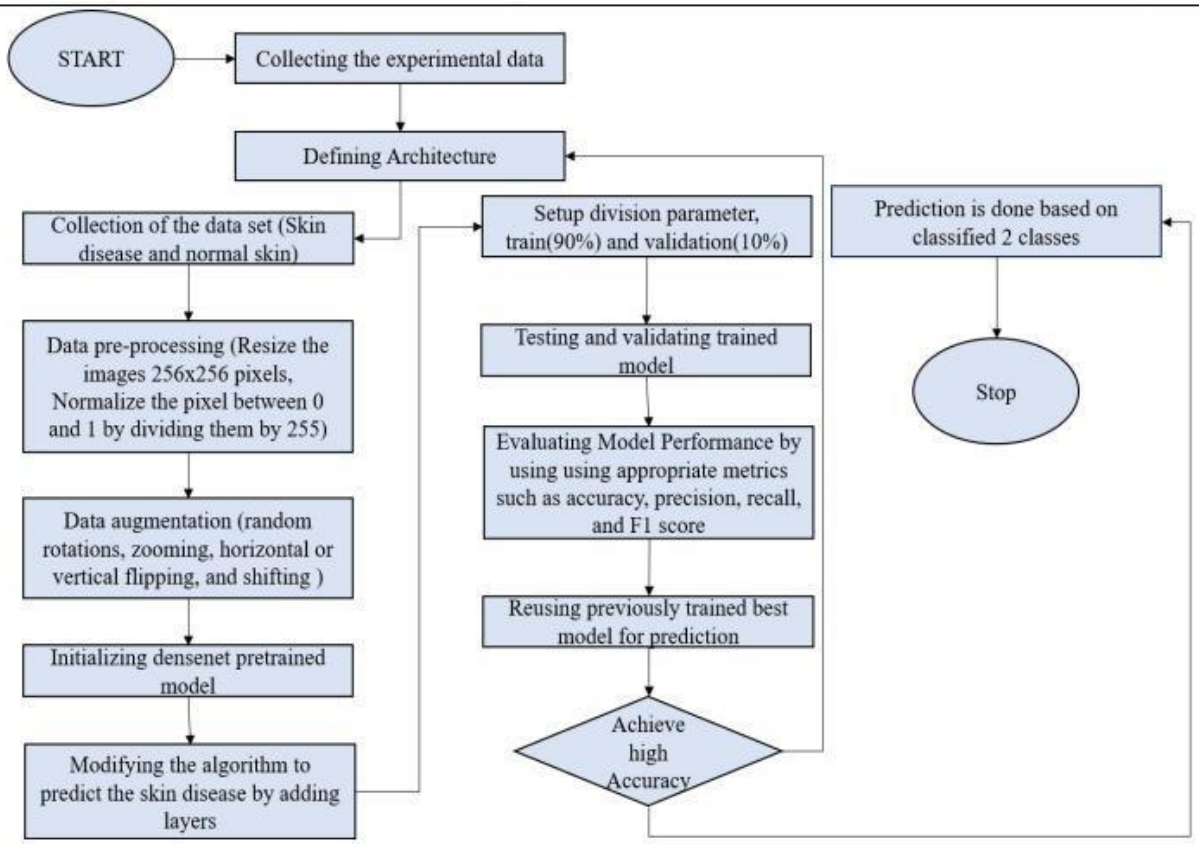
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	27 October 2023
Team id	591964
Project name	Prediction of lumpy skin disease
Maximum marks	4 marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table2



Guidelines:
1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3.Indicate external interfaces (third party API's etc.)
4.Indicate Data Storage components / services
5.Indicate interface to machine learning models (if applicable) **Table-1: Components & Technologies:**

Table 1: Components (for "Predicting Lumpy Skin Disease")

Component Name	Description	Technology
User Interface	Web-based user interface	HTML, CSS, JavaScript
Application Server	Main application logic and workflow control	Node.js, Express.js
Authentication Service	User authentication and authorization	OAuth 2.0, JWT
Data Processing Module	Handles data processing and analysis	Python, Pandas, NumPy
Machine Learning Interface	Connects to machine learning models	Python, TensorFlow, PyTorch
Third-Party API 1	External data source 1	RESTful API, JSON
Third-Party API 2	External data source 2	RESTful API, JSON
Database Service	Stores structured data for the application	PostgreSQL, AWS RDS
Machine Learning Models	Custom machine learning models for prediction	Python, scikit-learn

Table-2: Application Characteristics:

Table 2: Characteristics (for "Predicting Lumpy Skin Disease")

Characteristic Name	Description	Technology/Approach
Scalability	Ability to handle increased data and user load	Horizontal scaling
Security	Ensures data and system security	HTTPS, Encryption, Access Control
Fault Tolerance	System's capability to continue functioning despite errors	Load balancing, Redundancy
Real-time Processing	Processing data in real-time or near real-time	Streaming data processing
Data Analytics	Analyzing data for disease prediction and insights	Data mining, statistical analysis