Project Initialization and Planning Phase

Date	15 July 2024
Team ID	740051
Project Name	SDSS galaxy classification using Machine Learning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

Astronomers face significant challenges in classifying galaxies based on their Sloan Digital Sky Survey (SDSS) data. As an astronomer, I want to leverage machine learning to streamline and enhance the galaxy classification process. However, the current manual classification method is exceedingly time-consuming and prone to errors due to the sheer volume of data and the subjective nature of human classification. This situation leaves me feeling frustrated and inefficient, highlighting the urgent need for a more automated and reliable solution.

Problem Statement (PS)	I am	I'm trying to	But	Because	Which makes me feel
PS-1	An astronomer	Classify galaxies based on their SDSS(Sloan Digital Sky Survey)data using machine learning	The manual classification process is time-consuming and prone to errors	There is a large amount of data,and human classification is subjective	Frustrated and inefficient
PS-2	A researcher in astrophysics	Utilize machine learning to automate and improve the accuracy of galaxy classification	The current manual classification method is labor-intensive and inconsistent	The SDSS dataset is vast and diverse,making manual classification impractical and error-prone	Overwhelmed by the volume of data and uncertain about the reliability of classifications