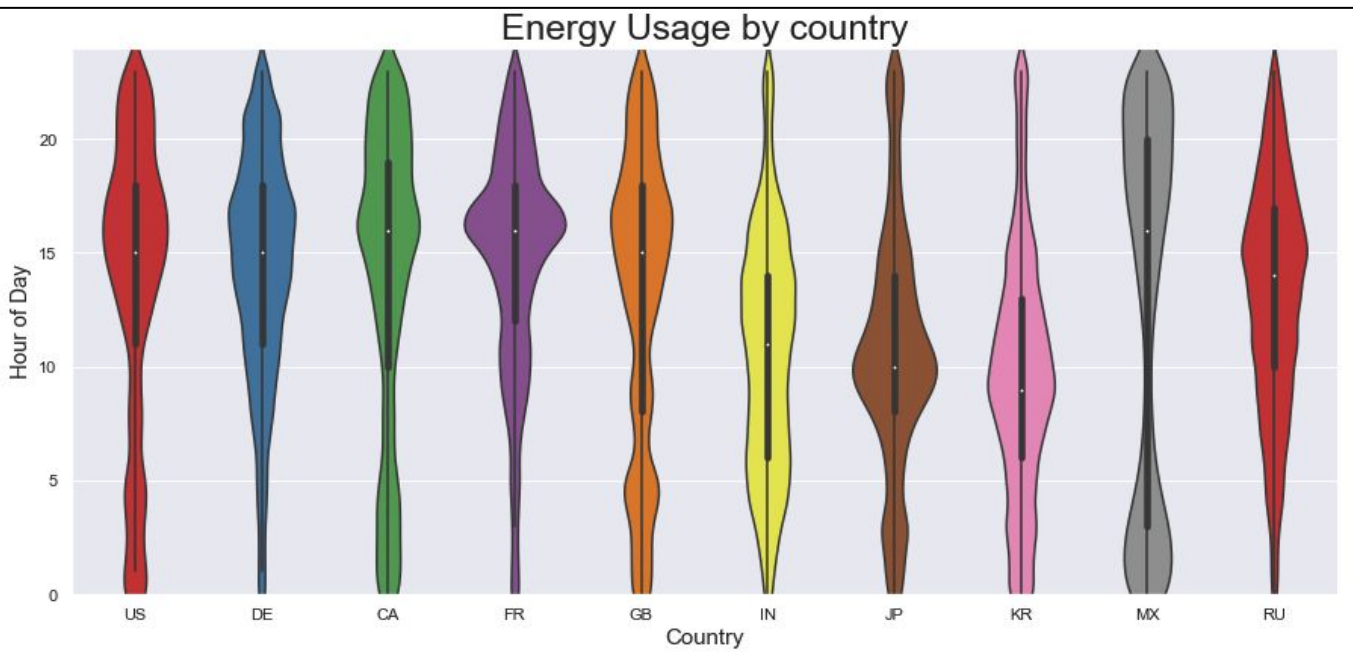
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Energy Consumption

Country vs. Hour of Day

Analysis: Understanding the global target audience

Understanding how energy usage differ lets you make smart business decisions.



What can we learn from this?

