

Project Initialization and Planning Phase

Date	15 July 2024
Team ID	740713
Project Name	Genetic Classification Of An Individual By Using Machine Learning
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

Individuals and healthcare providers are often in need of precise genetic information to make informed decisions regarding health, ancestry, and personal traits. Traditional genetic analysis methods can be time-consuming, costly, and sometimes inaccurate. Our objective is to develop a machine learning model that can quickly and accurately classify individuals based on their genetic data, providing insights into health risks, ancestry, and genetic traits. By leveraging advanced machine learning techniques, we aim to deliver a solution that enhances the accuracy and efficiency of genetic classification.

I am	A healthcare provider looking to provide personalized medicine and researcher studying genetic traits and disease predispositions.
I'm trying to	Gain insights into my genetic traits, health risks, and ancestry then provide accurate and timely genetic information to patients and analyse genetic data efficiently and accurately for research.
But	Current genetic analysis methods are time-consuming and costly.
Because	Genetic testing often involves complex procedures and expensive equipment. The vast amount of genetic data requires advanced computational techniques and there is a lack of accessible, reliable, and quick genetic classification tools.
Which makes me feel	Frustrated due to the high costs and long waiting times for results concerned about the accuracy and reliability of the genetic information received.

Example:

I am	I'm trying to	But	Because	Which makes me feel
an individual curious about my genetic makeup	understand my health risks and ancestry	the current genetic analysis methods are expensive and slow	traditional techniques require complex procedures and costly equipment	frustrated and concerned about the accessibility of my genetic information

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	A medical researcher or healthcare provider.	Accurately classify genetic variations in individuals to predict potential health risks and	The current methods are either too slow, costly, or	They rely heavily on manual analysis and traditional statistical	Frustrated and concerned about the effectiveness and efficiency of patient care.

		personalize treatment plans.	lack precision	methods	
PS-2	An individual interested in personalized health information.	Understand my genetic profile to take proactive steps in managing my health.	I find it difficult to access clear and accurate genetic information	The available resources are either too technical or not tailored to my specific needs.	Confused and overwhelmed about making informed health decisions