**Project Design Phase**

**Proposed Solution Template**

|  |  |
| --- | --- |
| Date | 15 February 2025 |
| Team ID | LTVIP2025TMID38735 |
| Project Name | Rice Type Detection System |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in the proposed solution template.

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Automate the identification of rice types from images to assist in quality control and classification in the agriculture and food industry. |
|  | Idea / Solution description | Develop a machine learning model (using CNN/image processing) to classify different rice varieties (e.g., Basmati, Sona Masoori, Jasmine, etc.) based on grain images. This solution can be deployed via a web or mobile app for real-time classification. |
|  | Novelty / Uniqueness | Automates a traditionally manual process using deep learning, offering high accuracy, speed, and consistency. Can also detect impurities or mix-ups in rice batches. |
|  | Social Impact / Customer Satisfaction | Helps farmers, traders, and quality inspectors maintain fair pricing, reduce fraud, and ensure proper classification. Improves transparency in rice supply chains. |
|  | Business Model (Revenue Model) | SaaS-based licensing to rice mills, agricultural cooperatives, and exporters. Mobile app with subscription for individual users or small-scale buyers. |
|  | Scalability of the Solution | Can be expanded to include more rice varieties and grains (e.g., wheat, pulses). Easily deployable across regions and integrated into existing quality control systems. |