



V-Care
WE TAKE CARE



V-Care: Virtual Medical Check-up Application **- Suryansh Trivedi**

IBM TRAINING CUM INTERNSHIP

CLOUD COMPUTING (BATCH-2)

Experience V-Care at:

<https://v-care.eu-gb.cf.appdomain.cloud/>

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Introduction

V-Care is an **Artificial Intelligence** based Virtual Medical Checkup web application that will examine your whole body physically as well as mentally like a real Medical Checkup's. **V-Care** gives you complete freedom to examine your health by yourself from anywhere in the world within a few clicks and saves your lot of money from visiting to Doctors and paying very big amount of money to them.

Once you visit our website our virtual assistant will guide you about every single step require to **Diagnose and Cure your Diseases** virtually through our **Services**. (i.e. **Skin Disease, Depression, X-ray Monitor, BMI etc.**).

V-Care organizes virtual personal meetings with Doctors and suggests you about best hospitals, in the world for your disease. You can also generate Virtual Health Reports from here.

Experience V-Care at:

<https://v-care.eu-gb.cf.appdomain.cloud/>

Working

V-Care is simple, convenient and easy to use application. Within a clicks user can examine their body. When the user comes first time to **V-Care** website they need to register themselves in a website by filling some basic details. Once they get registered successfully all their data will be encrypted and saved to IBM Cloud Cloudant Database. After registration User can user will be redirected back to home page of our website, from here user can take some basic details about **V-Care** from About & Service sections for help and support there will also one Contact form in Contact section. Register/LogIn section is also provided here.

After successful LogIn user will be moved to their Dashboards. User Dashboard contains necessary all services required to monitor and analyze health of user either by themselves or by doctor. On dashboard region one virtual assistant is also provided that will guide users about their self-health examination process. Virtual Assistant will also guide all users “How they themselves works on all available services at dashboard?”

Dashboard contains services like Anxiety monitor, BMI Calculator, Skin Disease Detector, X-ray monitor, Fractures and Heart Disease Detector. All these services use different Artificial Intelligence custom models trained for these services (Skin Disease Detector, X-ray monitor, Fractures and Heart Disease Detector uses Azure Custom Vision service at it's background for visual analysis of diseases by training custom models for each diseases) ,(Anxiety Monitor uses TensorFlow face expression model).All the training and prediction data of all these models are stored in Azure Blob storage.

Dashboard also provides facility to interact with doctors by Chatrooms for Expert advice, asking any queries and virtual personalized checkups. One can upload their past health prescriptions for better observations. User will also generate their health reports as well as take details about best hospitals and doctors from Dashboard.

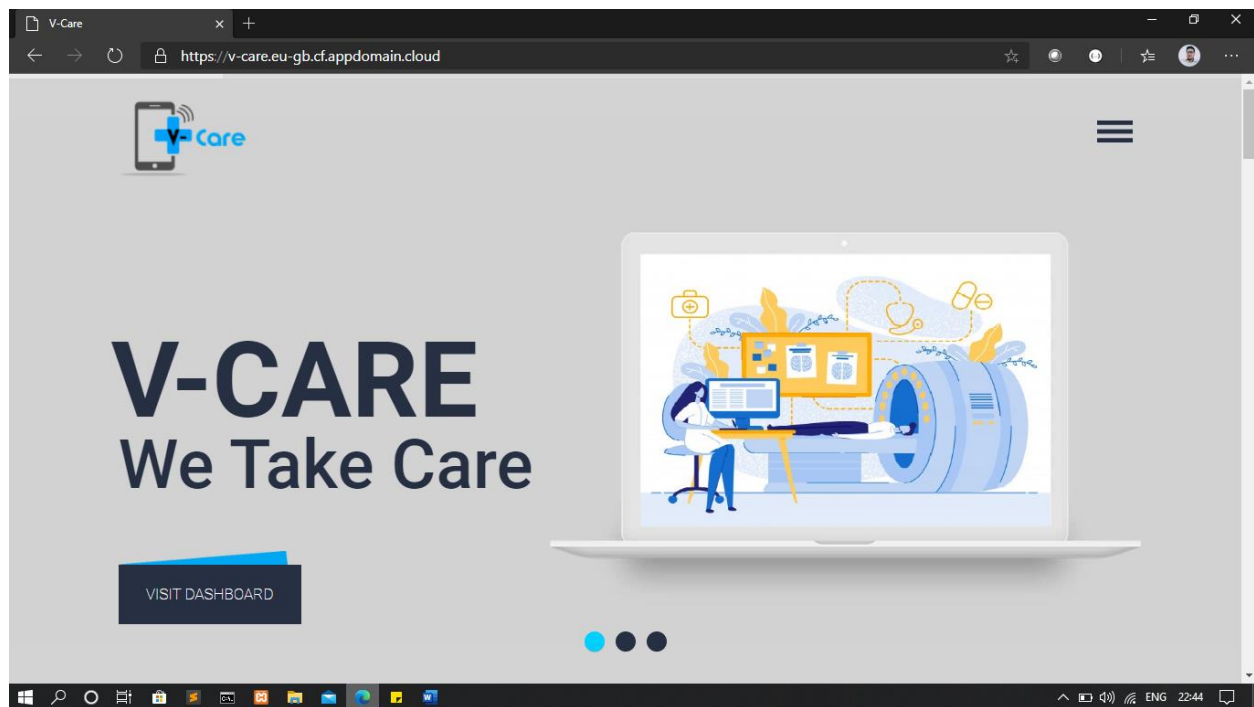
Demonstration

Step1:

Visit <https://v-care.eu-gb.cf.appdomain.cloud/> to Start V-Care for Virtual Medical Check-up.

