

Project Design Phase-I
Proposed Solution Template

Date	05 May 2023
Team ID	NM2023TMID03654
Project Name	Project - Covid Vision: Advanced COVID-19 Detection from Lung X-Rays with Machine Learning or Deep Learnings
Maximum Marks	

Proposed Solution Template:

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

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Covid-19 is a more dangerous pandemic. The process of diagnosing it takes a huge amount of time using PCR techniques, which is not an efficient way of diagnosing the patient. The time that patients have to wait for the results may result in anxiety and depression, which is also not good for their health.
2.	Idea / Solution description	The idea is to provide a deep learning model which is capable of classifying between the normal lung X-Rays and the covid-19 pneumonia X-Rays. So, this will produce an efficient way to diagnose the covid-19 disease.
3.	Novelty / Uniqueness	Already there exists three models which are as follows COVID-Net, DarkCovidNet, DeepCovid-XR. The model which is about to develop will be more efficient to produce more faultless predict. This is done with the ensemble techniques & uses grid search cv to find better hyperparameters combination to make the model results in predicting accordingly. And there will be a mobile app for public to make use of this application. So that the customer need not to wait in hospitals to take X-Rays and get results. They can get the result just from their finger tips if they have the recent X-Ray with them.
4.	Social Impact / Customer Satisfaction	Patients and their close as well as normal relatives' expectation can be fulfilled as this is a quick process of classifying between the normal X-Rays and the Covid pneumonia X-Rays.
5.	Business Model (Revenue Model)	This application will generate revenue as the new data are to be trained & updated in application which will be more efficient day by day, with the maintenance progress too. The mobile app for the public is allowed for a trial after that it will charges per month accordingly.
6.	Scalability of the Solution	The cost of implementing this application will be affordable to all the hospitals even though the small clinics can afford to it. Then there is a user login where the user can be able to get register and make use of this application. Even for the normal people and poor people too. So, the scalability of this application is really a huge one as it is efficient and low of costs which makes affordable to a wide range of customers.