

Project Initialization and Planning Phase

Date	19 March 2024
Team ID	SWTID1720240510
Project Title	Covid vision: Advanced Covid-19 Detection From Lung X-Rays With Deep Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

The proposal report aims to detection of COVID-19 from chest X-rays using tensor flow ,boosting efficiency and accuracy. This project proposes the development of an advanced deep learning model .as the COVID -19 pandemic has underscored the critical need for accurate and efficient diagnostic tools to identify infected individuals swiftly .chest X-rays are a valuable diagnostic modality for detecting respiratory abnormalities, including those caused by COVID-19.key features include deep learning, TensorFlow ,and CNN (xception model)

Project Overview	
Objective	The primary objective is to implement the model for detection of COVID-19 with chest X-rays using deep learning with help of tensor flow, ensuring most accurate results
Scope	The project comprehensively assesses and chances the loan approval process , incorporating deep learning for a robust and efficient system and Validate the trained CNN model using rigorous testing protocols. Perform cross-validation and assess the model's ability to accurately distinguish COVID-19 cases from viral pneumonias and normal lung scans.
Problem Statement	

Description	The objective of this project is to develop and optimize a deep learning model using TensorFlow for accurate and early detection of COVID-19 from chest X-ray images. The COVID-19 pandemic necessitates reliable and efficient diagnostic tools to aid healthcare professionals in identifying infected individuals promptly, thereby facilitating timely intervention and containment efforts.
Impact	Solving these issues will result in improved operational efficiency, Reduced risks , and a overall enhancement in the detection of



	COVID-19 using chest x-ray contributing best result for doctor to easy way of detection
Proposed Solution	
Approach	Implement a convolutional neural network (CNN) architecture leveraging TensorFlow to classify chest X-ray images into three classes: COVID-19 positive, viral pneumonia (non-COVID), and normal cases.
Key Features	Using CNN xception model for best accuracy,

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	T4 GPU
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	TensorFlow

Development Environment	IDE, version control	Jupyter Notebook, google colab
Data		
Data	Source, size, format	Kaggle dataset, 16,000 images