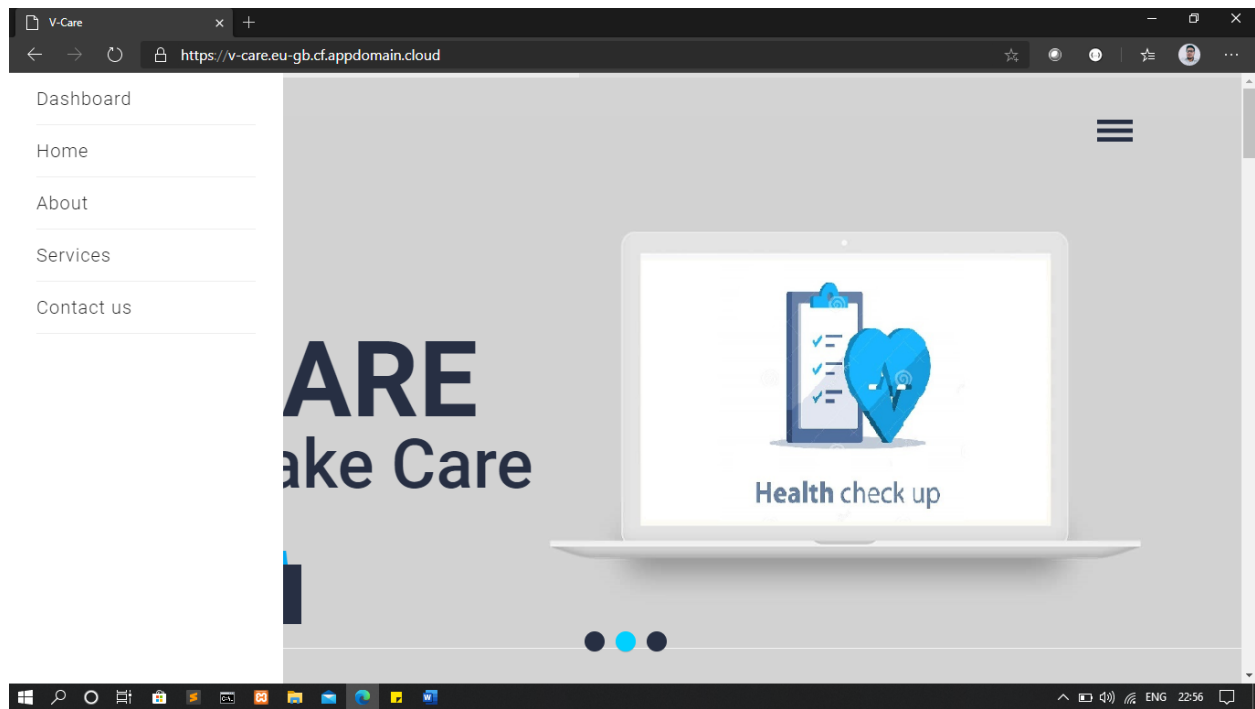
Step2:

Once you hit the above URL you will reached to the landing (Home) page of V-Care.