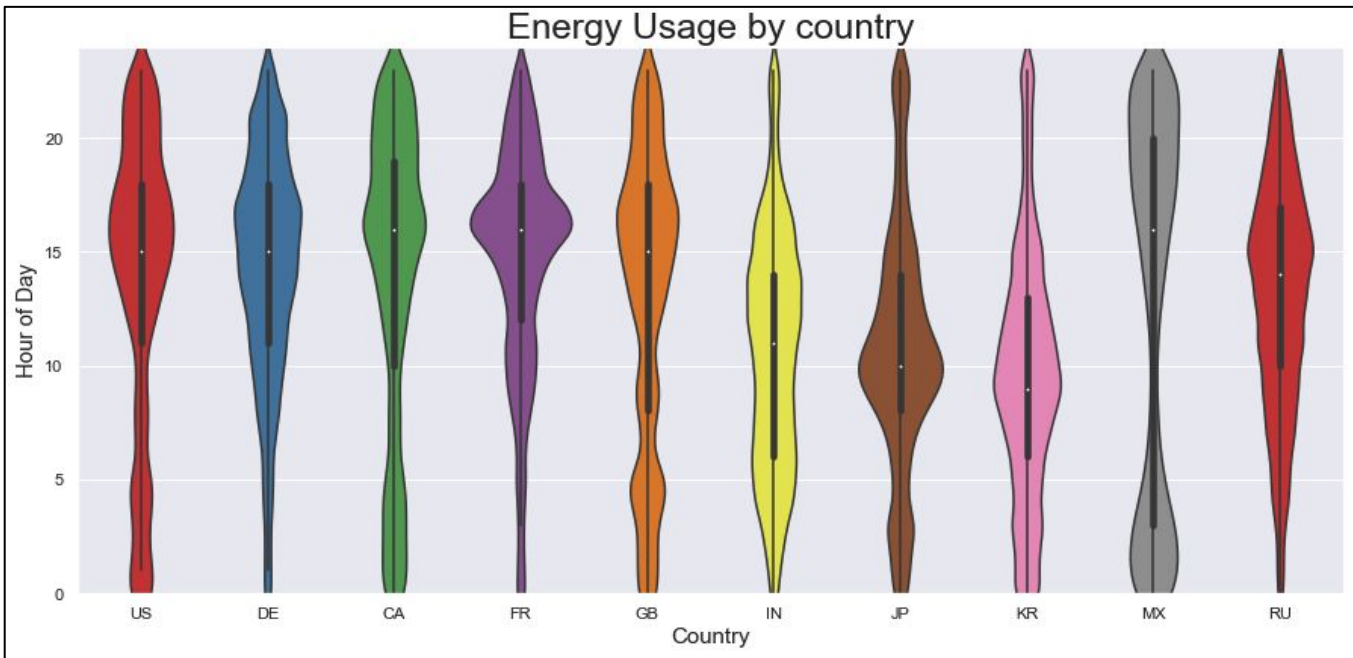
- Data centers in France should be equipped to handle the high energy influx during peak hours
- Products targeting asian consumers should take into account their inactivity during normal peak hours

Energy Consumption

Country vs. Hour of Day

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Analysis: Understanding the global target audience



What can we learn from this?

- Indian power grids is more vulnerable to overheating and should use more resilient parts.
- News and social media are less used during the daytime in Mexico.

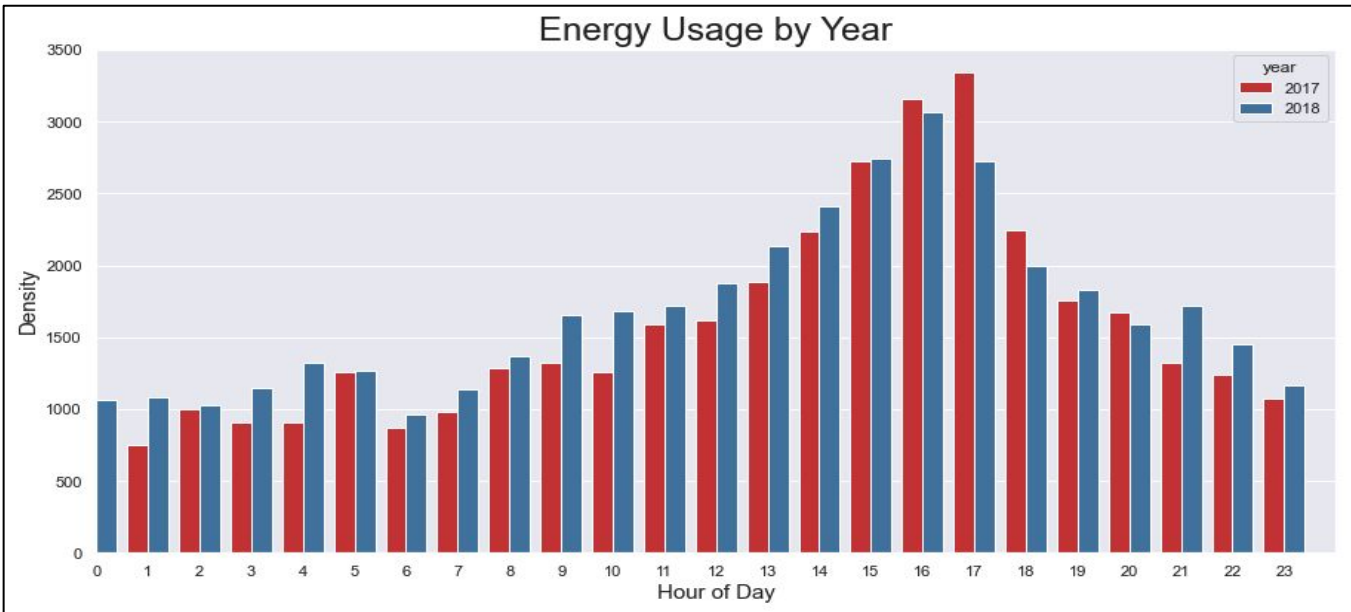
Trend Analysis, Growth

Hour of Day vs. Density

Analyzing annual trends
can help predict how
dependent consumers are
in phones/technology.

