SIH 2022

Team Parle-G

HeartX.

We care for your Heart.

Parle-G

- We are Engineering sophomores from Netaji Subhas University of Technology, Delhi. We are a group of six self-motivated individuals who are eager to use the knowledge we have gained over our academic years to contribute best to our society.
- Our offering is more than a product; it is a goal to take healthy India to the next level. It is a purpose to educate more than half of the population to keep track of their health in this fast-paced world.
- Our vision will be achieved the day we transform the market in such a way that the reliance on doctors for routine exams such as blood pressure, stress, and so on will decrease, and every impoverished person will have access to such checkups at a low cost.

HeartX.

Team Information:

Team Leader : Kartik Bhatt

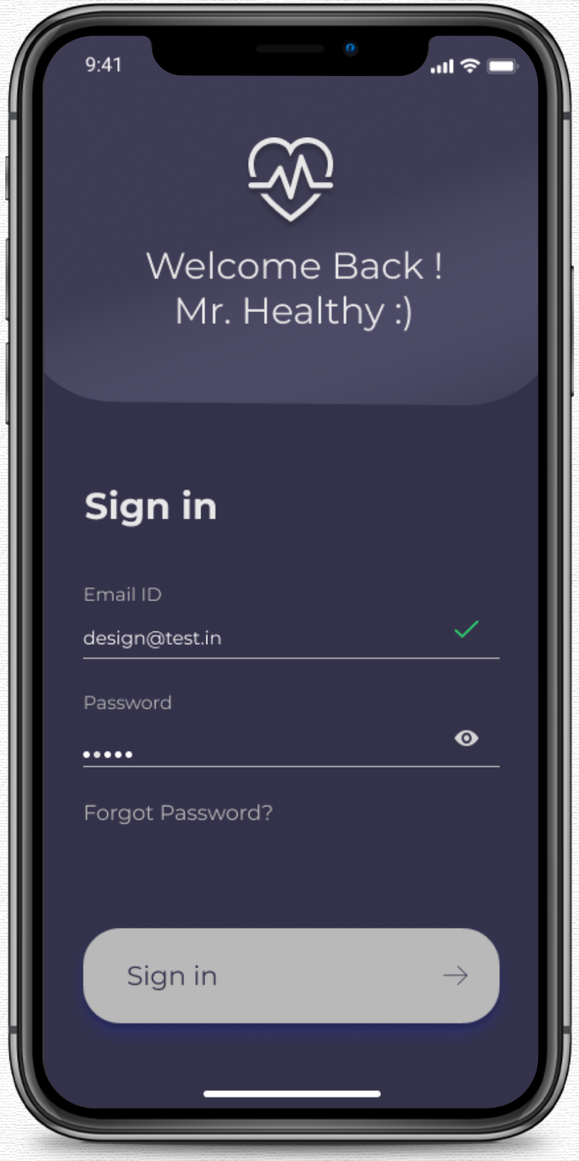
Team Member 1: Abhinav Prakash

Team Member 2: Aditi Arya

Team Member 3: Ayush Garg

Team Member 4: Vasu Pal

Team Member 5: Vidur Rajpal



Problem

- People usually have to suffer from the onset of various chronic illnesses, primarily as a result of their own carelessness, and their hectic schedules do not allow them to participate in such regular checkups.
- Given that 20% of India's population lives in poverty, the availability of such specialised technology, as well as its cost, is a significant business challenge.
- According to the most recent disease trends being tracked, chronic diseases are expected to account for 53% of all fatalities in India.
- It is expected that deaths from chronic diseases will rise by 18% more noticeably in the upcoming time.
- Estimates suggest that by 2025, more than 60 million people will have died as a result of chronic illness.
- Over the next ten years, India is expected to lose 237 billion dollars due to premature deaths from heart disease, strokes etc.