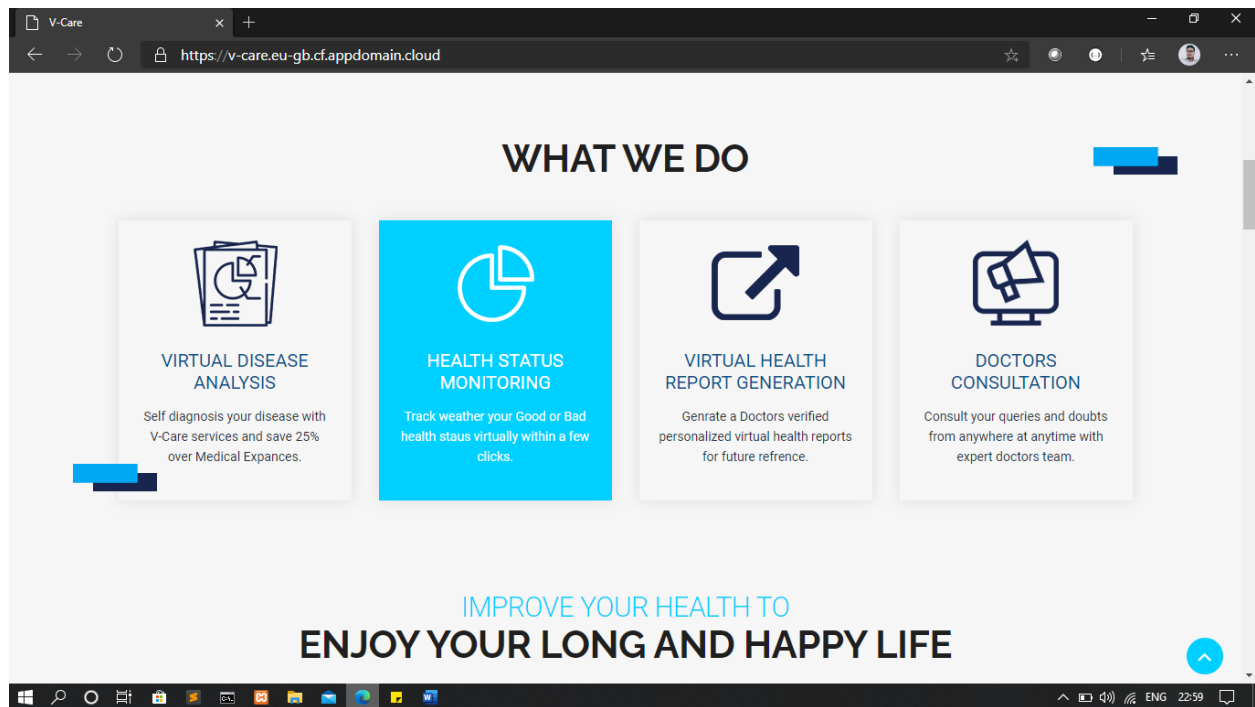


Explore the Home page of V-Care.

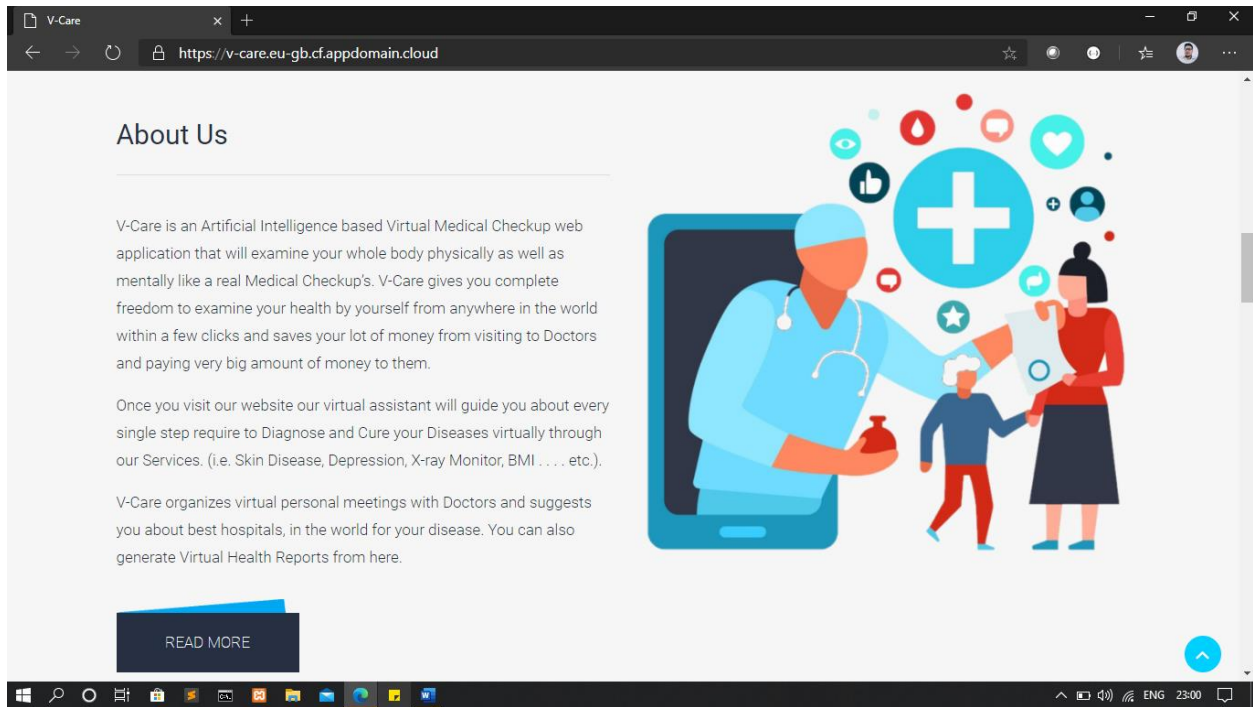
When you click the 3- lines icon you will get the navigation menu which contains 5 elements Dashboard, Home, About, Services, Contact. You will get detailed information about these sections in further steps. Visit Dashboard button will redirect you to the V-Care Dashboard



