Capstone Project

Mess Management Platform

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Agenda

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Abstract

The major goal of the mess is to serve the organization's staff and students with wholesome cuisine. In the modern world, all feedback and mess management are still done manually. It takes a lot of time and diminishes the likelihood of improving the hostellers' experience. As a result, software development is required to automate the complete mess management process. Our project will be helpful for any school or college hostel or generally for any institute that maintains a mess and gives hostellers a flawless experience. It also helps the students and the vendors to interact with each other.

Motivation & Objective

Motivation

- Living in a digital world we often prefer to automate lot's of things these days. One thing hostellers definitely miss is their home food. We often see students falling sick regularly due to malnutrition.
- Generally we do take manual feedback but often don't implement it. Keeping up to speed is the need of the hour in this fast paced environment for a student and the vendors, so what better than accessing the whole of the mess system on one's smartphone.

Objective

- The Mess Management System helps the user to access all the functionalities of the mess. It provides better feedback and monthly reports that helps the vendors to understand the students more better and provide good healthy food.
- Our mess application along with the feedback also offers comprehensive information about hostel mess. They can also know the daily menu , Mess Committee Updates , Monthly Mess Reviews and much more .

Problem Survey

Understanding The Problem :-

- We have come across many papers and entrepreneurs coming with solutions to tackle the mess problems for hostellers.
- Even though they have overcome great problems like Billing System , Groceries management , Stock Calculations, etc. We have understood that they have not much concentrated on the Feedback sector.
- The main drawback we have understood is there is no efficient feedback management. Some applications we came across through certain papers are added in references.
- We have observed that they are just concentrating on collecting the feedback and not acting upon it. Hence we decided to solve this by using Natural Language Processing approach.

Problem Survey

Problem Approach:-

- Our Project aims to benefit both the students at our university as well as the catering provider.
- With our Feedback application, we will be doing sentiment analysis on the feedback provided by the students, and we will be able to compare and give a detailed survey analysis dashboard which can be accessed by anyone .
- This would maintain a check on hygiene and student satisfaction levels along with building healthy competition between the vendors which would motivate them to provide better food.
- This system will focus on enhancing the GUI and become a One Stop for all the mess updates to the students and give them amazing hostel experience.

Module Identification

1. **Data Survey:**
   - Preparing our own dataset by collecting feedback
   - Study the drawbacks of traditional methods of feedback techniques
   - Data Pre-processing methods
   - Listing out Pros and Cons
2. **Data Analytics and ML:**
   - Descriptive Statistics and Predictive Analytics
   - Data Visualization and EDA
   - Implementation of Machine Learning Algorithms
   - Metrics evaluation

Module Identification

3. Web Application Implementation:

- UI Interfaces
- Architecture Design
- Deployment of Analytics
- Final Layout of the Web Application

4. Testing:

- Unit and Integration Testing
- Acceptance Testing
- Make corrections as required
- Give ample time for testing

Data Analytics and Ml Implementation

Data Analytics and Visualization:

- We will collect data from all the students of the hostels from VIT-AP university through different survey analysis techniques.
- Text Pre-Processing and Normalization along with descriptive statistics.
- We will then do prescriptive analytics for the different mess vendors and provide insights of the whole mess management using data visualization.

Implementation of ML Algorithms:

- Doing Sentimental Analysis for the given feedback dataset using supervised algorithms like Naive Bayes , Logistic regression and many more.
- Feature Engineering and Model Training.
- Model Prediction
- Evaluation using different metrics like , Accuracy , F1 Score , Confusion Matrix and lot more.

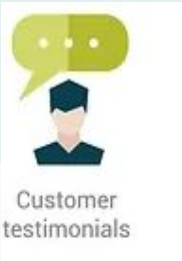
Web Application Implementation

Identification Of the Project:-

- Better User Experience.
- Feedback Tracking System
- OneStop for Mess Requirements

Features Of Our Web Application :-

- Semester reports of the Analytics which will help the vendors and the students
- Feedback Review page
- Suggestions and Committee Updates
- Daily Menu Updates



Timeline for the Project

References

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