Project Design Phase-I
Solution Architecture

Date	16 October 2022
Team ID	PNT2022TMID42545
Project Name	AI -powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	4 Marks

Solution Architecture Diagram:

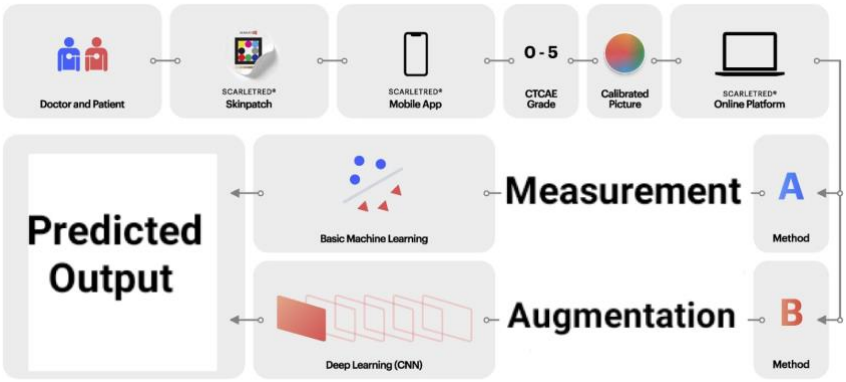

Figure 1: Architecture and data flow to find the Nutrition Prediction

- Significant advancements in computer -aided diagnostics using artificial intelligence(AI).
- No viable method for radiation- induced Nutrition analysis and classification is available.
- The objective of this single-center study was to develop machine learning and deep learning approaches using deep convolutional neural networks(CNNs) for automatic classification of RISRs.
- According to the Common Terminology Criteria for Adverse Events(CTCAE) grading system.
- Scarletred Vision , novel and state-of-the-art digital food imaging method capable of remote monitoring and objective assessment of acute RISRs was used to convert 2D digital Nutirtional food images using the CIELAB color space and conduct measurements.
- A set of different machine learning and deep convolutional neural network-based algorithms has been explored for the automatic classification of RISRs.
- This study is the first to focus on erythema in radiation-dermatitis and produces benchmark results using machine learning models.
- The outcome of this study validates that the proposed system can act as a pre-screening and decision support tool for oncologists or patients to provide fast , reliable , and efficient assessment of erythema grading.