Project Initialization and Planning Phase
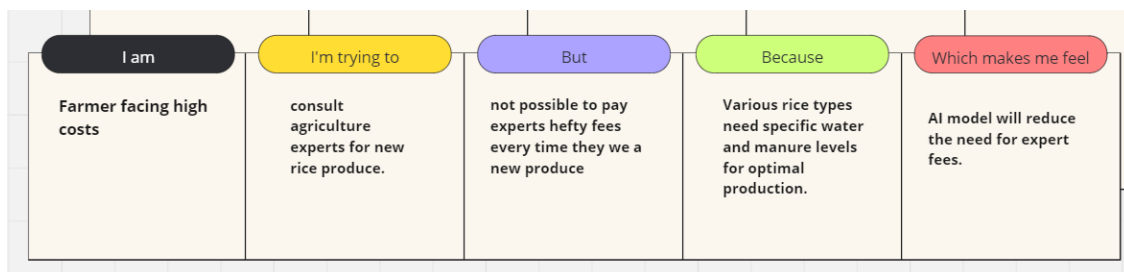
Date	15 March 2024
Team ID	SWTID1720277644
Project Name	Rice Type Classification using CNN
Maximum Marks	3 Marks

Define Problem Statements (Customer Problem Statement Template):

There are many types of rice available for production. It is essential to identify the type of rice as each produce needs different amounts of water, manure, etc.

It is not possible for the farmers to pay the agriculture experts hefty fees every time they have a new produce. We have come up with a solution to this problem. We have trained an AI model which can be used by farmers to check the type of rice. The users need to upload image of a rice grain and click on the submit button. Our model will give its prediction for probable rice type based on the image. Our model can predict up to 5 different types of rice.

This model is useful for farmers, agriculture scientists, home farmers, gardeners, etc. This AI model is made using Convolutional Neural networks and under CNN we will be using transfer learning. Transfer learning has become one of the most common techniques that has achieved better performance in many areas, especially in image analysis and classification. We used Transfer Learning technique MobileNetv4 that is more widely used as a transfer learning method in image analysis, and it is highly effective.

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	**Farmer facing high costs**	**consult agriculture experts for new rice produce**	Not possible to pay experts hefty fees every time we have a new produce	Various rice types need specific water and manure levels for production.	AI model will reduce the need for expert fees.