

## Project Design Phase-I Proposed Solution

Team ID	PNT2022TMID29594
Project Name	Project - 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 proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none"><li>AI-Based Localization and Classification of Skin Disease with Erythema.</li><li>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.</li><li>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.</li></ul>
2.	Idea / Solution description	<ul style="list-style-type: none"><li>To overcome the above problem, we are building a model that is used for the prevention and early detection of Erythema.</li><li>An image processing-based approach is used to diagnose the 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.</li></ul>
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>The model analyses the image and detects whether the person is having a skin disease or not, and if detected, gives a detailed description of the disease and treatment suggestions.</li><li>It has high level of accuracy</li></ul>
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"><li>It is easy to access as everyone is using mobile phones now-a-days.</li><li>It is a time and money-saving process.</li></ul>

		<ul style="list-style-type: none"> <li>• It is highly secured and the data is not delivered to third persons.</li> </ul>
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> <li>• Based on the report, a dermatologist is assigned who will cater specific needs and build a unique regime.</li> <li>• It recommends skin care products which will be delivered to doorsteps</li> </ul>
6.	Scalability of the Solution	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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</li> </ul>