Home Decor

Data Analytics

Git: http://github.com/purabi139/home-decor-analytics/upload/main

Agenda

Gathered data using API

Analysis on Home Decor Data with Visualizations

Identified Top competitors

Competitors Market Strategies

Factors Influencing Consumer purchases

Summary

Insights

Conclusion

Data Collection

➡ **Created a Simple API using python where i have feed the data and converted to .csv file**

```
competitors = [{"Name": "Wayfair", "Strategy": "Discount
Pricing, Free Shipping, Online Exclusives"},{"Name":
"IKEA", "Strategy": "Flat-Pack Furniture, Affordable
Prices, In-Store Experience"}, {"Name": "West Elm",
"Strategy": "Modern Designs, Sustainable Sourcing,
Premium Pricing"},{"Name": "Pottery Barn", "Strategy":
"Classic Designs, Seasonal Collections, Loyalty
Programs"}, {"Name": "Amazon", "Strategy": "Wide
Range, Quick Delivery, Competitive Pricing"},{"Name":
"Etsy", "Strategy": "Handmade Items, Unique Designs,
Artisanal Appeal"}

time_periods = pd.date_range(start="2023-01-01",
end="2023-12-31", freq="M")
```

➡

Data Analysis

Data set has been analyzed to draw some insights, patterns
Identified Top Competitors
- **Here we can see West Elm is the biggest competitor followed by Amazon based on market share**

Sample code

```python
# Top competitors by average market share
top_competitors = data.groupby("Competitor")["MarketShare"].mean().
# Competitor strategies and market share visualization
plt.figure(figsize=(10, 6))
sns.barplot(x=top_competitors.index, y=top_competitors.values, pale
plt.title("Top Competitors by Average Market Share ", fontsize=16)
plt.xlabel("Competitor", fontsize=12)
plt.ylabel("Average Market Share", fontsize=12)
plt.xticks(rotation=45)
plt.show()
```
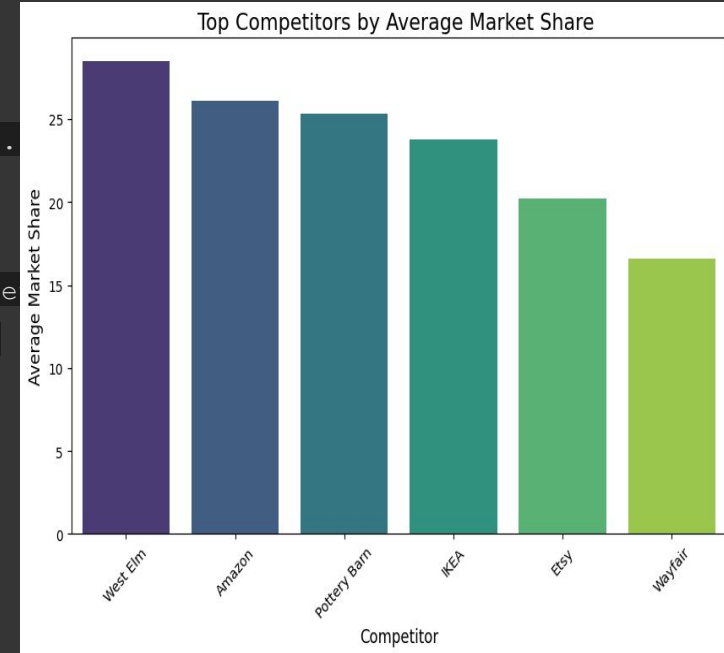
Observations
WestElm is the major market share followed by Amazon

Top Competitors by Average Market Share

Data Analysis

Market trends across categories

Sample code

```python
# Market trends by growth rate across categories
plt.figure(figsize=(12, 8))
sns.boxplot(data=data, x="Category", y="TrendGrowth",
 palette="coolwarm")
plt.title("Market Trends by Growth Rate Across Categories",
 fontsize=16)
plt.xlabel("Category", fontsize=12)
plt.ylabel("TrendGrowth", fontsize=12)
plt.xticks(rotation=45)
plt.show()
```

Observations:

Smart Home Devices and **Wall Art** have the highest median growth rates.

Eco-Friendly Decor has the lowest median growth rate.

Categories like Scandinavian Design and Vintage Decor show more variation in growth.

Outliers are present in some categories, indicating occasional high spikes in trend g[...] stable growth with less fluctuation.

Market Trends by Growth Rate Across Categories
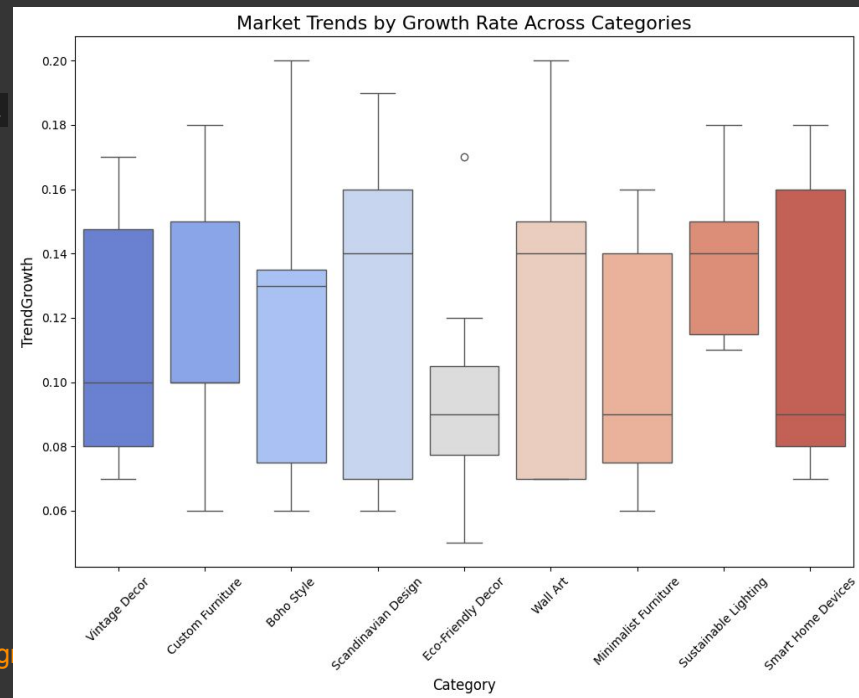
Data Analysis

