



# Osteo-Doc

AI Based solution for Osteoarthritis  
grading and exercise management



# Meet Team Osteo-Doc



Haider Masood



Eisha Hassan

# Supervisors

**Our Support !!!**

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Dr. Usman Akram

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Dr. Muwahida Liaquat

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Anum Abdul Salam

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Dr. Fauzia

# Local Partners



Educational Partners

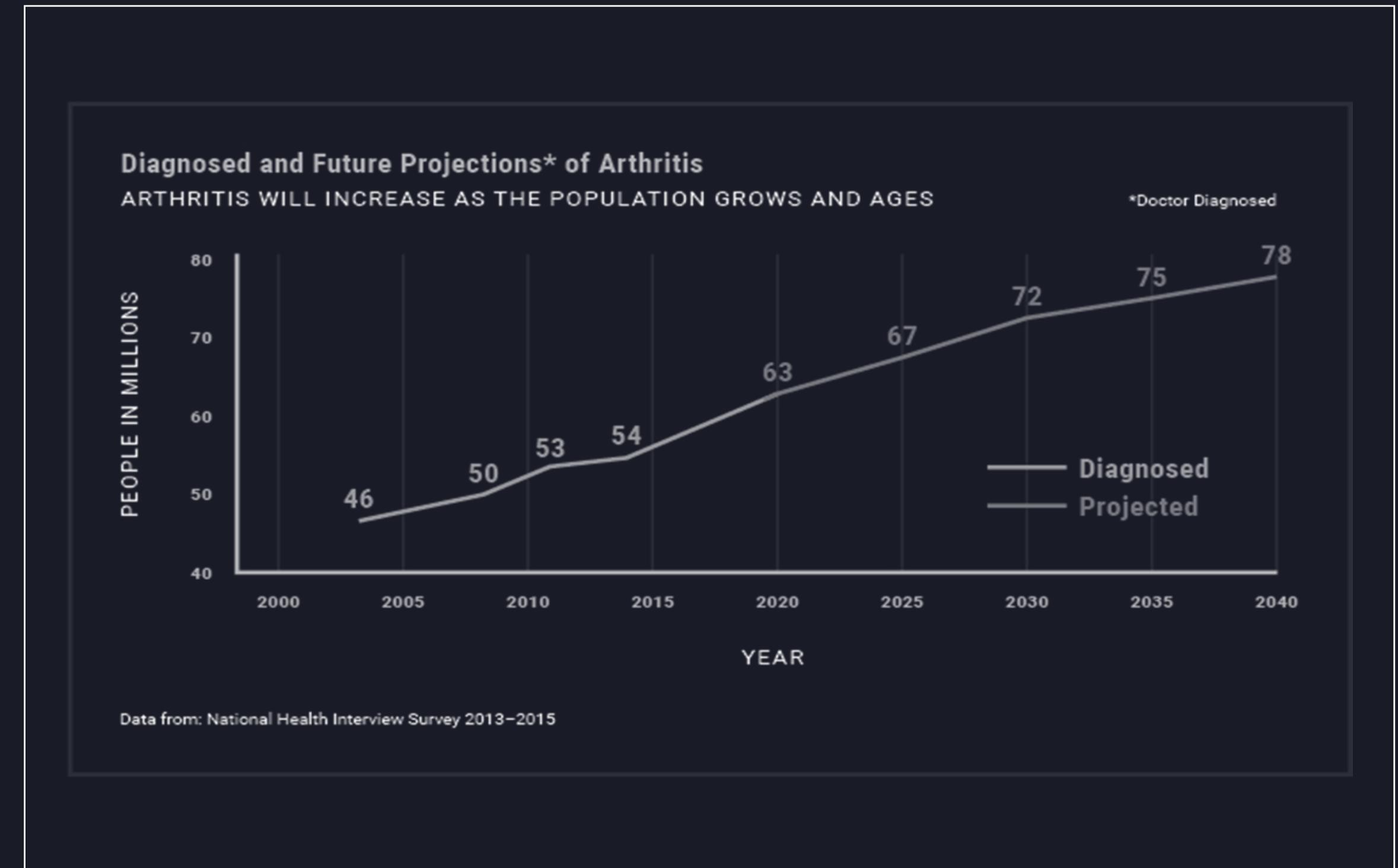


Industrial Partners

A group of diverse people are gathered around a wooden desk in a modern office or study room. They are all smiling and looking towards a laptop screen, which is the focal point of their attention. The desk is cluttered with various items: a white mug, a small potted plant, several books of different colors (blue, red, green), and a few electronic devices like a smartphone and a tablet. In the background, there's a bookshelf filled with books and some plants, and a window with a view of the outside. The overall atmosphere is one of collaboration and shared focus.

