PROBLEM STATEMENT:

The goal of this project is to understand this traffic better, in particular the volume and distribution of events, and to develop ideas how to increase the links' clickrates. With that in mind, please analyze the data using the Python libraries Pandas and SciPy where indicated, providing answer to presented question:

- [Pandas] How many total pageview events did the links in the provided dataset receive in the full period, how many per day?
- [Pandas] What about the other recorded events?
- [Pandas] Which countries did the pageviews come from?
- [Pandas] What was the overall click rate (clicks/pageviews)?
- [Pandas] How does the clickrate distribute across different links?
- [Pandas & SciPy] Is there any correlation between clicks and previews on list it significant? How large is the effect? Make sure to at least test for potential linear as well as categorical relationship between both variables.

DATA DESCRIPTION:

The data set provided contains web traffic data ("events") from a few different pages over a period of 7 days including various categorical dimensions about the geographic origin of that traffic as well as a pages content

WEBSITE TRAFFIC ANALYSIS:

Web traffic analytics refers to collecting data about who comes to your website and what they do when they get there. That data is crucial to building effective sales and marketing strategies.

TYPES OF WEBSITE TRAFFIC ANALYSIS:

- Organic.
- Paid.
- Direct.

IMPORTANCE:

Analyzing website traffic is critical for several reasons. First, it enables you to understand the behavior of your target audience. By analyzing metrics such as traffic sources, bounce rate, time on site, and exit rate, you can gain insight into how users interact with

your website and identify areas for improvement.

EXAMPLE:

Website traffic refers to the volume of users visiting a website. How many people visit a website will depend on the website's purpose, the visitors' own goals, and the way in which they discovered the site. Servers monitor website activity and register whenever a page receives a visitor.

WAYS FOR IMPROVE:

- Optimize your content with keywords.
- Create targeted landing pages.
- Craft engaging, high-quality content.
- Use digital ads to promote your site.
- Boost your local search reputation.
- Send emails that link to your website.

QUALITY:

Quality traffic refers to visitors who are actively searching for the products or services that your website offers. These visitors are more likely to convert into customers and generate revenue for your business.

ORGANIC:

Organic traffic is those visitors that land on your website from unpaid sources, aka essentially free traffic. Organic sources here include search engines like Google, Yahoo, or Bing. The brand of digital marketing that focuses on improving organic traffic is called Search Engine Optimization.

```
// Configure Pusher instance
const pusher = new Pusher('PUSHER_APP_KEY', {
  cluster: 'PUSHER_APP_CLUSTER',
  encrypted: true
});

var months = ["Jan", "Feb", "Mar", "Apr", "May", "Jun", "Jul", "Aug", "Sep", "Oct", "Nov", "Dec"];

$(document).ready(function(){
    var dataTable = $("#dataTable").DataTable()
    // var userSessions = $("#userSessions").DataTable()
    var pages = $("#pages").DataTable()

    axios.get('/get-all-sessions')
    .then(response => {
        response.data.forEach((data) => {
            insertDatatable(data)
        })
      var d = new Date();
      var updatedAt = `${d.getFullYear()}/${months[d.getMonth()]}/${d.getDay()} ${d.getHours()}:${d.getMinutes()}:${d.getSec
      document.getElementById('session-update-time').innerText = updatedAt
    })

    var sessionChannel = pusher.subscribe('session');
    sessionChannel.bind('new', function(data) {
      insertDatatable(data)
    });

    var d = new Date();
    var updatedAt = `${d.getFullYear()}/${months[d.getMonth()]}/${d.getDay()} ${d.getHours()}:${d.getMinutes()}:${d.getSeco
    document.getElementById('session-update-time').innerText = updatedAt
});

function insertDatatable(data){
    var dataTable = $("#dataTable").DataTable()
    dataTable.row.add([
        data.time,
        data.ip,
        data.continent,
        data.country,
        data.city,
        data.os,
        data.browser,
        `<a href=${"/dashboard/"+data.session}>View pages visited</a>`
      ]);
      dataTable.order([0, 'desc']).draw();
}
```