Revolutionizing Surgical Preference Cards using Artificial Intelligence

Overview

Surgical procedures require precise instruments and consumables that are essential for successful outcomes. However, matching preference cards with inventory data is a time-consuming process that can lead to wastage of instruments and consumables, as well as the occurrence of "never events" - surgical errors that are preventable.

CUSTOMER

Country: USA
Industry: Private Sector
Customer Size: 500 - 1000
Publish Date: 24/02/2023

Problem Statement

The problem of managing preference cards in healthcare facilities has become increasingly complex due to the need to streamline operations and reduce costs. Matching preference cards with inventory data is crucial to ensure that necessary instruments and consumables are available when needed, reducing the risk of delays and negative impacts on patient outcomes. Inaccurate preference cards and inventory data can lead to wastage of instruments and consumables, resulting in significant costs for hospitals and negative impacts on the environment. Moreover, such inaccuracies can lead to never events, which are serious, preventable incidents that occur during surgery, causing harm to patients and costly legal settlements for hospitals. Therefore, hospitals and healthcare facilities must prioritize the accurate management of preference cards and inventory data to save time, reduce wastage, and prevent never events, ultimately ensuring the safety and well-being of their patients.

Technical Solution

To solve the problem of managing preference cards in healthcare facilities, a technical solution could involve implementing a software application and dashboard system. For instance, has developed an app for surgical staff and a main dashboard to streamline the preference cards analysis process.

The app provides surgical staff with easy access to preference cards, allowing them to update the cards in real-time and match them with inventory data. This real-time matching process ensures that essential instruments and consumables are available when needed, thereby reducing delays and negative impacts on patient outcomes. By allowing surgical staff to update the preference cards in real-time, the app also ensures that the cards remain accurate and up-to-date, reducing the risk of wastage and never events.

Moreover, the main dashboard provides real-time data on inventory levels, usage rates, and the status of surgical procedures. This data enables better decision-making and inventory management, allowing healthcare facilities to optimize their operations and reduce costs. For instance, the dashboard can help identify which items are frequently used, which items are prone to wastage, and which items are running low on stock. This information can be used to adjust inventory levels, reduce wastage, and optimize the use of resources.

Overall, the technical solution offered by the app and dashboard system provides a comprehensive solution to the problem of managing preference cards in healthcare facilities. By enabling real-time updates and matching of preference cards with inventory data, the app ensures the availability of essential instruments and consumables, reducing delays and negative impacts on patient outcomes. Meanwhile, the main dashboard provides real-time data on inventory levels, usage rates, and surgical procedures, allowing healthcare facilities to optimize their operations and reduce costs. The implementation of this solution can ultimately improve the safety and well-being of patients while reducing the financial burden on healthcare facilities.

Results

The introduction of the app and main dashboard had a significant impact on surgical procedures, resulting in a saving of $4 million per hospital. The app's ability to match preference cards with inventory data in real-time has led to a reduction in wastage and the occurrence of "never events." The main dashboard's real-time data has also enabled better decision-making and inventory management, leading to significant cost savings. The app and main dashboard have revolutionized the way surgical preference cards analysis works, making it a valuable tool for surgical staff, hospitals, and patients.

Technologies	Domain
Pandas, NumPy, FuzzyWuzzy, RegEx	NLP