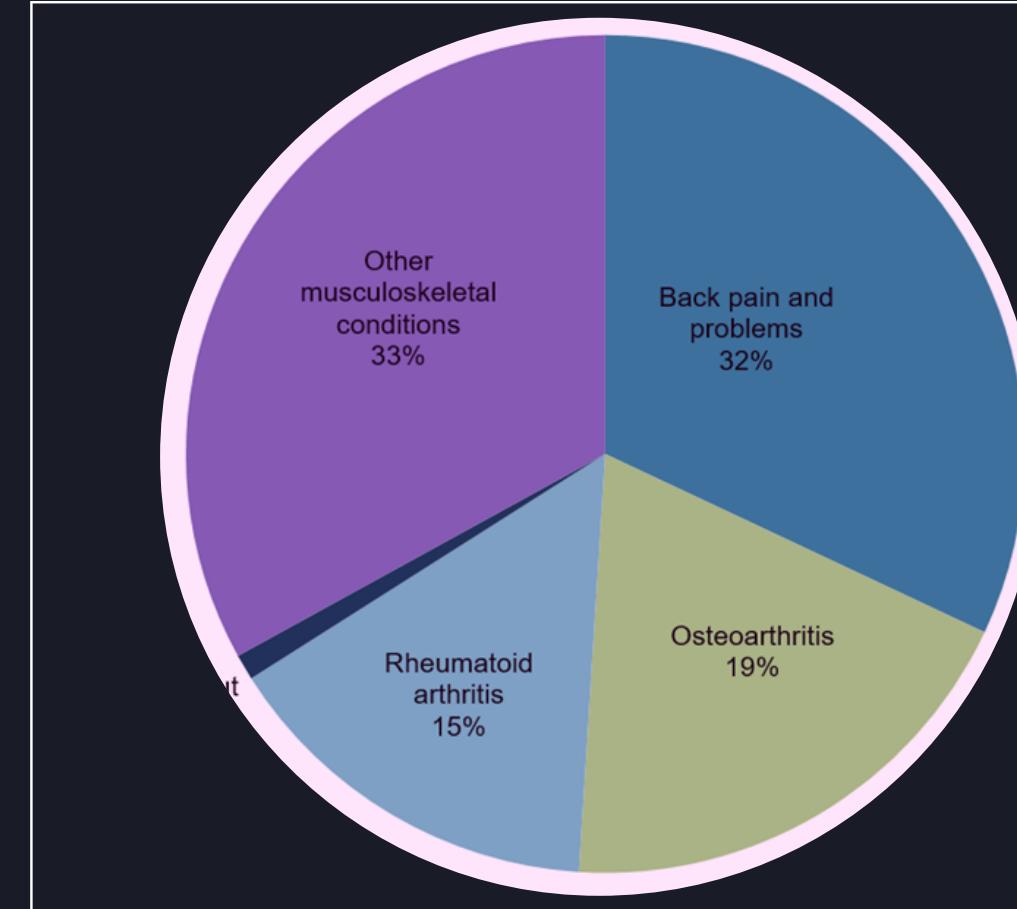
# Our Motivation behind Osteo-Doc

**Annual  
increase of  
86.7 million  
patients  
across globe**

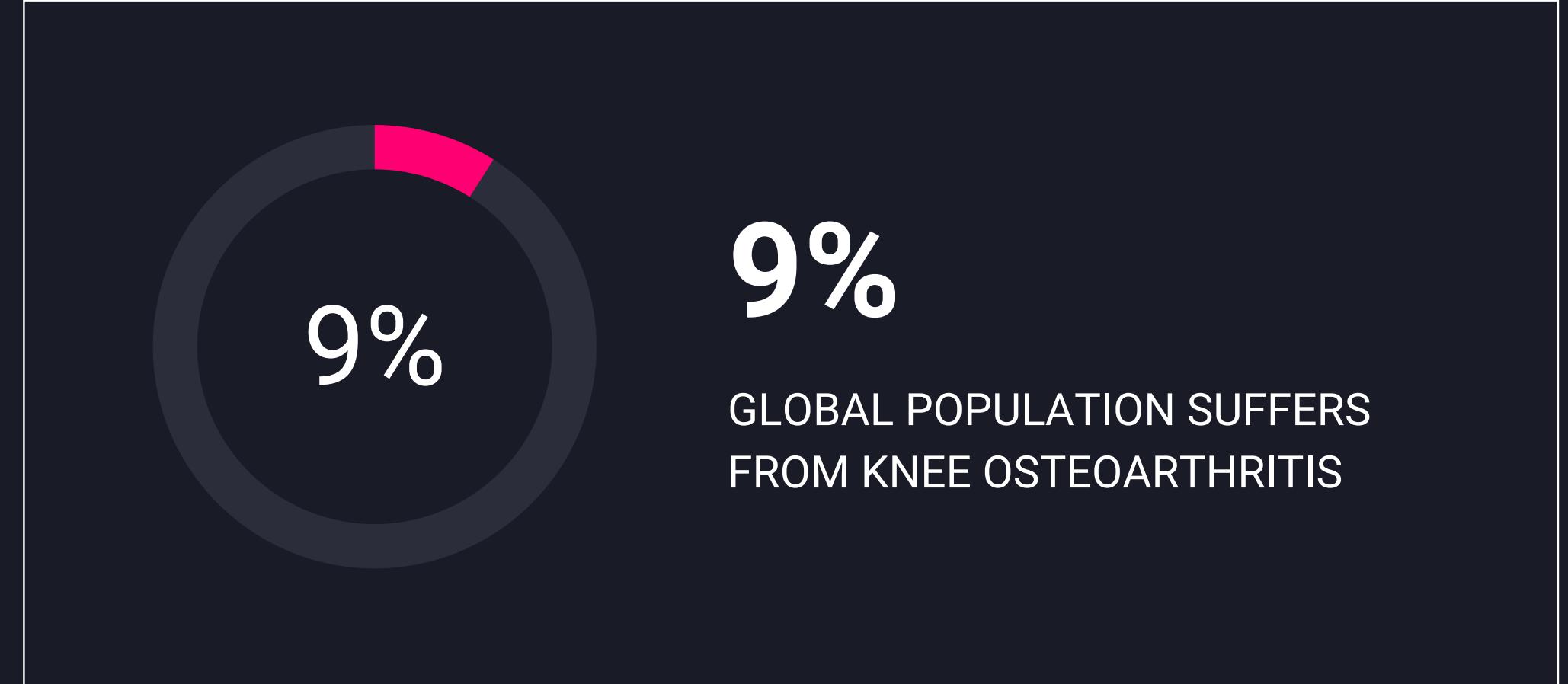


# Problem Identification

Facts and Figures to support our cause



BASED ON DATA FROM STUDY  
OF AUSTRALIAN INSTITUTE OF  
HEALTH AND WELFARE



A photograph showing a close-up of a doctor's hands performing acupuncture on a patient's lower back. The doctor is wearing a white lab coat. There are several thin needles inserted into the patient's skin. The background is slightly blurred.

# Pain Points of Customers

- LOW DOCTOR TO PATIENT RATIO
- DISCOMFORT FOR PATIENTS TO VISIT CLINIC ON REGULAR BASIS
- NO TRACK OF JOINTS CONDITION

# Proposed Solutuion

- Our application aims at grading the X-Ray images using deep learning.
- Recommend relevant exercises.
- Generate personalized progress reports.