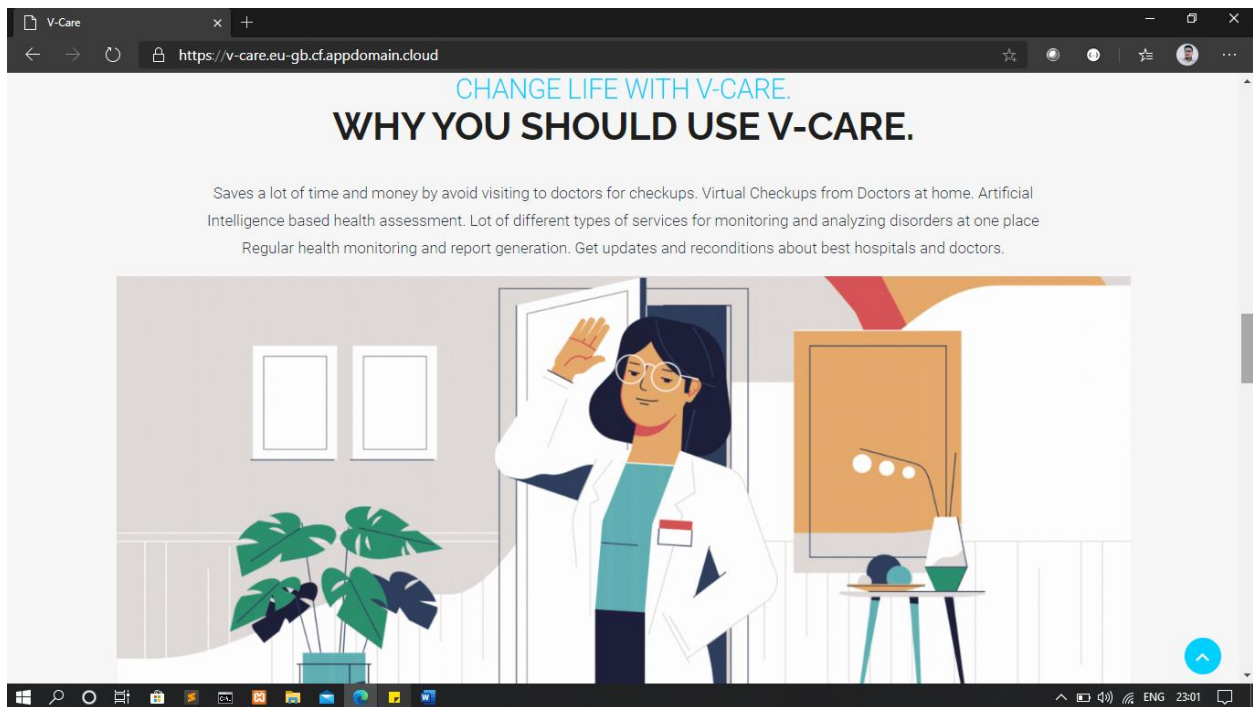
Scroll down the Home page to view other sections



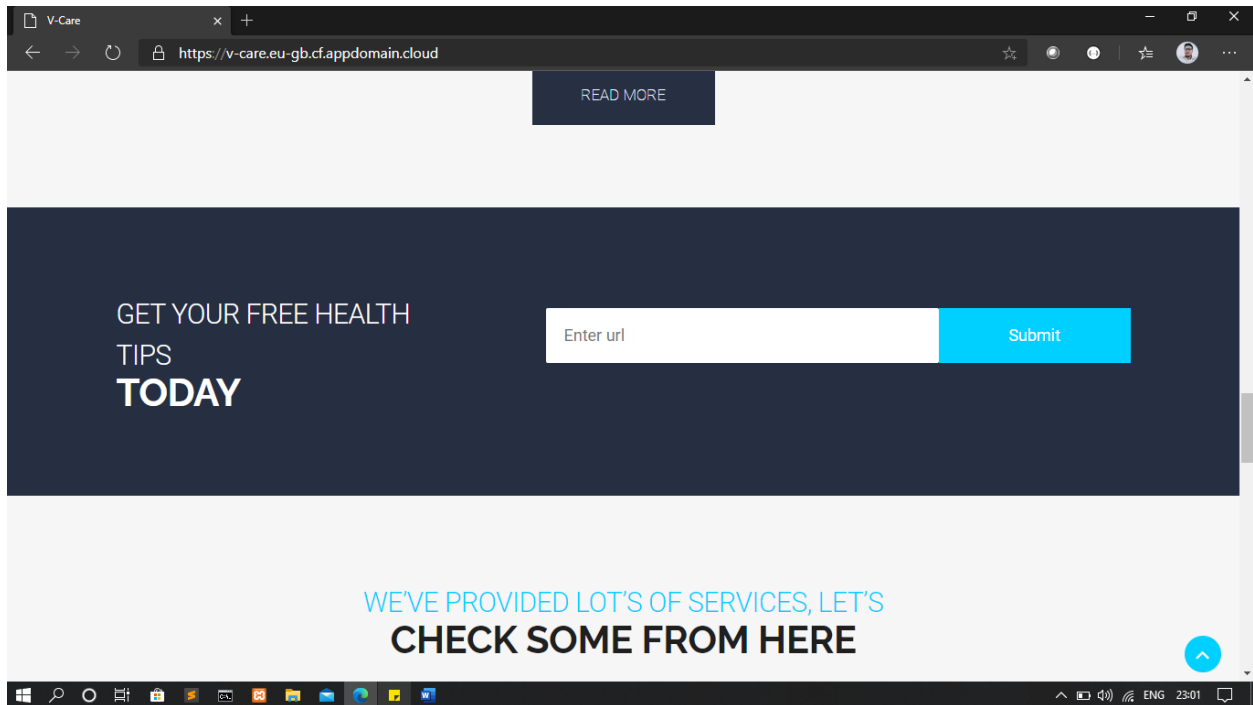
What we do section will showcase some of our main features.