## Advertising Budget trends over time for top competitors

Sample code

```python
top_competitors_list = top_competitors.index[:3]   # Select top 5 competitors
filtered_data = data[data["Competitor"].isin(top_competitors_list)]
plt.figure(figsize=(14, 7))
sns.barplot(data=filtered_data, x="Date",
 y="AdvertisingSpend", hue="Competitor",
palette="tab10")
Plt.title
("Advertising Budget Trends Over Time (Top Competitors)",
fontsize=16)
plt.xlabel("Date", fontsize=12)
plt.ylabel("Advertising Spend", fontsize=12)
plt.xticks(rotation=45)
plt.legend(title="Competitor")
plt.show()
```
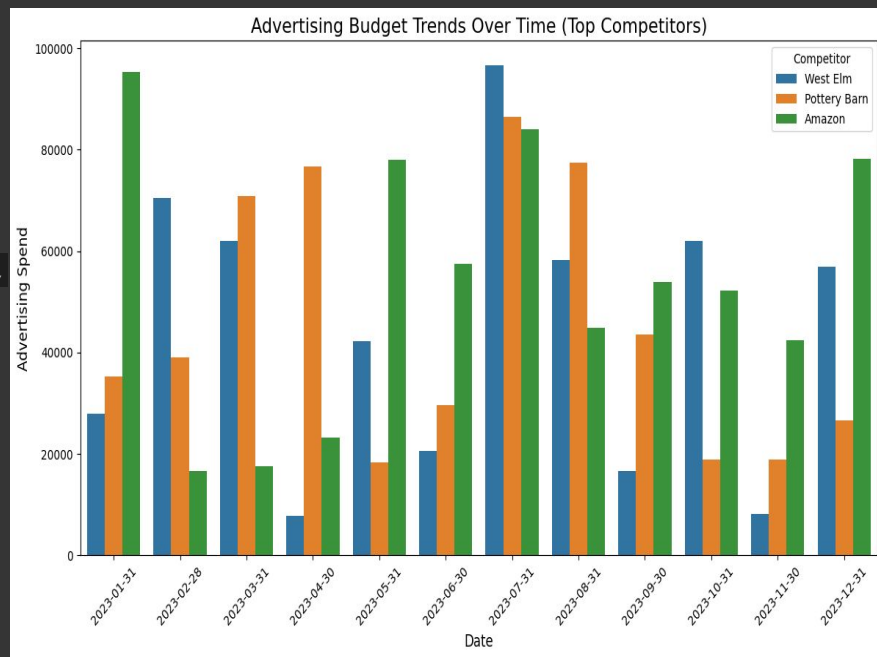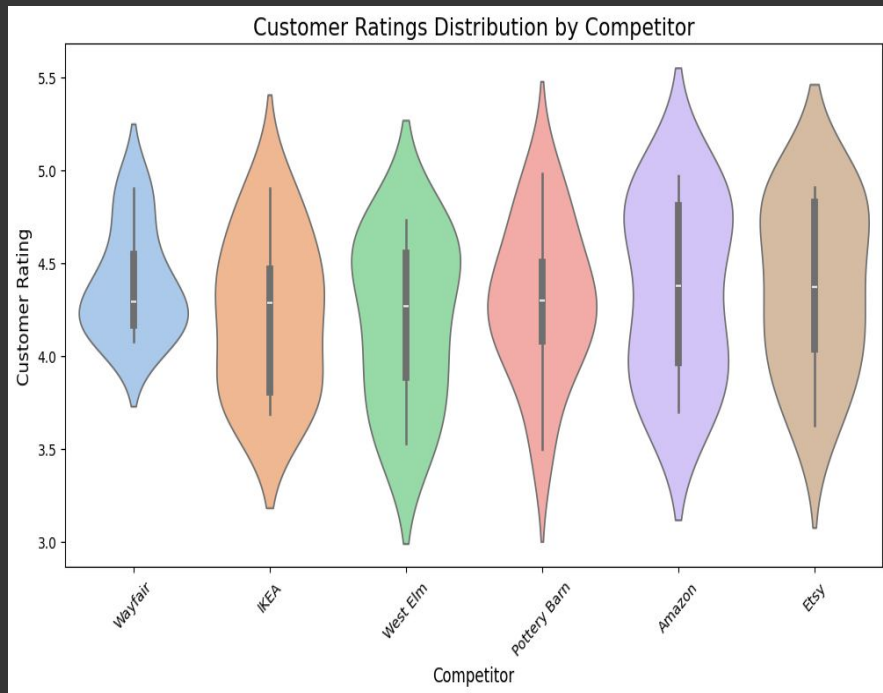
Data Analysis

Customer Rating Distribution by Competitor

Sample code

```python
# Customer rating distribution by competitor
plt.figure(figsize=(12, 6))
sns.violinplot(data=data, x="Competitor", y="CustomerRating", palette="pastel")
plt.title("Customer Ratings Distribution by Competitor", fontsize=16)
plt.xlabel("Competitor", fontsize=12)
plt.ylabel("Customer Rating", fontsize=12)
plt.xticks(rotation=45)
plt.show()
```

Data Analysis

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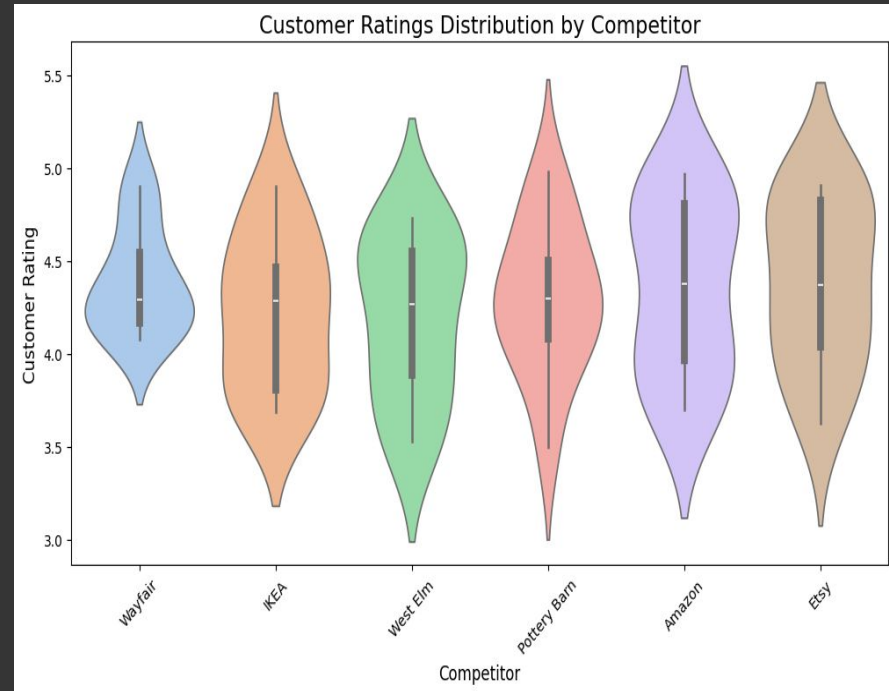
Market Strategies By competitors

Below are few Strategies opted by competitors

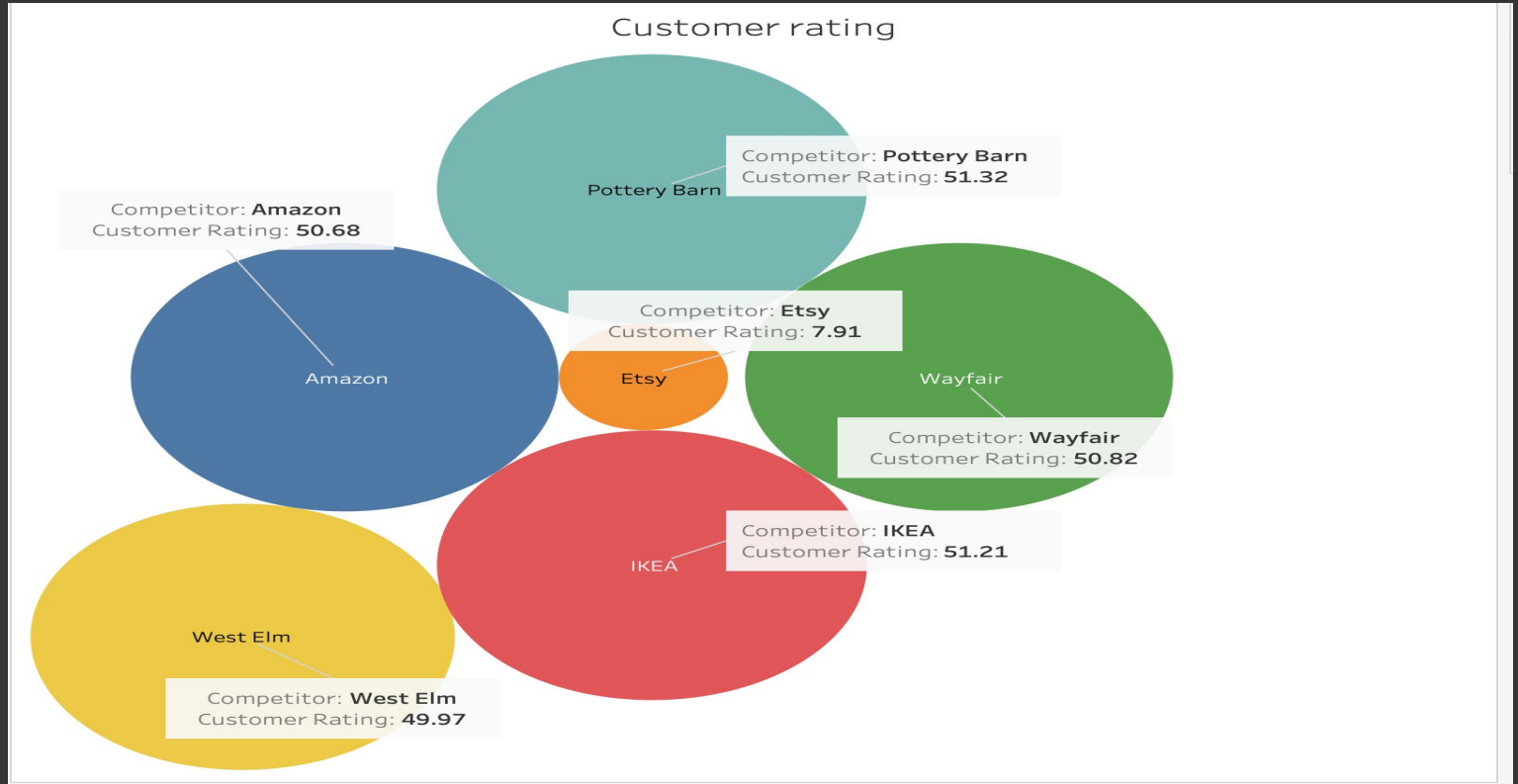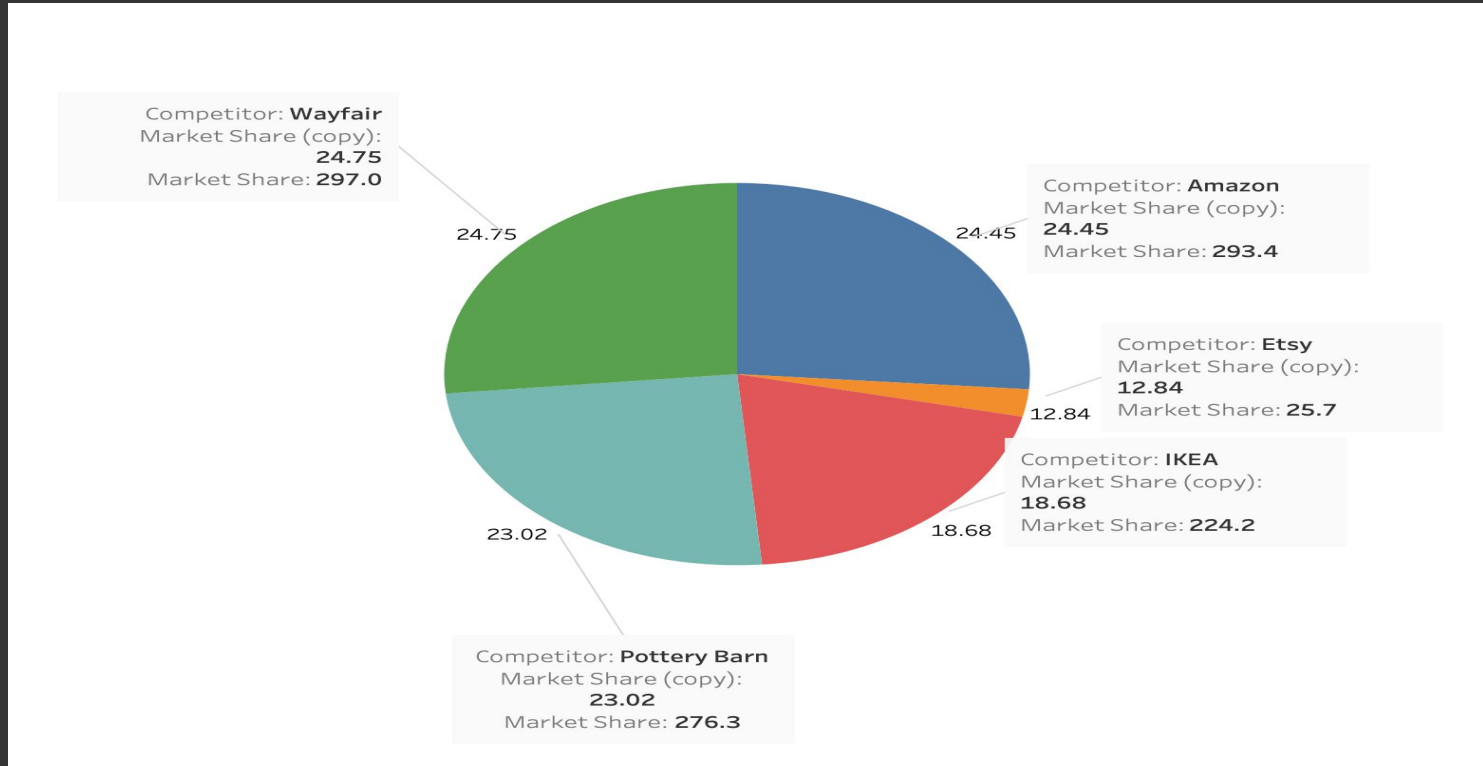- **Growth wise