Project Initialization and Planning Phase

Date	2 July 2024
Team ID	SWTID1720093035
Project Title	TechPart Vision
Maximum Marks	3 Marks

Project Proposal (Proposed Solution):

Project Overview	
Objective	To identify a PC part by analyzing the image
Scope	Can analyze and Identify PC part present in the image for which the model is trained for.
Problem Statement	
Description	Many users face difficulties identifying their PC components due to a lack of documentation or technical knowledge. This can create challenges in upgrading, selling, or troubleshooting their hardware.
Impact	Simplify the process for users to identify their PC parts accurately, leading to easier upgrades, more informed selling/buying decisions, reduced shipping errors and effective troubleshooting which gives a high customer satisfaction
Proposed Solution	
Approach	We developed and deployed an EfficientNetV2B1 model to classify and identify various PC parts from images. The model was trained using TensorFlow and integrated into a Flask web application for real-time predictions.
Key Features	- Image analysis - User-friendly interface - Accurate and efficient classification - Regular updates and maintenance

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Google Collab T4 GPU
Memory	RAM specifications	12.7 GB RAM
Storage	Disk space for data, models, and logs	34 MB (dataset) + 84.1MB (model) + 498MB (executable file zip) = 616.1 MB
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Tensorflow, keras, openCV
Development Environment	IDE, version control	Google collab
Data		
Data	Source, size, format	Kaggle dataset, 14 classes, 3279 images, 256x256 jpg.