Ideation Phase
Grainpalette statement

Date	31 January 2025
Team ID	LTVIP2025TMID38653
Project Name	GrainPalette
Maximum Marks	2 Marks

Grainpalette template Statement Template:

The GrainPalette project aims to develop a machine learning-based image classification model to identify different types of rice grains using Transfer Learning. With the increasing need for automation in agriculture and food quality control, this system provides a scalable, accurate, and efficient method to distinguish between rice varieties based on visual features.

leveraging pre-trained convolutional neural networks (CNNs) like MobileNet or ResNet, and training them on a curated rice grain dataset, the model achieves high accuracy in classification. The final solution is deployed through a web-based interface where users can upload an image of rice grains and get real-time predictions of the rice

Objectives

1.To classify rice grains into different types using image data.

2.To implement Transfer Learning for efficient training and improved accuracy.

3.To design a user-friendly interface for real-time rice type prediction.

4.To aid farmers, food inspectors, and researchers in rice classification tasks