**Mushroom Dataset**

Dataset : https://www.kaggle.com/datasets/prishasawhney/mushroom-dataset

**Analytical Conclusion**

The dataset contains the following features related to mushrooms:

1. **cap-diameter**: Numeric value representing the diameter of the mushroom cap.
2. **cap-shape**: Categorical value indicating the shape of the cap.
3. **gill-attachment**: Categorical value indicating how the gills are attached to the cap.
4. **gill-color**: Categorical value indicating the color of the gills.
5. **stem-height**: Numeric value representing the height of the stem.
6. **stem-width**: Numeric value representing the width of the stem.
7. **stem-color**: Categorical value indicating the color of the stem.
8. **season**: Numeric value likely representing the season or time of year when the mushroom is found.
9. **class**: Binary value indicating the class of the mushroom (likely edible or poisonous).

Based on the initial inspection of the dataset, it appears to be well-structured and contains key features that can be used for classification purposes. Here are some potential analyses and interpretations that can be drawn from this dataset:

1. **Class Distribution:**
   * Investigating the distribution of the class feature can reveal if the dataset is balanced or imbalanced, which is crucial for building an accurate classifier.
2. **Feature Correlation:**
   * Analyzing the correlation between numeric features such as cap-diameter, stem-height, and stem-width with the class can help identify which features are most influential in determining the class of the mushroom.
3. **Categorical Feature Analysis:**
   * Examining the distribution of categorical features like cap-shape, gill-attachment, gill-color, and stem-color can provide insights into which categories are more likely to be associated with a particular class.

**Corrulation:**

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Note :

Conclusions from Correlation matrix :-

stem-height have high positive correlation with Type of Class 18%.

stem-width have negative correlation with Type of Drug -18%.

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Overview of Gill\_Color Column

Overview of Gill\_Attachment Column

Overview to Relation between Target Column and Gill\_Color Column

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Overview to Relation between Target Column and Stem\_Color Column

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Overview to Relation between Target Column and Cap\_shape

Column

Overview to Relation between Target Column and Gill\_Attachment