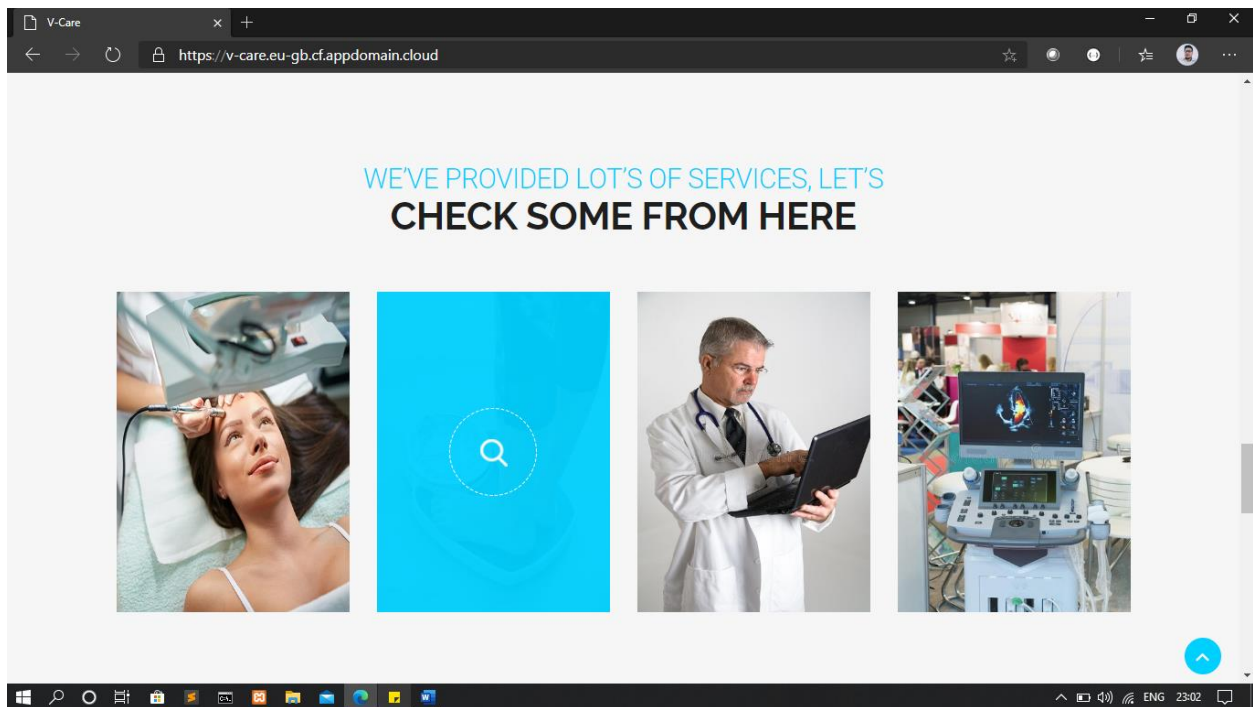
About Us section will give you clear idea about our goals and services.



