

Medicine Details Analysis

Problem Statement:

The pharmaceutical industry faces the challenge of managing vast amounts of data related to the composition, uses, and side effects of medicines. As the number of available medications continues to grow, healthcare providers need reliable insights to prescribe the most effective treatments while minimizing adverse effects. Additionally, understanding the distribution of medicine usage and patient satisfaction can help pharmaceutical companies improve their offerings.

Your task is to analyze a dataset containing detailed information about over 11,000 medicines, including their salt compositions, uses, side effects, manufacturers, and user reviews. The goal is to uncover patterns and insights that can help improve decision-making in the healthcare industry and enhance patient outcomes.

Dataset Access:

- The dataset **Medicine_Details.csv** can be downloaded from [Kaggle](#).

Data Description:

- **Medicine_Name:** Name of the medicine.
- **Salt_Composition:** The active ingredients in the medicine.
- **Uses:** Medical conditions or symptoms the medicine is used to treat.
- **Side_Effects:** Known side effects associated with the medicine.
- **Manufacturer:** Company that manufactures the medicine.
- **Image_URL:** URL to the medicine's image.
- **Review_Excellent:** Percentage of users who rated the medicine as excellent.
- **Review_Average:** Percentage of users who rated the medicine as average.
- **Review_Poor:** Percentage of users who rated the medicine as poor.

Evaluation Parameters:

Evaluation will be based on:

- Feature Engineering (25%)
- Model Selection (20%)
- Visualization + Evaluation (20%)
- Presentation + Report (15%)
- LinkedIn Post (20%)

Expected Outcome:

- Gain insights into the factors that influence medicine effectiveness and patient satisfaction.
- Identify the most common side effects and their associated medicines.

- Predict user satisfaction ratings with high accuracy using the given features.

Submission:

- Python Script: Submit a well-documented Python/R script that performs the entire analysis, from data preprocessing to model evaluation and optimization.
- Presentation: Submit a presentation summarizing your findings, insights, and recommendations, with visualizations to support your analysis.
- LinkedIn Post: Instructions and Format have been attached with this file. (Compulsory)

Referral Reports Projects for Presentation: <https://www.linkedin.com/pulse/capstone-projects-data-science-machine-learning-full-alaa/>

LinkedIn Post Instructions

Final Internship Task: Writing Your Internship Experience Article

Objective:

Write an article detailing your remote internship experience at Oeson Learning to be posted on your LinkedIn account and submitted to Oeson Learning Internship Stories. This article will help potential interns and employers understand the value of the internship program at Oeson Learning.

Article Requirements:

- 1. Summary (300-500 words):**
Reflect on your overall internship experience, focusing on the technical skills gained, projects worked on, and key learnings. Highlight any rewarding aspects of the internship, such as interactions with mentors, significant challenges overcome, or personal growth achieved.
- 2. Photo:**
 - Take a photo of yourself at your work area with the Oeson Learning logo visible on your screen. You can also include any company swag in the photo. Ensure the photo is professional and you are dressed in business casual attire.
- 3. Hashtags:**
Include the following hashtags at the end of your article:
#OesonLearning #OesonInternship #EdTech #InternshipExperience

Assignment Instructions:

1. Review Process:

- Write your article and save it in a document or PDF format.
- Submit this document to the LMS for mentor approval.
- Your mentor will evaluate the document and provide approval in the comments section of the LMS.

2. Publishing on LinkedIn:

- Once approved, log in to LinkedIn and select "Write an Article" from your homepage.
- Include the company logo, graphic, or a related picture with the article.
- Use the required hashtags and attach the assignment photo.

3. Points Deduction:

- Typos, lazy, or unprofessional writing.
- Missing photo or non-compliant photo.
- Missing hashtags.

Examples:

You can refer to the following examples to guide you:

Example: [\(1\) My journey as a digital marketing Training & Internship at Oeson Learning : | LinkedIn](#)

We look forward to reading about your incredible experiences at Oeson Learning!