**Project Summary**

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| **Batch details** | BIA- Sem- 3- 2023 |
| **Team members** | Divyang raj  Smita Prajapati  Ritu Chavda  Tirth patel  Sulem Gena  Neha Parikh |
| **Domain of Project** | Health care |
| **Proposed project title** | Skin cancer Detection |
| **Group Number** | 4 |
| **Team Leader** | Divyang raj |
| **Mentor Name** | Palwinder sir |

Date:

Signature of the Mentor Signature of the Team Leader

**Project Abstract:**Skin cancer is the out-of-control development of unusual cells in the epidermis, the outermost skin layer, brought about by DNA harm that causes harmful variations. These changes lead the skin cells to duplicate quickly and form dangerous tumors. Despite consistent upgrades in medication, skin cancer is still an issue. According to the insights by the Skin Cancer Foundation, one of every five individuals will develop skin cancer by age seventy. The paper expects to plan a framework that will be adequately proficient to distinguish the occurrences of different sorts of skin malignancy in the body by extracting significant patterns from the dataset

**Project Introduction:**

Skin is the outer most region of our body and it is likely to be exposed to the environment which may get in contact with dust, Pollution, micro-organisms and also to UV radiations. These may be the reasons for any kind of Skin diseases and also Skin related diseases are caused by instability in the genes this makes the skin diseases more complex.

Melanoma. Malignant Melanoma is one of the deadly and dangerous type cancers, even though it’s found that only 4% of the population is affected with this, it holds for 75% of the death caused due to skin cancer. Melanoma can be cured if its identified or diagnosed in early stages and the treatment can be provided early, but if melanoma is identified in the last stages, it is possible that Melanoma can spread across deeper into skin and also can affect other parts of the body, then it becomes very difficult to treat. Melanoma is caused due to presence of Melanocytes which are present with in the body.

# Problem Statement

## Project Objective:

My skin cancer detection project aims to address a critical healthcare challenge by leveraging advanced technology. By developing an accurate and efficient algorithm, we strive to provide early detection and diagnosis of skin cancer, potentially saving lives. This project combines the power of artificial intelligence and medical expertise to improve the accessibility and affordability of skin cancer screening, especially in underserved areas. Through rigorous testing and validation, we aspire to achieve a high level of precision in identifying malignant skin lesions, enhancing patient outcomes, and reducing healthcare costs. Our project aligns with the global health agenda to combat skin cancer, making a meaningful contribution to public health. Ultimately, our innovation has the potential to transform the way we detect and combat this prevalent and dangerous disease.

## Business Application:

* Collaborate with healthcare institutions, dermatologists, and telemedicine providers to integrate the application into their workflows.
* Partner with educational institutions for skin cancer awareness campaigns.

## Further Scope of the Project:

1. Better Pictures: We can use more kinds of pictures to make our skin cancer detection better.

2. Check in Real-Time: We can make a special watch or phone app that always checks your skin and tells you if there's a problem.

3. Help from Far Away: You can talk to a skin doctor on the computer and show them your skin to get help, even if they are far away.

4. Help Everywhere: We can make our project work in many places, especially in places where not many doctors are available.

5. \*Help with Treatment\*: Our project can also tell you what kind of treatment might work best for your skin problem.

6. \*Help for Everyone\*: We want our project to work for everyone, no matter what they look like.

7. \*Keep Your Information Safe\*: We promise to keep your information safe and follow the rules for it.

8. \*Learning More\*: We can make our project even smarter by using more information and data.

9. \*Learn About Skin Cancer\*: We want to teach people about how to stop skin cancer and find it early.

## Challenges Presented by the Project:

## Project Timeline:

## Methodology:

* Data Preparation
* Creating a project and loading the dataset
* Building a deep learning classifier
* Tuning the model
* Checking result
* Drawing Inferences
* Code Access
* Deploying the model as a REST API.

## References & Citations: