

Project Initialization and Planning Phase

Date	20 August 2025
Team ID	Sneha S
Project Title	mushroom
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	To develop a machine learning model that can classify mushrooms (edible vs poisonous) from images and deploy it as a user-friendly web application.
Scope	Dataset, Training, Saving, Deployment
Problem Statement	
Description	Identifying edible and poisonous mushrooms manually is difficult because many species look similar.
Impact	A reliable classification system improves safety for mushroom foragers and reduces the risk of poisoning.
Proposed Solution	
Approach	Transfer Learning (Xception/ResNet), preprocessing with ImageDataGenerator, training on GPU (Tesla T4 in Kaggle), saving model as .h5, Flask web deployment.
Key Features	Automated classification, web-based image upload, prediction output with image preview.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	1 × NVIDIA T4 GPU
Memory	RAM specifications	16 GB RAM
Storage	Disk space for data, models, and logs	20 GB Disk
Software		
Frameworks	Python frameworks	Python, TensorFlow, Flask
Libraries	Additional libraries	keras, numpy, pillow
Development Environment	IDE, version control	Jupyter Notebook, Git
Data		
Data	Source, size, format	Kaggle dataset, 10,000 images