

Project Initialization and Planning Phase

Date	15 March 2024
Team ID	SWTID1720439521
Project Title	Covidvision: Advanced Covid-19 Detection From Lung X-Rays With Deep Learning
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

"Covid-19 Detection from Lung X-rays" utilizes deep learning algorithms to analyze lung X-ray images for signs of Covid-19 infection. By leveraging vast datasets and image recognition technology, this project aims to provide accurate and rapid diagnosis, aiding in early detection and containment of the virus.

Project Overview	
Objective	The main objective of this project is to detect the presence of Covid-19 in a person using his chest X-rays by implementing Deep Learning techniques and integrating AI into the field of medicine
Scope	The project efficiently detects the presence of covid-19 in a person, therefore in places with overwhelming cases, or in places with no access to expert radiologists, this model can be very useful. It also has the ability to detect signs of viral pneumonia.
Problem Statement	
Description	Addressing the delay in the result and chance of error in the current system to test covid-19, this project stands to triumph over the present system by efficiently and almost immediately producing the test results.
Impact	Every second is crucial in the field of medicine, it might even cost a life. This project was developed to tackle one such problem. This gives you a very accurate test result in a span of seconds which usually took over a day. This project totally revolutionizes the process of covid detection
Proposed Solution	

Approach	To use Deep Learning to train a model with a dataset consisting of covid, normal and viral pneumonia x-ray images.
Key Features	Implementation of ANN-based detection model

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Intel core i7, Nvidia RTX4060
Memory	RAM specifications	16 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	Tensorflow, pandas, scikit-learn, matplotlib
Development Environment	IDE, version control	Jupyter Notebook, Git
Data		
Data	Source, size, format	Acquired dataset, 1000 images