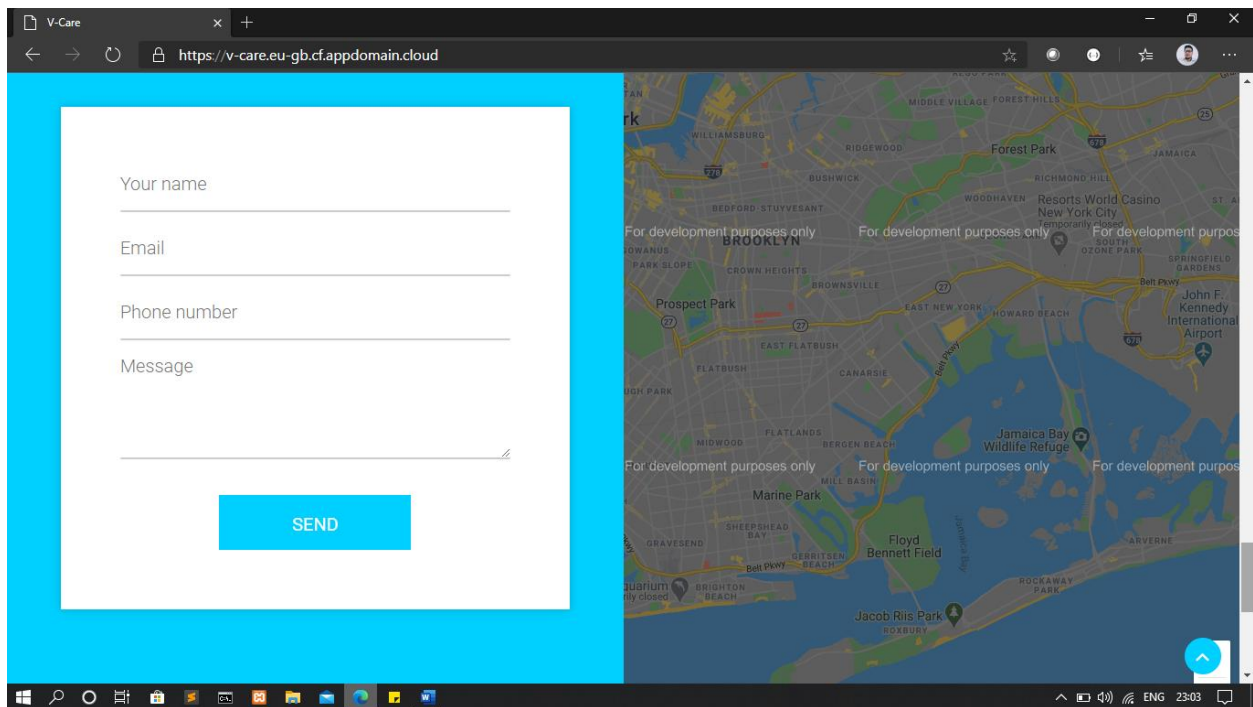
Why should you use V-Care provides you some advantages of using V-Care



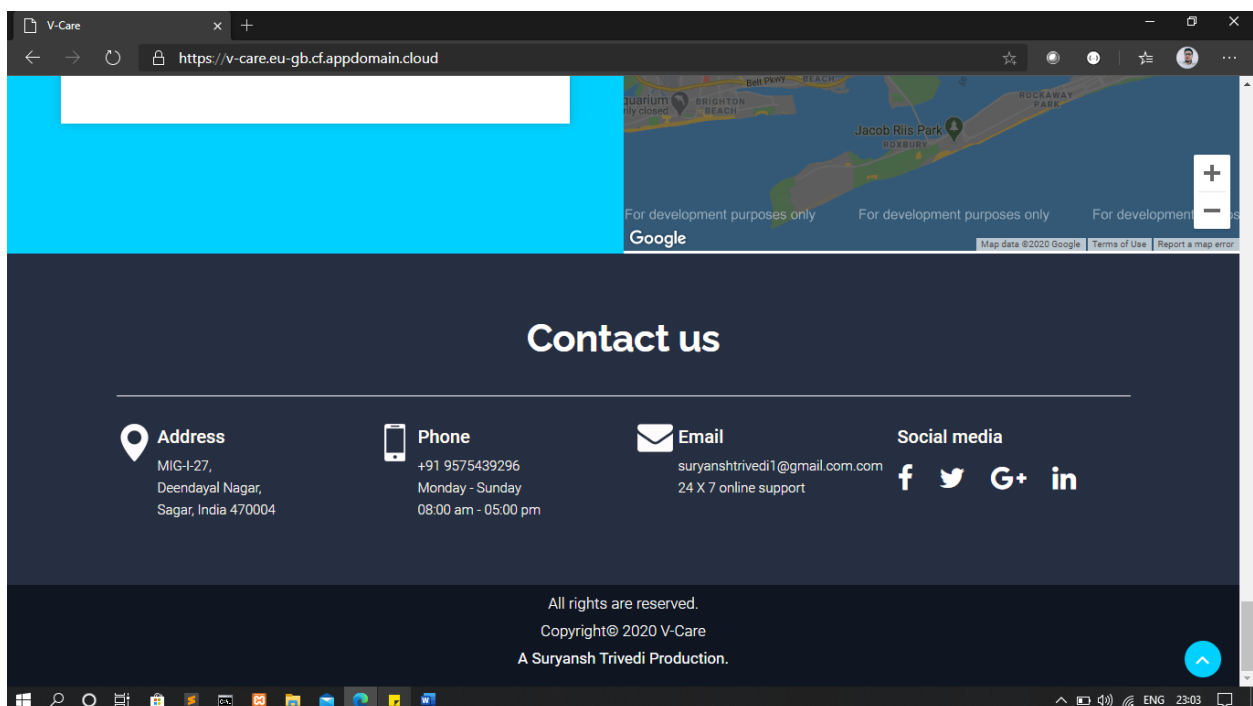
If the Customer wants some free health tips regularly on their mail, they need to submit their E-mail here



You can explore some of V-Care services without visiting to dashboard from here.



