

Project Design Phase-I
Proposed Solution Template

Date	19 September 2022
Team ID	PNT2022TMID34423
Project Name	AI-based localization and classification of skin disease with erythema
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none">· Erythema is the skin disease associated with redness or skin rash.· It is caused due to some allergic reaction or infection. Sometimes they are chronic, infectious and may develop into skin cancer.· The diagnosis and treatment of skin diseases like erythema takes longer time and causes financial and physical cost to the patient and also it leads to wrong prediction.
2.	Idea / Solution description	<ul style="list-style-type: none">· An image processing-based approach is used to diagnose the erythema. In this method, the digital image of disease affects the skin area then uses image analysis to identify the type of erythema.· The approach works on the inputs of a colour image. Then resize the image to extract features using pre-trained convolutional neural network. After that it classifies feature using Multiclass SVM. Finally, the results are shown to the user, including the type of disease, spread, and severity.

3.	Novelty / Uniqueness	<ul style="list-style-type: none"> · It has high level of accuracy
		<ul style="list-style-type: none"> · It stores the data for future use · It is fast and more stable
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> · It is easy to access as everyone is using mobile phones now-a-days. · It is ad free as it does not cause interruption while checking their details. · It is highly secured and the data is not delivered to third persons.
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> · It will be very useful for the customers to use this app. · Based on the report, a dermatologist is assigned who will cater specific needs and build a unique regime. · It recommends skin care products which will be delivered to doorsteps.
6.	Scalability of the Solution	<ul style="list-style-type: none"> · This proposed approach is simple and fast. · It does not require expensive equipment other than a mobile phone.

		<p>It can be used by dermatologists (skin specialist doctors) when they find difficulty in diagnosing the skin disease and may require expensive laboratory tests to correctly identify the type and stage of the skin disease.</p>
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