Project Initialization and Planning Phase

Date	12 July 2024
Team ID	SWTID1720157891
Project Title	Rice type classification using CNN
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	Develop an automated system for rice grain classification using deep learning techniques.
Scope	Focus on developing a CNN model for accurate and efficient classification of various rice grain types.
Problem Statement	
Description	Manual rice grain classification is labor-intensive and error-prone, necessitating an automated solution.
Impact	Automating classification improves efficiency, accuracy, and consistency in agricultural processes.
Proposed Solution	
Approach	Utilize convolutional neural networks (CNNs) with transfer learning for image classification.
Key Features	Includes data augmentation, model optimization, and integration potential into existing agricultural systems.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**

Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Python frameworks	e.g., Flask
Libraries	Additional libraries	e.g., tensorflow
Development Environment	IDE, version control	e.g., Jupyter Notebook, Git
Data		
Data	Source, size, format	e.g., Kaggle dataset, 10,000 images