Solution

HOW HEARTX. HELPS PATIENTS TO EVOLVE AND MONITOR

Proposition

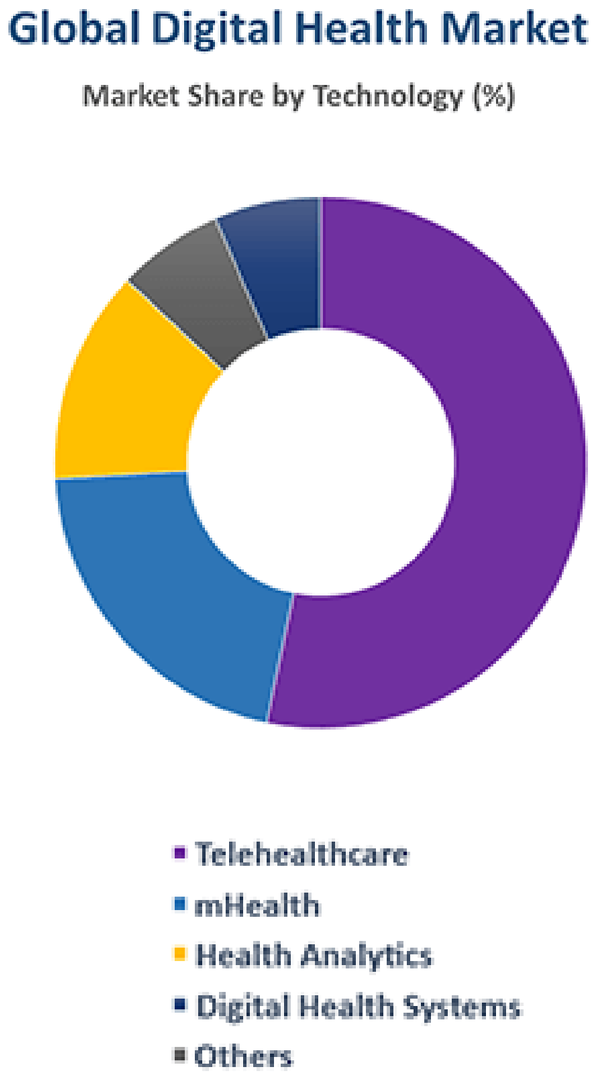
- A nutritious diet, regular physical activity, and early detection of poor health status such as a rise in blood pressure can avoid at least 80% of premature heart disease, stroke, and 40% of cancer.
- Our solution to the aforementioned issue is not a hardware device, but rather an attempt to eliminate or limit the use of such expensive equipment to enhance people's health standards cost-effectively.

Value to User

- An application that stores previously recorded health data in a centralised location.
- Before it's too late, get a timely analysis of your health issues.
- Monitoring are available at any time and from any location.
- It's simple to use and doesn't require any medical technology understanding.

Market Size

- The growth of the healthcare applications market in India has been fueled by a growing focus on patient-centric treatment, the advent of new technology, and shifting business models. In terms of revenue, India's market will be worth INR 43.41 billion in 2020.
- It is expected to grow at a CAGR of 39.37 percent between 2021 and 2026, reaching INR 337.89 billion.
- Apps for appointment scheduling and wellness monitoring have become extremely popular. In the next few years, the demand for chronic disease management apps is likely to skyrocket.
- Our product is a cross-platform application that is available for free on the Google Play and Apple App Stores.
- Social media marketing, handled by skilled content writers and creative designers, would greatly aid our product's distribution and public relations.

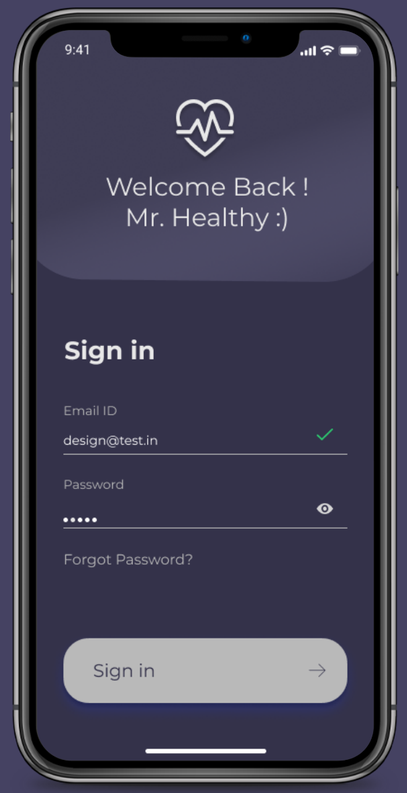


Market Validation

DEVELOPMENT TIME

- Our prototype consists of a simple, clean, and eye-pleasing UI.
- The prototype currently performs a limited set of functions that we've developed thus far, and we'll need plenty of time in the later stages of development to focus on more complex algorithms, such as coughing algorithms to detect lung disease, and to make our product more viable while also improving accuracy, efficiency, and availability.

