Conversion Rate Analysis

Unlocking Conversion Potential: Data-Driven Insights for Stripe

Introduction

This app provides an analysis of visits and conversions data over time, broken down by country and browser.

Data Quality Analysis

In this section, we assess the quality of the data by checking for missing values, duplicate entries, and data types.

Missing Values

	0
WEEK_DATE	0
BROWSER	0
COUNTRY	0
VISITS	0
CONVERSIONS	0

Duplicate Entries

0

Data Types

	0
WEEK_DATE	int8
BROWSER	object
COUNTRY	object
VISITS	int32
CONVERSIONS	int32

Data Overview

In this section, we provide an overview of the visits and conversions over time. This will help us understand the overall trend and any significant changes.

Weekly Visits and Conversions

Observations 📝

- The number of visits and conversions over time shows general trends in user activity.
- Notice any peaks or troughs which might indicate seasonal effects or marketing campaigns.

Conversion Rate Analysis

In this section, we analyze the conversion rate over time, by country, and by browser. The conversion rate is a crucial metric to understand the effectiveness of our website or campaign.
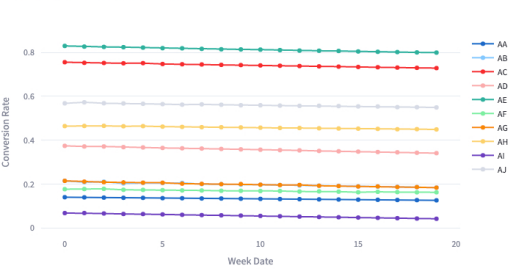
Weekly Conversion Rate

Observations 📝

- The weekly conversion rate provides insight into how effectively visits are turning into conversions.
- There is a noticeable increase in conversion rate starting from week 6.

Weekly Conversion Rate by Country

Observations 📝

- Country AC shows a significant increase in visits starting from week 6, which is impacting the overall conversion rate.
- Other Countries have a relatively stable conversion rate, while country AD shows fluctuations.

Weekly Conversion Rate by Browser
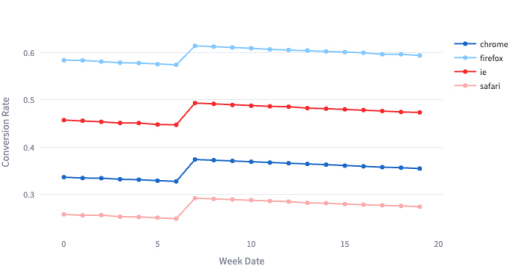
Observations 📝

- Browser Firefox has the highest conversion rate, suggesting it may provide a better user experience or have a more engaged user base.
- Browser Safari shows a lower conversion rate, indicating potential usability issues or a less engaged user base.

Top and Lower Performers 🏆

Top Performers

COUNTRY	BROWSER	conversion_rate
AE	firefox	0.942
AC	firefox	0.9126
AE	ie	0.8894
AC	ie	0.8395
AJ	firefox	0.8169
AE	chrome	0.8012
AH	firefox	0.7414
AC	chrome	0.7237
AE	safari	0.7083
AJ	ie	0.6898

Lower Performers

| COUNTRY	BROWSER	conversion_rate
AI	safari	0.0254
AI	chrome	0.0412
AA	safari	0.0656
AI	ie	0.0791
AF	safari	0.0861
AG	safari	0.1042
AB	safari	0.1045
AA	chrome	0.1048
AF	chrome	0.1361
AI	firefox	0.146

Observations 📝

- The top performers include a combination of countries and browsers, with the highest conversion rates observed in country AE using Firefox.
- The lower performers are generally from countries that have low conversion, such as AI or of countries with high coversion but underperforming in specific browsers, such as AC(Chrome).

Enhanced Correlation Analysis

In this section, we analyze the correlation between visits and conversions to understand the relationship between these two metrics.

Pair Plot Analysis 📊

A pair plot provides a visualization of the pairwise relationships between variables, allowing us to observe potential correlations and distributions.