Ikea has adopted a good strategy followed by pottery Barn**
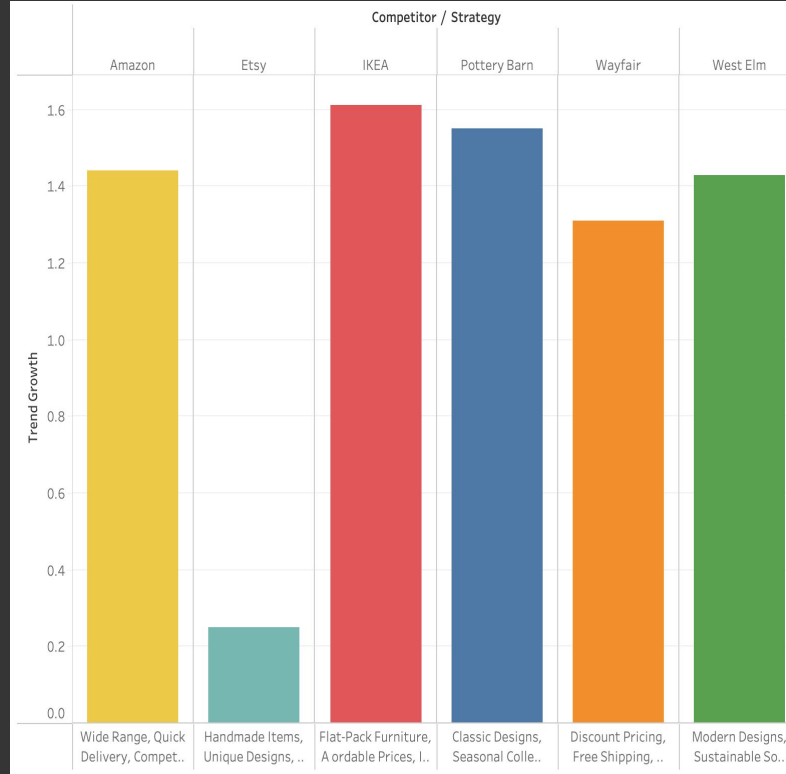
Customer rating Depending on the Purchases