Product



HeartX.

01 Architecture

A cross-platform application built with flutter and Python.

02 Ecosystem

Future prospects will focus on ecosystem, prototypes doesn't have to do anything with this

03 Adjacent Markets

Possible adjacent markets for HeartX

- Ophthalmic health monitoring, Pulmonary health monitoring, Skin health monitoring, Activity and sleep monitoring systems, Hearing impairment monitoring systems and Mental health monitoring.

04 Metrics

Customer Acquisition Cost, Churn Rate, Retention Rate, Daily active users/ Monthly Active Users, customer reviews

05 Sealibility

Easy to understand the representation of such complex stats and timely alerts of possible illness.

05 Channels

The most important distribution channel of our product is Internet.

Business Model

HOW HEARTX MAKES ACCOMPLISHING WORK EASY AND SATISFYING

01 Opportunities- As a service,Product etc.

We are seeking major opportunities in the MedTech field through our application and our product provides an end to end solution to major chronic illness anytime, anywhere at super affordable prices which in turn is our Unique Selling Proposition(USP).

02 Sources of revenue

The major sources of revenue consists of monthly subscription fee for some premium-locked features and other revenues from advertising.

03 Intended customer base

The majority population of our Customer Base are health freaks and heart patients of the age group 35+

Competition

Defensibility

In order to counter our competitors on the point of defensibility, we'll be extending the flexibility of our product from chronic illness to other serious illnesses like skin, pulmonary health monitoring.

Niche

The initial prototype is intended to serve niche of heart patients by providing them with their past health records and also current SpO2 and Heart Rate values..

Financial Model and Projections

Investment to develop- Material and manpower

The presented prototype is developed on Flutter for FrontEnd and uses Python for BackEnd purposes and developed by us 6 using all the available resources around us.

Assumptions

After competing in the market, we’re assuming an annual revenue of 20 Lacs+

Return on Investment

The total cost of investment we’ve applied so far in the prototype is zero.

Competitive advantages

Partnerships/Collaboration with:

Doctors
Govt. Health facilities
NGOs

Expanding the distribution channel will be extremely beneficial.

Strengths of technology/Team (USPs):

Ease of access, availability, and super affordable cost are the USPs of HeartX.
Productive, responsive, cross-platform application using Flutter.
Graphical representation of data and past reports & records.
Low-quality smartphones can also generate accurate results.

Assumptions and Risks

SWOT Analysis

Strength: Ease of access, availability, and super affordable cost.
Weakness: Product backEnd in the prototyping stage
Opportunity: an end-to-end solution to major chronic illness anytime, anywhere at super affordable prices.
Threat: Plagiarism issues.

Risk and Precautions

Risk: The biggest risk in the prototype is the accuracy of the ML model we're deploying.
Precautions: In-depth Research & Development and testing.

Summary

A one-stop solution for people to measure, store and analyze cardiac and related measurements without the use of expensive external equipment like pulse oximeters and smartwatches. Our app uses the smartphone camera and principles of light to calculate quantities such as specific oxygen and heart rate, which can be further used to determine any health conditions the user is facing by continuously collecting data over a period of time. Upon detection, the app can provide emergency instructions and contacts.

We provide a clean and crisp user interface along with multilingual capabilities through Google translate API, suitable for elderly users across all of India.

For clean UI, we used graphs intensively instead of crowding the screen with text most of us cannot even comprehend.

As a premium feature, we provide medical tests recommendation based on your health records, along with nearby labs and specialists.

Do you have any questions?

Ask them out!

We hope you learned something new.