**Project Title: Analyzing the Impact of Social Media on Mental Health**

**Project Overview**

This project aims to analyze the relationship between social media usage and mental health outcomes. By leveraging a dataset that captures various aspects of social media behavior and mental health indicators, we seek to uncover trends, correlations, and potential causative factors that could inform strategies for improving mental health in the digital age.

**Group Members**

* Member 1: Alex Dunn; Most Commonly Used Platforms
* Member 2: Kene Ezeagba; Age vs Hours Spent on Social Media Platforms
* Member 3: Kathryn Kavanagh Mental Health Impacts Across Individual Platforms
* Member 4: Jerome Stepp; Relationship Status/Social Media Use
* Member 5: Randon White; Number of Social Media Platforms and Time Spent Online

**Project Goals**

1. Identify trends in social media usage among different demographic groups.
2. Examine the correlation between the type of social media platform used and levels of anxiety and depression.
3. Assess the impact of social media usage frequency on mental health indicators.
4. Provide actionable insights and recommendations based on the findings.

**Dataset**

The dataset used for this project is smmh.csv, which contains the following columns:

* Age: Age of the respondent
* Gender: Gender of the respondent
* Platform: Social media platform used
* Usage\_Hours: Daily hours spent on social media
* Anxiety\_Level: Self-reported anxiety level
* Depression\_Level: Self-reported depression level
* Wellness\_Program: Participation in a wellness program (Yes/No)
* Activity\_Level: Overall physical activity level

**Installation Instructions**

To run the analysis, follow these steps:

1. Clone the repository: git clone <repository-url>
2. Navigate to the project directory: cd <repository-directory>
3. Install the required dependencies: pip install -r requirements.txt
4. Open the Jupyter Notebook: jupyter notebook project1.ipynb

**Usage Instructions**

1. Ensure that the dataset smmh.csv is located in the project directory.
2. Open and run the Jupyter Notebook project1.ipynb.
3. Follow the steps in the notebook to load, clean, and analyze the data.
4. Review the visualizations and analysis results provided in the notebook.

**Analysis and Findings**

**Key Findings**

1. **Trend Analysis**: Identified the most frequently used social media platforms among different age groups and genders.
2. **Correlation Analysis**: Found a significant correlation between high social media usage and increased levels of anxiety and depression.
3. **Impact of Wellness Programs**: Users participating in wellness programs reported lower anxiety and depression levels.

**Visualizations**

The project includes the following visualizations:

1. Bar charts showing the distribution of social media usage across different age groups.
2. Scatter plots depicting the relationship between usage hours and mental health indicators.
3. Heatmaps highlighting the correlation between various factors such as platform usage and anxiety levels.

**Conclusion**

The analysis indicates a notable impact of social media usage on mental health. Higher usage hours are associated with increased anxiety and depression levels. However, participation in wellness programs appears to mitigate some of these negative effects. These findings suggest that promoting balanced social media use and supporting wellness initiatives could improve mental health outcomes.

**Future Work**

Given more time, the project could explore additional factors influencing mental health, such as the type of content consumed on social media or the role of offline social support networks. Further research could also involve longitudinal studies to understand the long-term effects of social media usage on mental health.

**Repository Organization**

* project1.ipynb: Jupyter Notebook containing the code and analysis.
* smmh.csv: Dataset used for the project.
* README.md: Project documentation.
* requirements.txt: List of dependencies required to run the project.

**Contact Information**

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