# Working of Our Project

1

STEP 1

Collect X-Ray Images

2

STEP 2

Train and Implement AI  
model

3

STEP 3

Make Virtual Goniometer

4

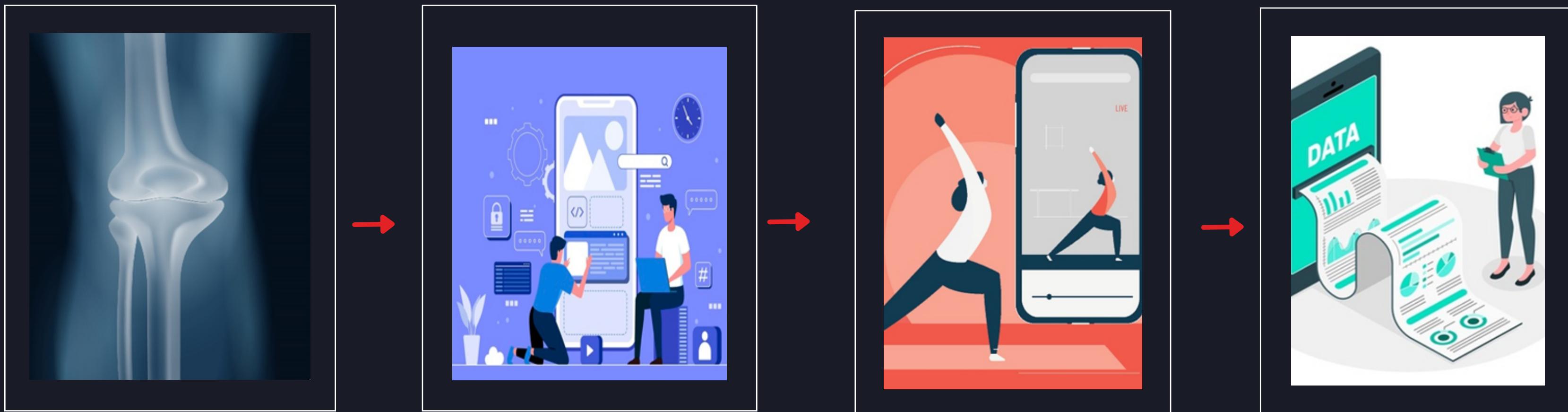
STEP 4

Develeop Android  
Application and Integration



*we are here!*

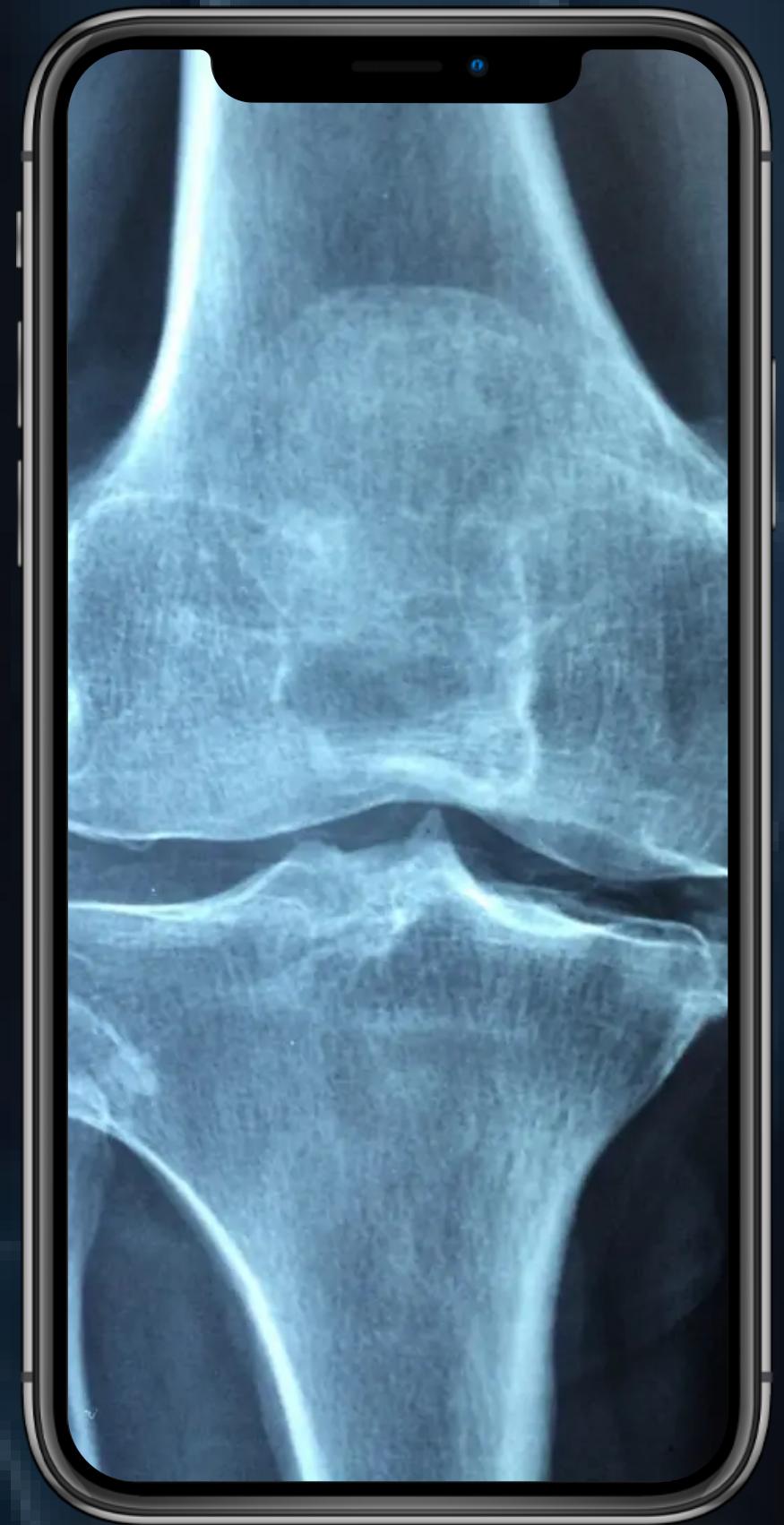
# SYSTEM LEVEL DIAGRAM



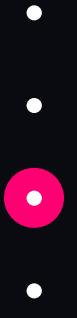
A black silhouette of two people climbing a steep, rocky mountain peak. One person is at the top, reaching down to help the other climb. The background is a bright, cloudy sky.

