Project Design Phase-I
Solution Architecture

Date	06 May 2023
Team ID	NM2023TMID08945
Project Name	classifcation analysis project on uncovering the hidden treasures of the Mushroom Kingdom

Solution Architecture:

Classification analysis can be used in the Mushroom Kingdom project to identify different types of mushrooms. To perform this analysis, a dataset containing various features of different types of mushrooms needs to be collected.

- Based on the project description provided, the technical solution for classification analysis would involve the following steps:

  1. Data pre-processing: The first step would beto clean and preprocess the data. This would involve tasks such as removing duplicates and irrelevant data, filling missing values, and converting data into a standardized format suitable for analysis.

  2. Feature engineering: The second step is to identify the relevant features or variables

- Classification analysis is a commonly used technique in machine learning that involves categorizing data into specific classes or categories based on a set of predefined features. This techniquecan be used to gain insights and make predictions about new, unlabeled data based on patterns in existing labeled data.

- Features:

  – Dataset: The project will use a dataset containing information about various types of mushrooms found in the Mushroom Kingdom.

  – Data Cleaning: The datasetwill first undergo a data cleaning process to eliminate any missing or irrelevant data points.

  – Feature Engineering: We will then explore the dataset and engineer new features if necessary.

  – Classification Algorithms: The next step will be to implement various classification algorithms to build

- Objective: The objective of this project is to build a classification model to predict whether a particular mushroom from the Mushroom Kingdom is edible or poisonous.

- Data Collection: The data has been collected from various sources including the Mushroom Data Set from UCI Machine Learning Repository. The data set contains 8,124 instances and 23 attributes including cap shape, cap color, gill size, gill color, veil
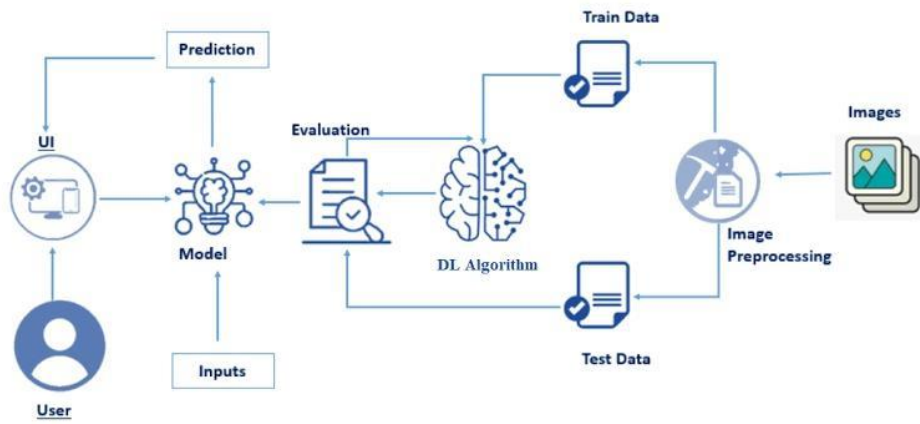
Example - Solution Architecture Diagram:

Figure 1: Architecture and data flow of the voice patient diary sample application