

Project Design Phase  
Solution Architecture

Date	23 October 2023
Team ID	Team-592696
Project Name	Detecting COVID-19 From Chest X-Rays Using Deep Learning Techniques
Maximum Marks	4 Marks

**Solution Architecture:**

The solution architecture for the project Detecting COVID-19 From Chest X-Rays Using Deep Learning Techniques can be divided into the following components:

- **Data collection and preprocessing:** The first step is to collect a dataset of chest X-rays from patients with COVID-19, patients with other lung conditions, and healthy patients. The images need to be preprocessed to ensure that they are all in the same format and size. This may involve resizing the images, normalizing the pixel values, and removing any noise.
- **Model training:** Once the data is preprocessed, the deep learning model can be trained. This involves feeding the model the labeled training data and allowing it to learn the relationships between the features in the images and the labels.
- **Model evaluation:** Once the model is trained, it needs to be evaluated on a held-out test set. This is to ensure that the model can generalize to new data and is not simply overfitting to the training data.
- **Model deployment:** Once the model is evaluated and found to be performing well, it can be deployed to production. This may involve deploying the model to a server or to a mobile device.

**Solution Architecture Diagram**

