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

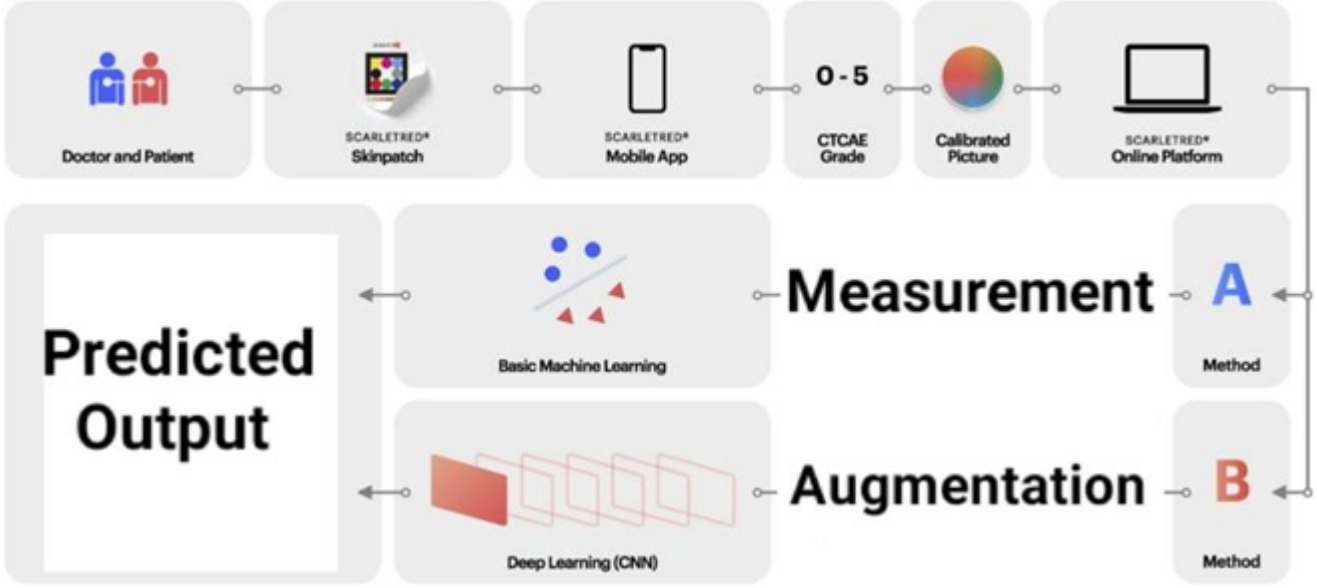
Team ID	PNT2022TMID33185
Project Name	Project – AI based localization and classification of skin disease with erythema
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/



Guidelines:

- Include all the processes (As an application logic / Technology Block)
- Provide infrastructural demarcation (Local / Cloud)
- Indicate external interfaces (third party API's etc.)
- Indicate Data Storage components / services
- Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with application Web UI	Python IDE
2.	Application Logic-1	The logic for performance of the process to execute the desired output	Python
3.	Application Logic-2	IBM is used to deploy the YOLO model	IBM Watson
4.	Database	(Pictures) composite Data Type	MySQL
5.	Cloud Database	Database Service on Cloud	IBM Cloudant DB
6.	File Storage	Files like dataset for the use of training and testing can be stored in local system	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Purpose of External API used in the application	IBM Weather API
8.	Machine Learning Model	Purpose of the Machine Learning Model is to allow the user to feed a computer algorithm an immense amount of data and have the computer analyze and make data-driven recommendations and decisions based on only the input data.	Object Recognition Model,YOLO
9.	Infrastructure (Server / Cloud)	Application Deployment on Cloud server	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	The open-source frameworks,IBM Cloud,VOTT	javascript
2.	Security Implementations	Security is one of the parts which protects against attacks or unauthorised access. Stored data is encrypted.	Microsoft Visual Object Tagging Tool(VOTT)

S.No	Characteristics	Description	Technology
3.	Scalable Architecture	This proposed approach is simple and fast.It does not require expensive equipment other than a mobile phone.	As artificial intelligence is used it gives appropriate detection of skin diseases erythema.
4.	Availability	These requirements are mostly easy to use.Storage based backup is available.It is available.It is available for user at any time so user can make use of it.	(open source) python
5.	Performance	It cannot be buffered. So users don't get stressed because of that. When the disease is detected the altering message will be sent to the user. So they will get aware of it.	IBM cloud makes the process more feasible.

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d