Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	24 October 2022
Team ID	PNT2022TMID26030
Project Name	AI-based localization and classification of skin disease and erythema
Maximum Marks	4 Marks

Functional Requirements: Following are the functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	**using a neural network-based segmentation model to create a segmented map of the image, we then cluster sections of abnormal skin and pass this information to a classification model.**

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Temperature	If the temperature level exceeds the room temperature then the alert message will be sent using GSM to the specified users.
FR-2	Pulse sensor	The sensor can measure the pulse amplitude and width signals of the cunpart of the human body. In addition, three sensors can be placed at the cun, guan, chi part at the same time, so that the "three body parts and nine pulse-taking sites" can be realized
FR-3	GPS	GPS is used to track the livelocation of the skin disease. This review provides a synthesis of the current evidence on the risk factors or correlates of GPS-driven mobility limitations, such as demographic, cognitive, physical, psychological, and environmental factors.
FR-4	GSM	The general use of mobile phone communications results in partial or whole-body exposures to electromagneticfield(EMF)communications use pulse-modulated signals, among which is the global system for mobile communication (GSM) operating in the 900-MHz or 1800-MHz bands.
FR-5	Web camera	The collected medical images or images from WebCam are feed into the system, and using different image processing schemes image propeties are enhanced. Useful information can be extracted from these medical images and pass to the classification system for training and testing using MATLAB image processing toolbox for detection of skin disease

FR-6	Raspberry pi microprocessor	Raspberry Pi microprocessor in which all other sensors, GPS and GSM are integrated. The users are required to register using their credentials to use the application.

Non-functional Requirements: Following are the non-functional requirements of proposed solution.

NFR-2	**Security**	it illustrates the best available techniques for precision health data security and privacy with a conceptual system model that enables compliance, ethics clearance, consent management, medical innovations, and developments in the health domain.
NFR-3	**Reliability**	Reliability and validity are among the most important and fundamental domains in the assessment of any measuring methodology for data-collection in a good research.
NFR-4	**Performance**	imagine if AI could guide you to a range of possible diagnoses, and provide you with a more realistic set of possibilities (as opposed to just guessing) on what the skin lesion may actually
NFR-5	**Availability**	the data used to support the findings of this study are available from the corresponding author upon request.This method takes the digital image of disease effect skin area and then uses image analysis to identify the type of disease. Our proposed approach is simple, fast, and does not require expensive equipment, it can run on any device which has internet access. Just upload the image of your skin and check whether you have any skin disease or not
NFR-6	**Scalability**	It is a process to detect the type of disease in just a few seconds, making the diagnosis more fast and realistic.