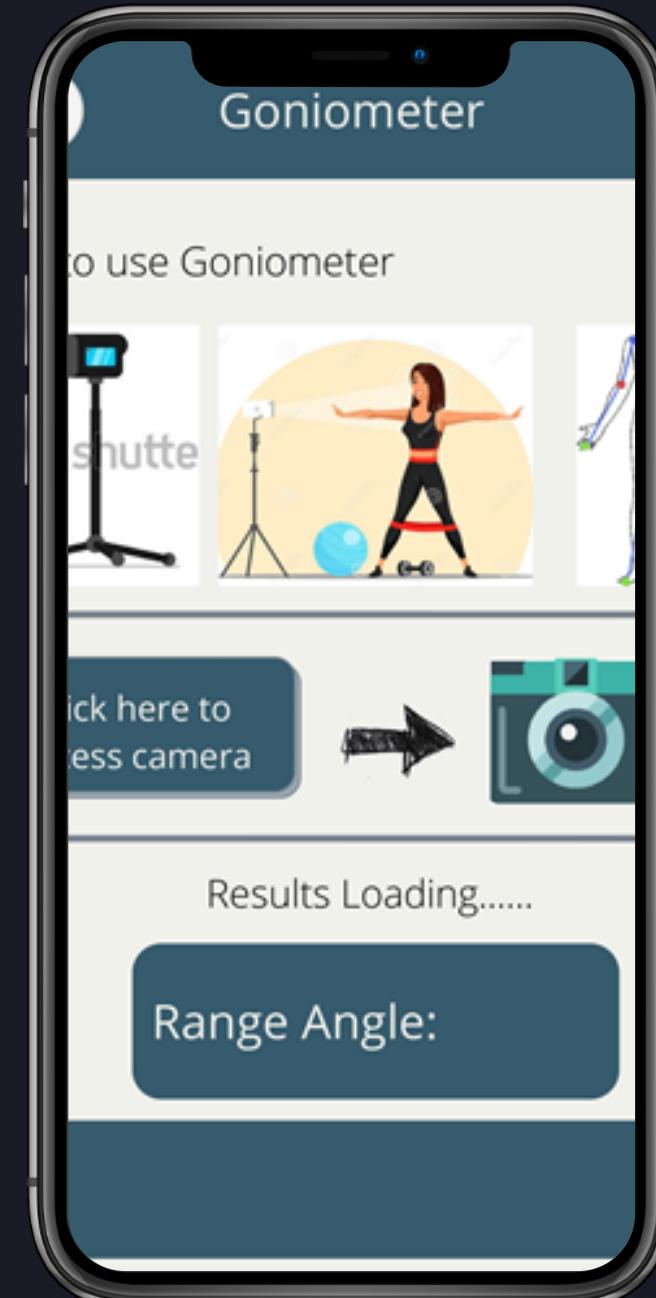
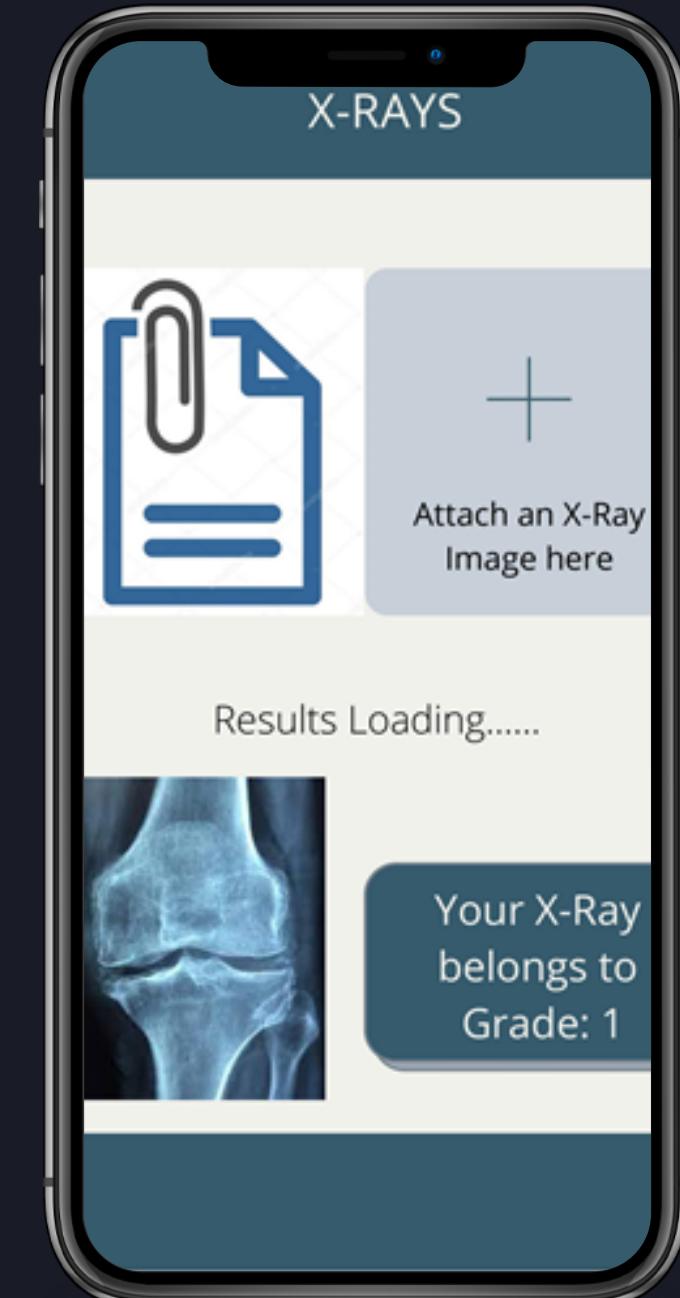
