**Summary of Dataset Analysis**

The dataset comprises information on 1,825 Leetcode problems, last updated in April 2021. It encompasses various attributes such as problem ID, title, description, difficulty level, premium status, solution link, acceptance rate, frequency, URL, discuss count, acceptance count, submissions count, associated companies, related topics, likes, dislikes, and more.

The initial data preprocessing involved checking for missing values, which were subsequently dropped to ensure data integrity. Descriptive statistics and information about the dataset were then examined to gain a comprehensive understanding of its structure.

The analysis commenced with a scatter plot illustrating the relationship between related topics and their average acceptance rates, shedding light on potential correlations between problem themes and their difficulty levels. This was followed by a countplot visualizing the distribution of problem difficulty, indicating that a majority of problems were of medium difficulty.

Further exploration into acceptance rate distribution through a histplot provided insights into the frequency of correct submissions. A boxplot was employed to investigate the relationship between problem difficulty and acceptance rate, revealing varying trends across different difficulty levels.

The examination of premium versus non-premium problems using a countplot revealed that the majority of problems did not require a premium account, while a countplot analyzing the relationship between premium status and difficulty showcased distinct patterns between the two categories.

Additionally, a boxplot was utilized to explore the relationship between premium status and acceptance rate, uncovering potential differences in performance between premium and non-premium problems.

A pie chart was generated to illustrate the proportion of problems asked by FAANG (Facebook, Apple, Amazon, Netflix, Google) companies, providing insights into their involvement in problem creation. Moreover, a bar chart displayed the top 20 companies based on question count, highlighting the most prolific contributors to the problem pool.

Lastly, the dataset was filtered according to specific companies for in-depth analysis of their respective problem sets, enabling targeted insights into company-specific question trends and characteristics.

Overall, the dataset analysis offers valuable insights into the Leetcode problem ecosystem, facilitating a deeper understanding of problem attributes, difficulty distribution, premium status impact, company involvement, and related topics, thereby aiding in strategic decision-making and problem-solving strategies for individuals and organizations engaging with Leetcode.