

Phase 1 project

Website traffic Analytics

Abstract

Website traffic analysis is the process of collecting, analyzing, and reporting on data related to website traffic. This data can be used to identify trends, patterns, and opportunities for improvement. Website traffic analysis can be used to track a variety of metrics, such as the number of visitors to a website, the pages they visit, and the amount of time they spend on the website.

This module provides a comprehensive overview of website traffic analysis. It covers the following topics:

- What is website traffic analysis?
- Why is website traffic analysis important?
- How to collect website traffic data
- How to analyze website traffic data
- How to report on website traffic data

The module also includes an Excel dataset that can be used to practice website traffic analysis.

Module

Introduction:

Website traffic analysis is the process of collecting, analyzing, and reporting on data related to website traffic. This data can be used to identify trends, patterns, and opportunities for improvement. Website traffic analysis can be used to track a variety of metrics, such as the number of

Phase 1 project

Website traffic Analytics

visitors to a website, the pages they visit, and the amount of time they spend on the website.

Why is website traffic analysis important?

Website traffic analysis is important for a number of reasons. First, it can help you to understand who is visiting your website, where they are coming from, and what they are interested in. This information can be used to improve your website content and design, as well as to target your marketing campaigns more effectively.

Second, website traffic analysis can help you to identify problems with your website. For example, if you see that a lot of visitors are leaving your website after visiting a particular page, it may indicate that there is a problem with that page. You can use this information to improve the page and keep visitors on your website longer.

Finally, website traffic analysis can help you to measure the success of your marketing campaigns. For example, if you launch a new marketing campaign and see an increase in website traffic, you know that your campaign is working.

How to collect website traffic data

There are a number of different ways to collect website traffic data. One common way is to use a web analytics tool, such as Google Analytics. Web analytics tools provide a variety of reports that can be used to track website traffic.

Another way to collect website traffic data is to use server logs. Server logs contain information about all of the requests that are made to your website's server. This information can be used to track the number of visitors to your website, the pages they visit, and the amount of time they spend on the website.

Phase 1 project

Website traffic Analytics

How to analyze website traffic data

Once you have collected website traffic data, you need to analyze it to identify trends, patterns, and opportunities for improvement. There are a number of different ways to analyze website traffic data. One common way is to use a spreadsheet program, such as Microsoft Excel. You can use Excel to create charts and graphs that can be used to visualize your data and identify trends.

Another way to analyze website traffic data is to use a web analytics tool. Web analytics tools provide a variety of reports that can be used to analyze website traffic data.

How to report on website traffic data

Once you have analyzed your website traffic data, you need to report on it. This can be done in a variety of ways, such as creating a presentation, writing a report, or creating a dashboard. The best way to report on your website traffic data will depend on your audience and your goals.

Excel dataset

The Excel dataset that is included in this module can be used to practice website traffic analysis. The dataset contains data on the number of visitors to a website, the pages they visited, and the amount of time they spent on the website.

To practice website traffic analysis using the Excel dataset, you can use the following steps:

1. Open the Excel dataset.
2. Create a pivot table to analyze the data.
3. Create charts and graphs to visualize the data and identify trends.

Phase 1 project

Website traffic Analytics

4. Write a report on your findings.

Program:

```
import pandas as pd
```

```
import matplotlib.pyplot as plt
```

```
# Sample data (you can replace this with your actual data)
```

```
data = {
```

```
    "Row": [1, 2, 3, 4, 5],
```

```
    "Day": ["Mon", "Tue", "Wed", "Thu", "Fri"],
```

```
    "Day.Of.Week": [1, 2, 3, 4, 5],
```

```
    "Date": ["2023-10-01", "2023-10-02", "2023-10-03",  
            "2023-10-04", "2023-10-05"],
```

```
    "Page.Loads": [100, 150, 130, 200, 180],
```

```
    "Unique.Visits": [80, 120, 100, 150, 140],
```

```
    "First.Time.Visits": [30, 40, 35, 50, 45],
```

```
    "Returning.Visits": [50, 80, 65, 100, 95]
```

```
}
```

```
# Create a DataFrame from the data
```