Analysis: Understand which times consumers will be most engaged

*** Data is normalized to reflect the number of months*



What can we learn from this?

- Consumers are more glued to their phones during late night in 2018 as opposed to 2017.
- This may be the optimal time slot for online ad companies to market their product.

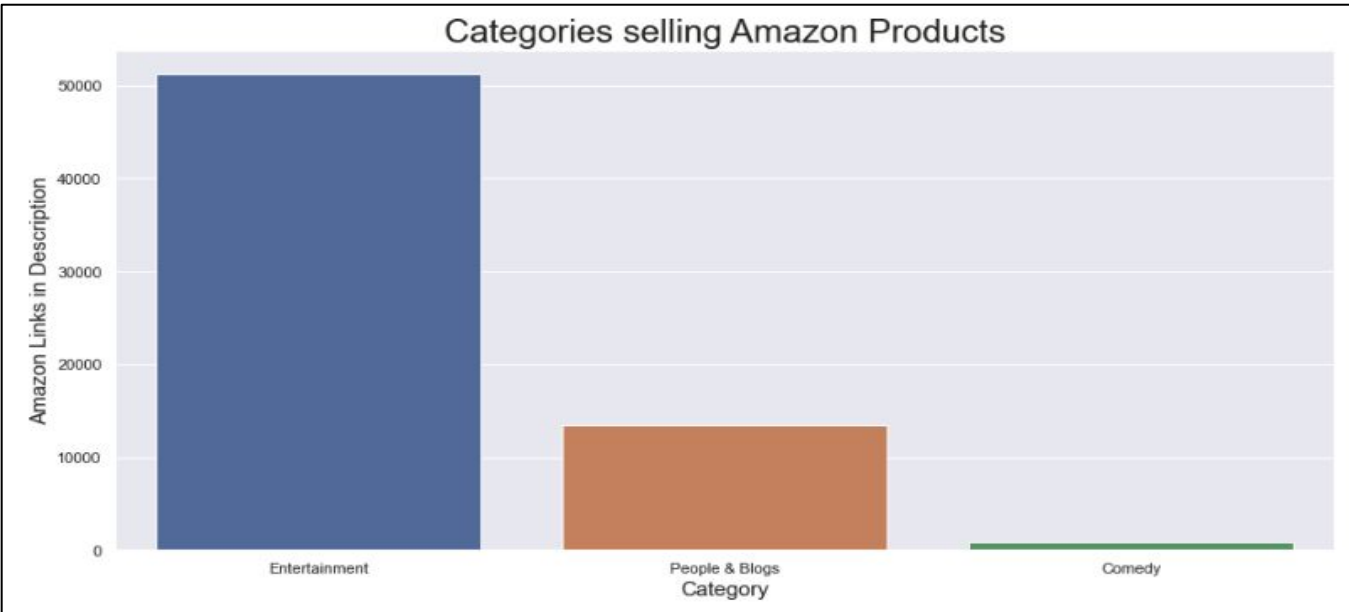
Trend Analysis, Sales

Category vs. Amazon Links

Technology ads are most effective in the entertainment industry.

Analysis: Understand which items consumers are most likely to buy

*** Extracted amazon links from observation description*



What can we learn from this?

- Affiliated Marketing should target those in the entertainment industry for highest ROIs
- After scraping the links on Amazon, technology was the highest advertised category.

Takeaways

- Great Britain has the highest engagement, meaning they could be a good product to target.
- Hardware used in data centers should be more resilient in India and Japan as opposed to the rest of the world.
- Technology product companies should advertise most to entertainment influencers.

Effective Marketing

Energy Consumption

Sales and Growth

Future Work

- Find other datasets/observations to support trend hypothesis. See usage impact of CoVID-19.
- Scrape more than just Amazon links: find out which categories are most advertised.
- Compare trends from parallel social media platforms, including TikTok and Instagram.

What impact did CoVID have in consumer demand?

What's the dominating marketplace platform for each category?

How do interests vary across platforms and age groups?