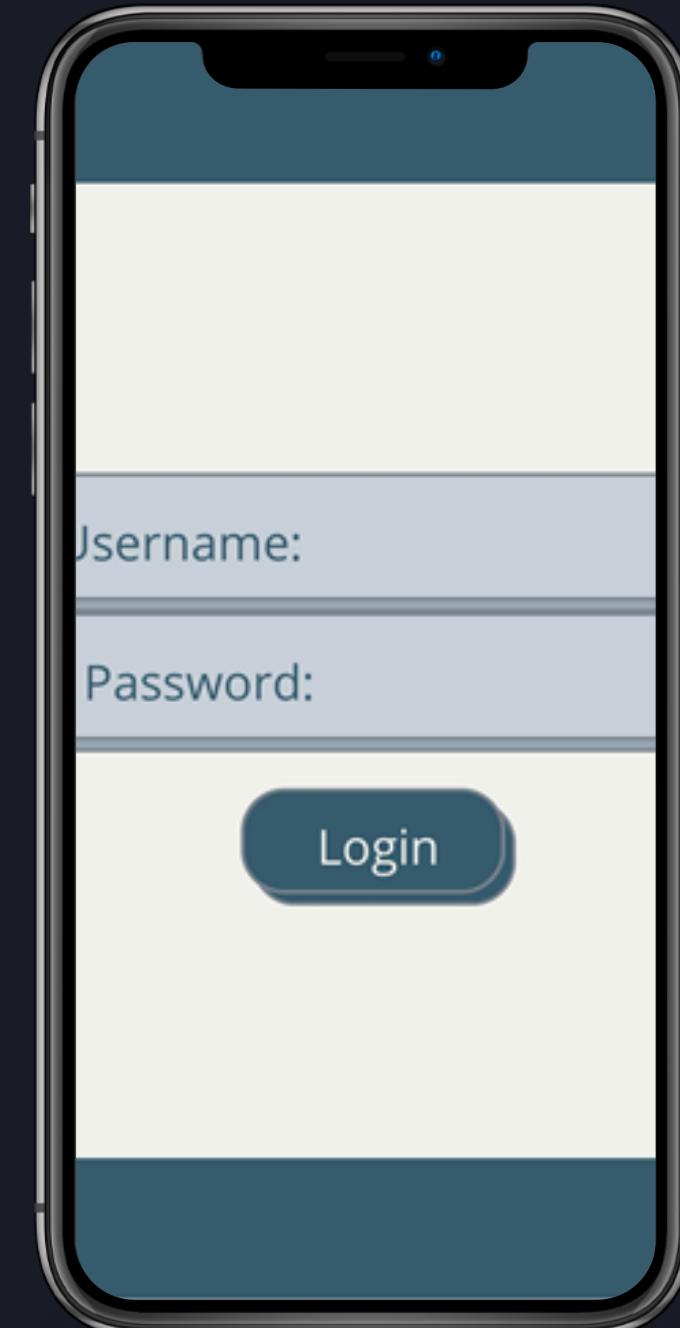
COME ON PAL