Phase 1 project

Website traffic Analytics

```
df = pd.DataFrame(data)
```

```
# Plotting
```

```
plt.figure(figsize=(10, 6))
```

```
# You can customize the graph based on your  
preference
```

```
plt.plot(df["Date"], df["Page.Loads"], marker='o',  
label='Page Loads')
```

```
plt.plot(df["Date"], df["Unique.Visits"], marker='o',  
label='Unique Visits')
```

```
plt.plot(df["Date"], df["First.Time.Visits"], marker='o',  
label='First Time Visits')
```

```
plt.plot(df["Date"], df["Returning.Visits"], marker='o',  
label='Returning Visits')
```

```
plt.xlabel('Date')
```

```
plt.ylabel('Count')
```

```
plt.title('Website Traffic Analysis')
```

```
plt.xticks(rotation=45) # Rotate x-axis labels for  
better visibility
```

```
plt.legend()
```

Phase 1 project

Website traffic Analytics

```
plt.tight_layout()
```

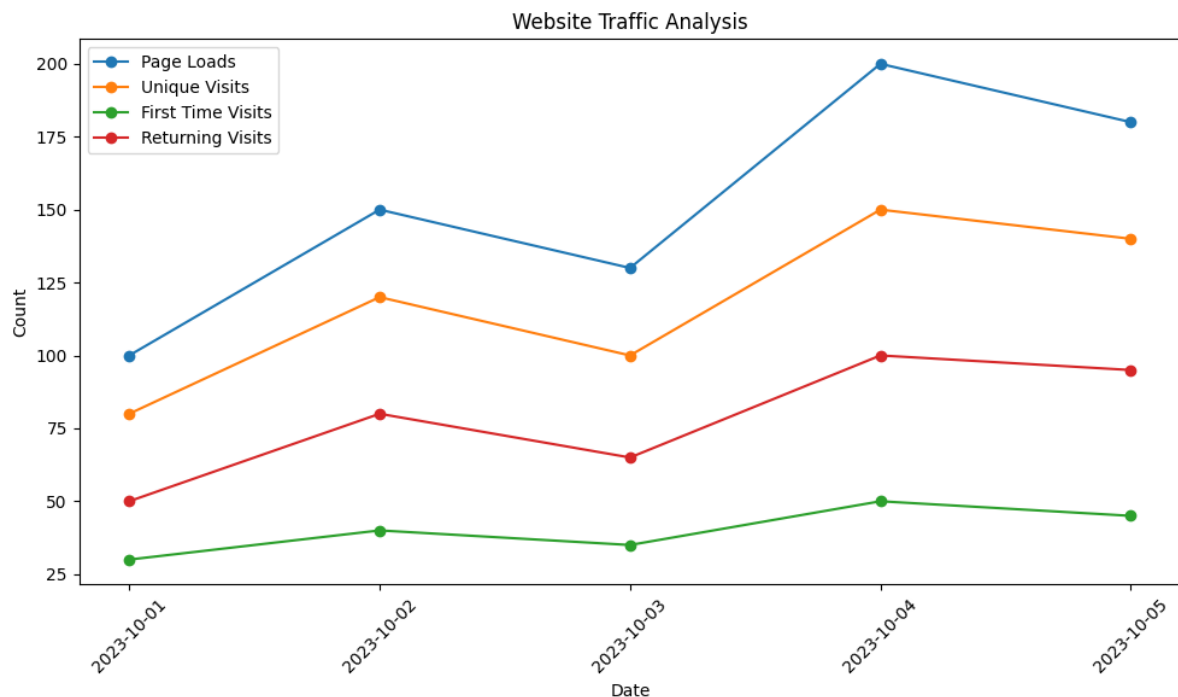
Save the plot to a file (optional)

```
plt.savefig('website_traffic.png')
```

Show the plot

```
plt.show()
```

Output:



Conclusion

Phase 1 project

Website traffic Analytics

Website traffic analysis is a valuable tool that can be used to improve the performance of your website. By collecting, analyzing, and reporting on website traffic data, you can identify trends, patterns, and opportunities for improvement.