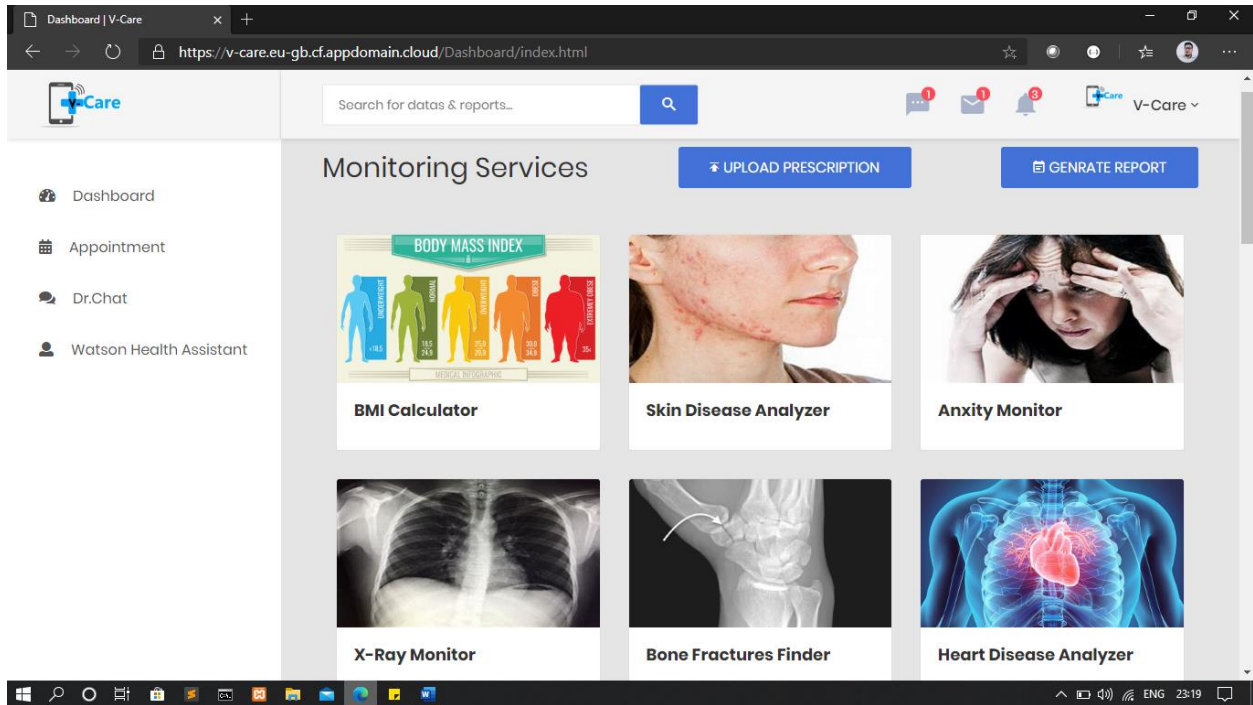
Get in Touch section will allow the customers to ask their questions and provide honest feedback.



Contact Us section will provide some contact details of developer. At last there is copyright section.

Step3:

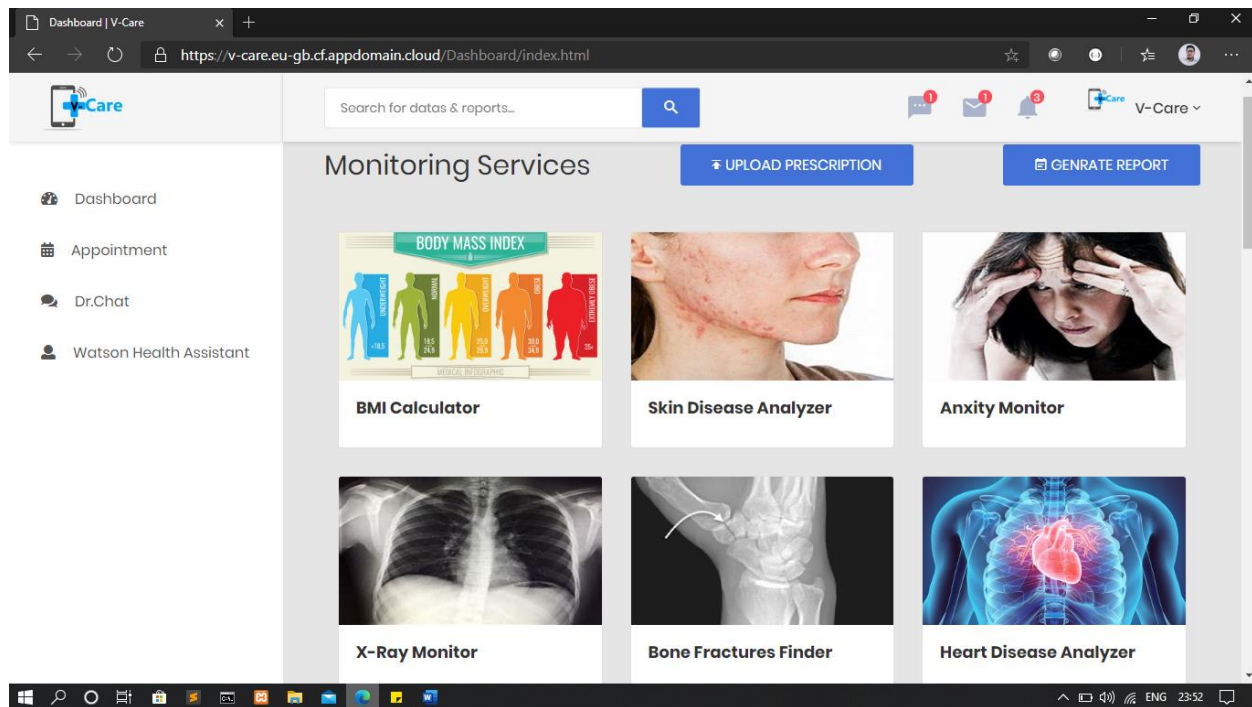
Once you click on **Visit Dashboard** button from V-Care **Home** page you will redirected to **Dashboard** page.