**Do not compromise on your  
daily tasks !!!**



Our Application





A group of five people are gathered in a modern office or workshop space. In the foreground, a woman with short dark hair and glasses, wearing a brown cardigan over a white shirt, holds a small black cup and looks towards the right. Next to her, a man with a beard and short blonde hair, wearing a light grey sweatshirt, looks down at a tablet he is holding. To his right, another man with dark hair and glasses, wearing a dark blue long-sleeved shirt, also looks at the tablet. In the background, a woman with long curly hair, wearing a light pink top, stands with her hands in her pockets, looking towards the left. On the far left, a person's back is visible, wearing a white hoodie and brown pants, leaning against a wooden table. The room has brick walls, large windows, and industrial-style lighting.

# Target Audience

# 22.8 M

-JPMA AUG 2011

Young and Middle Aged patients  
residing in Urban and Sub Urban areas



A photograph showing three women in an office environment. One woman on the left is seen from the side, wearing a red and black plaid shirt. In the center, a woman with curly hair and glasses is wearing a light-colored blazer over a white top. On the right, another woman is gesturing with her hands while speaking, wearing a dark blazer over a white top. They appear to be in a meeting or discussion. A computer monitor and a telephone are visible in the background.

# Our Stakeholders



Local Partners



Physiotherapists



Medical Service  
Providers



General Public

# ANALYSIS



# Ease of Adoption

- **Estimate for cost of solution**  
300-400\$
- **Mass-deployment possible**  
Scope of the project includes mass deployment
- **Does it require Product training for customers to adopt?**  
No prior training required for customers to use this application.
- **Is it easy to be adopted by the beneficiaries?**  
User Friendly GUI

# SWOT ANALYSIS



## Strengths

- Orthopedic surgeons Referral
- Research support
- Multi-disciplinary collaboration



## Weaknesses

- Have weak financial strength
- Intrusion in Government hospitals/organizations in the presence of big Multinational vendors financially very strong with vested interests



