Skin Scanner

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| V1.0 | Essam | 20-11-2021 | Initial Creation |

# Project Description:

## Definition:

It is an embedded device used to classify melanoma types.

## Features:

* Predict skin cancer is benign or malignant.
* The Skin image and prediction printed on the device screen.

## Key Elements:

* The device consists of camera, camera arm, screen and the processing unit.
* The device has four buttons (power button, camera arm button, button for tacking a picture, button for specifying that the image is good to run the model on it.
* The device has a power management system.
* The doctor uses the device camera to take the skin image.
* The image is processed and classified.
* The image and its prediction presented on the screen.

# Mapping table:

|  |  |
| --- | --- |
| Requirement ID | Covers |
| Covers\_ESDMD\_CR\_001\_V1.0 | The device opened using the power button. |
| Covers\_ESDMD\_CR\_002\_V1.0 | The camera arm opened using its button. |
| Covers\_ESDMD\_CR\_003\_V1.0 | The real time camera shown on the screen. |
| Covers\_ESDMD\_CR\_004\_V1.0 | The doctor can tack a skin picture using camera button. |
| Covers\_ESDMD\_CR\_005\_V1.0 | He can use another button to specify if the image is good to send it to the model or he will take another one. |
| Covers\_ESDMD\_CR\_006\_V1.0 | The image sends to the ML model to classify it. |
| Covers\_ESDMD\_CR\_007\_V1.0 | The image and its prediction presented on the screen. |
| Covers\_ESDMD\_CR\_008\_V1.0 | The doctor can choose if he wants to print the image with its prediction or save it in data base or an excel sheet. |