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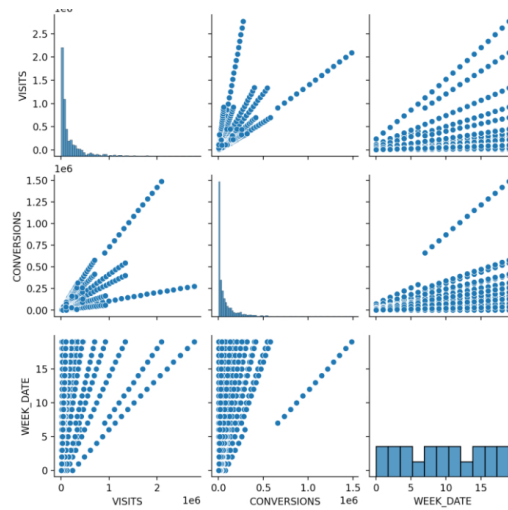
Observations 📝
- The pair plot shows a positive correlation between visits and conversions, indicating that as the number of visits increases, the number of conversions also increases.
- There are distinct patterns visible for different countries and weeks.

Country AC Analysis

In this section, we take a closer look at the significant increase in visits and conversions for country AC.

Country AC: Weekly Visits and Conversions
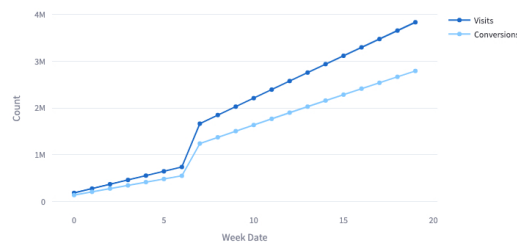
Observations 📝
- There is a significant increase in visits and conversions starting from week 6.
- This spike is driving the overall increase in the global conversion rate.

Possible Theories for the Increase:
- **Marketing Campaigns**: A new marketing campaign may have been launched in week 6, leading to increased traffic and conversions.
- **Product Launches or Updates**: A new product or feature might have been introduced, attracting more users and improving conversion rates.
- **Seasonal Effects**: Seasonal promotions or events could have increased user activity during this period.
- **Technical Improvements**: Enhancements in website performance or user experience may have led to higher conversions.

Final Recommendations

Based on the findings from the analysis, here are the recommendations for improving conversion rates and understanding the root causes behind the observed trends:

Overall Recommendations:

- **Aside from the increase created by Country AC, there is no significant improvement in the conversion rate with the current data.**
  - **Action Items:**
    - Conduct a deeper analysis to understand the underlying factors affecting conversion rates in countries other than AC.
    - Perform A/B testing on different strategies to see which ones yield better conversion rates.

Country-Specific Recommendations:

- **Country AC:**
  - **Observation:** Country AC exhibits a significant increase in conversion rate starting from week 6, likely influencing the global conversion rate.
  - **Action Items:**
    - Follow up with the team to confirm the cause of the change in the data.
    - If it's due to a marketing campaign, consider replicating this campaign in other countries.
    - Analyze the specific elements of the campaign that led to the increase and apply those insights to other markets.
- **Country AB:**
  - **Observation:** Country AB has a stable conversion rate.
  - **Action Items:**
    - Reach out to the responsible team to understand what is driving the stability.
    - Explore additional data or macroeconomic factors that could be influencing this stability.
- **Country AD:**
  - **Observation:** Country AD shows more variability in conversion rates.

- **Action Items:**
  - Investigate the factors contributing to this variability.
  - Collaborate with the country team to identify potential causes and solutions.
  - Use more granular data to pinpoint specific issues or opportunities for improvement.

Performance Analysis:

- **Top Performers:**
  - **Observation:** The highest conversion rates are observed in Country AC using Chrome.
  - **Action Items:**
    - Use the insights from the top-performing segments to develop best practices.
    - Apply successful strategies from these segments to underperforming ones.
- **Lower Performers:**
  - **Observation:** The lowest conversion rates are found in Countries AB and AD using less popular browsers.
  - **Action Items:**
    - Focus on improving the user experience in lower-performing browsers.
    - Implement targeted interventions in countries AB and AD to address specific challenges.

Correlation Analysis:

- **Observation:** There is a positive correlation between visits and conversions, indicating that higher visits generally lead to higher conversions. Distinct patterns are visible for different countries and weeks, suggesting varying factors influencing conversion rates.
  - **Action Items:**
    - Use segmentation in data analysis to capture the unique patterns and factors influencing conversion rates in different markets.
    - Consider developing market-specific strategies rather than a one-size-fits-all approach to improve conversion rates.

Loaded Data

	WEEK_DATE	BROWSER	COUNTRY	VISITS	CONVERSIONS	conversion_rate
0	0	chrome	AA	241,655	26,787	0.1108
1	0	chrome	AB	18,041	3,230	0.179
2	0	chrome	AC	101,680	75,034	0.7379
3	0	chrome	AD	120,393	39,988	0.3321
4	0	chrome	AE	35,729	29,274	0.8193