## Opportunities

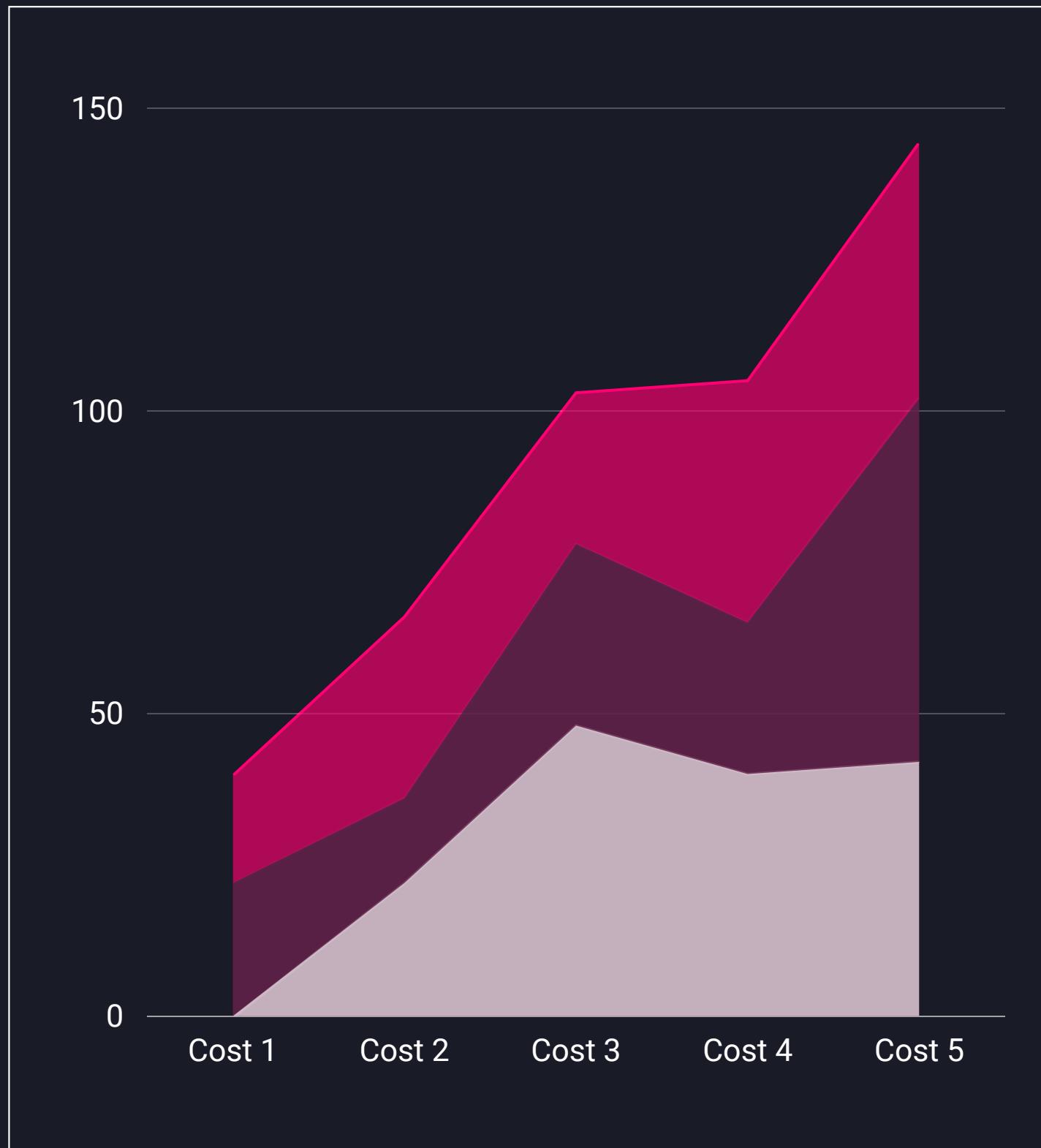
- No local competitor
- Market needs this Service



## Threats

- Existing companies may start getting into the market
- Third party prices may go up -Cloud Services

# COST ANALYSIS



- **Development Cost**  
300-400\$ - including cloud services
- **Subscription charges for advanced features**  
10\$ per month
- **Break Even Point**  
Can be achieved on having a reach of 40 customers for our premium feature subscription

# Marketing Strategy





## PRICE

- 1.No Price for basic App
- 2.Subscription pricing for additional features
- 3.Discount Plans



## PRODUCT

- 1.No hardware component
- 2.User Friendly App
- 3.Use built-in mobile camera
- 4. An app installed on a phone



## PROMOTION

- 1. Sticker Strategy
- 2. Social Media
- 3. Collaboration with Risetech and Local clinics



## PLACEMENT

- 1.Online via Website
- 2.Offline availability in tech stores.
- 3.Local Clinics and Hospitals



Thank you!