Pottery Barn has a good Customer rating as compared to others

Market Share Captured By Competitors

Etsy has least market share .They should probably work on their strategy ,advertisements and products

Summary

Insights from Customer Ratings Distribution by Competitor (Violin Plot)

1. Competitor Performance Overview

- The **violin plot** represents the distribution of customer ratings for different competitors in the home decor and lifestyle sector.
- The **width of the plot** at different rating levels shows the density of ratings. Wider sections indicate more frequent ratings.

2. Competitor Comparisons

- **Wayfair**: Has a high concentration of ratings around **4.0 - 4.5**, suggesting a generally positive but slightly mixed reputation.
- **IKEA**: Displays a wider spread, with ratings ranging from **3.5 to 5.0**. This indicates variability in customer experiences—some highly satisfied, others less so.
- **West Elm**: Shows a strong cluster of ratings around **4.0 - 4.8**, suggesting a higher customer satisfaction rate compared to IKEA.
- **Pottery Barn**: Similar to West Elm, but slightly broader distribution with some ratings below 4.0.
- **Amazon**: Has a fairly balanced distribution, spanning **3.5 to 4.8**, reflecting a mix of experiences across various home decor products.
- **Etsy**: Has the **most consistent high ratings**, with a strong concentration between **4.2 and 5.0**, indicating high customer satisfaction.

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Conclusion

✅IKEA should work on consistency in product quality and customer experience to reduce negative ratings.

✅ Amazon could focus on improving seller vetting and ensuring better quality control for home decor products.

✅ Wayfair & Pottery Barn should capitalize on their strong reputation but work on addressing common customer pain points to push ratings higher.

✅ Etsy and West Elm should leverage their strong customer satisfaction to expand product offerings and maintain service quality.