

# Project Design Phase-I

## Solution Architecture

Date	3 <sup>rd</sup> November 2023
Team ID	Team-592083
Project Name	Project – Disease Prediction using Machine Learning
Maximum Marks	4 Marks

### **Solution Architecture:**

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

### **Model**

Convolutional Neural Networks (CNN) are used in this model to predict up to 42 diseases based on input symptoms. It is accessible via a web application that allows users to enter their symptoms and return possible disease predictions. This concept can be used by doctors for virtual consultations or by patients for self-care and preventive diagnosis, reducing the need for costly doctor visits. Our model stands out because of its capacity to predict various diseases accurately, its user-friendly web application interface, and its ability to run without gathering personal data such as name, age, gender, religion, or residence.

We follow the following steps:

Data Collection

Data Preprocessing

Feature Extraction

Machine Learning Algorithms

Model Evaluation

Deployment

Monitoring and Maintenance

Insights and Reporting

Security and Compliance

Scalability

**Solution Architecture Diagram:**

