Project Title: AI- based localization and classification of skin disease with erythema

Project Design Phase-I - Solution Fit Template

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Patients with skin disease

6. CUSTOMER CONSTRAINTS — CC

They have to pay money for installation.
They may not get proper solution for their skin disease.
They have used some apps that does not predict correctly.

5. AVAILABLE SOLUTIONS — AS

They ask suggestions from friends, relatives.
They try to treat themselves by watching videos related to their skin conditions.
They used some apps for checking.

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

They have to identify the appearance of the disease and give proper answers to the questions.

9. PROBLEM — RC

They do not know the type and stage of skin disease. Some of the skin disease shows symptoms several months later, causing the disease to develop and grow further.
This is due to the lack of medical knowledge among them.

7. BEHAVIOUR — BE

They use some apps to check their conditions.
They examine their skin texture with the normal persons and ask their suggestions to their conditions such as consulting a dermatologist or to take a home remedy.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS — TR

They find this while searching their conditions by themselves on the internet.

10. YOUR SOLUTION — SL

An image processing-based approach is used to diagnose the erythema. In this method digital image of disease affects skin area then use image analysis to identify the type of erythema.
The approach works on the inputs of a color image. Then resize the image to

8. CHANNELS of BEHAVIOR — CH

8.1 ONLINE

They install some apps and find solution for their skin conditions

8.2 OFFLINE

They will consult a dermatologist

	4. EMOTIONS: BEFORE / AFTER EM They felt panic because of their skin condition They get confused while trying to find a solution for their conditions by themselves.	extract features using pre-trained convolutional neural networks. After that it classifies features using Multiclass SVM. Finally, the results are shown to the user, including the type of disease, spread, and severity. This can be implemented as a mobile application.		