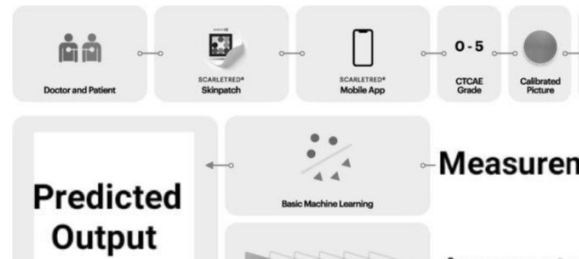


Project Design Phase-I

Solution Architecture

Date	17 October 2022
Project Name	AI- based localization and classification of skin disease with erythema

Solution Architecture Diagram:



Significant advances in computer-aided diagnostics using artificial intelligence (AI). There is no practical method to analyze and classify radiation-induced skin reactions (RISR).

The aim of this single-center study was to develop machine learning and deep learning approaches using deep convolutional neural networks (CNNs) for automatic classification of RISR.

According to the Common Terminology Criteria for Adverse Events (CTCAE) rating system. Scarlet Vision, a novel and state-of-the-art digital skin imaging modality suitable for remote monitoring and objective assessment of acute RISR, was used to convert 2D digital skin images using the CIELAB color space and perform measurements.

Various machine learning and deep convolutional neural network algorithms have been investigated for automatic classification of RISR.

This study is the first to focus on radiation dermatitis erythema and use a machine learning model to provide benchmark results. The results of this study confirm that the proposed system can serve as a pre-screening and decision support tool for oncologists or patients, allowing rapid, reliable, and efficient assessment of erythema grading. increase.

