**Data Analysis Challenge: Analyze Web Traffic and User Engagement Task: Analyze Website Traffic and User Engagement Data Objective:**  
Analyze a dataset related to website traffic and user engagement to provide insights that can inform design and development decisions.

**Guidelines:**

**1. Dataset Collection:**

* Use a provided dataset or find a publicly available dataset that includes information such as page views, user sessions, bounce rates, time on site, traffic sources, and user demographics.

**2. Data Cleaning and Preparation:**

* Clean and prepare the dataset for analysis. This includes handling missing values, normalizing data, and ensuring the dataset is ready for analysis.

**3. Analysis:**

* Perform a detailed analysis of the data, focusing on key metrics like:
* Traffic Sources: Identify where most of the traffic is coming from (e.g., search engines, social media, direct visits).
* User Engagement: Analyze metrics like bounce rate, average session duration, and pages per session to understand how users interact with the site.
* User Demographics: Explore data related to user demographics such as age, location, and device type to identify target audiences.

**4. Visualization:**

* Create clear and insightful visualizations using tools like Excel, Tableau, or Power BI. Visualize trends, correlations, and key findings that can inform design and development decisions.
* Include charts like bar graphs, line graphs, heatmaps, and pie charts to make the data more understandable.

**5. Reporting:**

* Compile your findings into a well-organized report. The report should include:
* An executive summary of key insights.
* Detailed analysis with supporting visualizations.
* Recommendations based on the data, such as design changes, content strategies, or user experience improvements.

**6. Documentation:**

* Provide documentation that explains your analysis process, the tools used, and the reasoning behind your conclusions.

**7. Submission:**

* Push your report, visualizations, and any code used for analysis to the GitHub repository you created before.
* Ensure that your repository is well-organized, with a clear README file explaining your project.

**Evaluation Criteria:**

**1. Data Preparation:** How well-prepared and clean is the dataset for analysis?  
**2. Analysis Quality:** How detailed and insightful is your analysis?  
**3. Visualization:** How effectively are your visualizations conveying the data’s story?  
**4. Reporting:** How clear and well-structured is your report?  
**5. Recommendations:** How actionable and data-driven are your recommendations?  
**6. Originality:** Is your analysis and reporting genuinely your own, with no duplication or copying? **Submission Deadline:**  
***Thursday 15th August 2024***This challenge will allow you to showcase your data analysis skills and provide valuable insights that can influence the design and development decisions of the other tracks. Feel free to reach out here on Slack if you have any questions or need assistance. Goodluck, and let’s uncover some insights! :bar_chart:**Best regards,**   
**YOUDEVHUB Admin** (edited)