

Project Initialization and Planning Phase

Date	July 2024
Team ID	740664
Project Name	Drug classification using machine learning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

The pharmaceutical industry struggles with accurate drug classification due to manual, error-prone methods. We propose a machine learning model to classify drugs based on chemical properties, mechanisms of action, and therapeutic uses. This model, using Python and libraries like scikit-learn and TensorFlow, aims to improve accuracy and efficiency. Enhanced classification will support drug discovery, regulatory compliance, and personalized medicine. Ultimately, this solution will optimize drug development and enhance patient safety.

I am	Describe customer with 3-5 key characteristics - who are they?	Describe the customer and their attributes here
I'm trying to	List their outcome or "job" the core about - what are they trying to achieve?	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way - what do they have there?	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problems or barriers exist - what needs to be solved?	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view - how does it impact them emotionally?	Describe the emotions the result from experiencing the problems or barriers

Reference: https://miro.com/app/board/uXjVK2aqlmY=?share_link_id=534024970903

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
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PS-1	A pharmaceutical researcher or healthcare professional.	Accurately classify different types of drugs based on their chemical properties and potential effects.	The process is time-consuming and prone to human error due to the complexity and volume of data involved.	Manual classification requires extensive knowledge and experience, and even minor inaccuracies can lead to significant consequences in drug development and patient care.	Frustrated and concerned about the efficiency and reliability of the drug classification process.
PS-2	A healthcare data analyst.	Identify and classify new drug compounds rapidly and accurately from vast datasets.	The traditional methods are not scalable and often fail to capture the intricate patterns in the data.	These methods rely heavily on manual analysis and outdated algorithms that can't handle the complexity and volume of modern drug data.	Overwhelmed and uncertain about the effectiveness of our current drug discovery and classification processes.