Explore the dashboard. V-Care Dashboard will provide 2 sections i.e. Monitoring and Analytical section under each section different types of services are provided. Left side of Dashboard will contains Navigation section. Which contains 4 elements Dashboard, Appointment, Dr. Chat, Watson Health Assistant.

On top right corner you will show your profile (for simplicity during development and evaluation purpose you will login as V-Care). Click on logout for to reach to home page.

Monitoring Services:

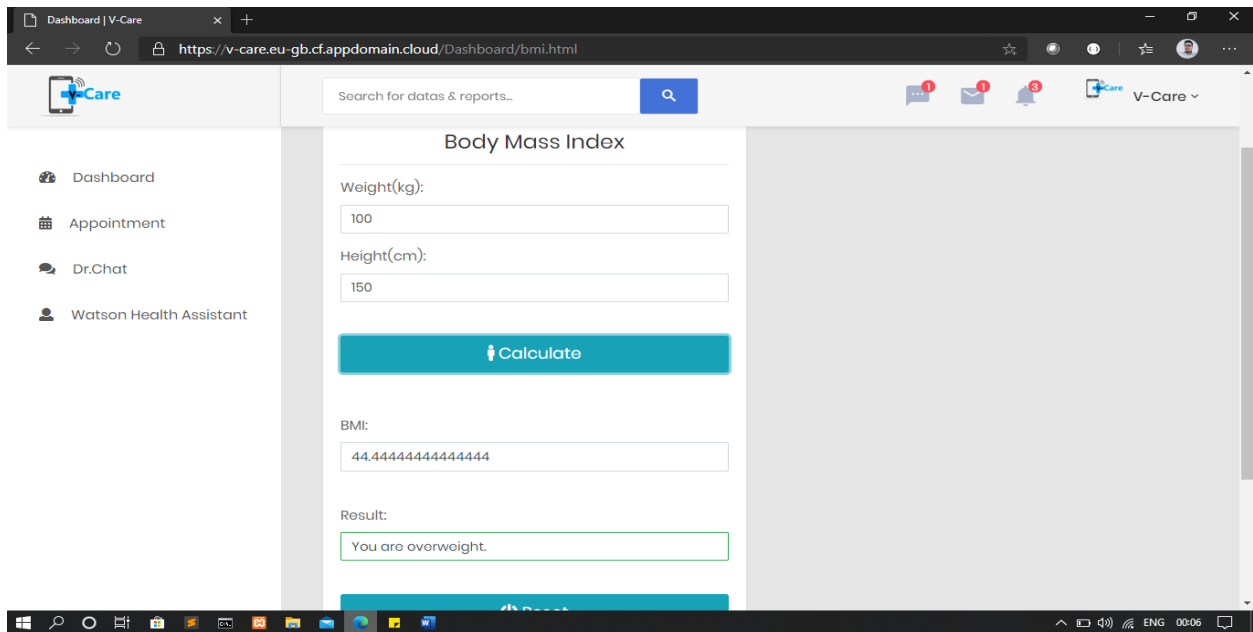


Monitoring Service Section is a group of 6 services i.e. BMI Calculator, Skin Disease Analyzer, Anxiety Monitor, X-Ray Monitor, Bone Fracture Finder, Heart disease Analyzer.

Along with all these 6 services there are 2 additional services (Upload Prescription and Generate Report Service)

BMI Calculator

Click on BMI Calculator you will reach to BMI Calculator form where you need to fill your body details (Height and Weight) it will calculate your BMI and show whether you are under nourished, over nourished or fit



Dashboard | V-Care

Search for datas & reports...

Body Mass Index

Weight(kg):
100

Height(cm):
150

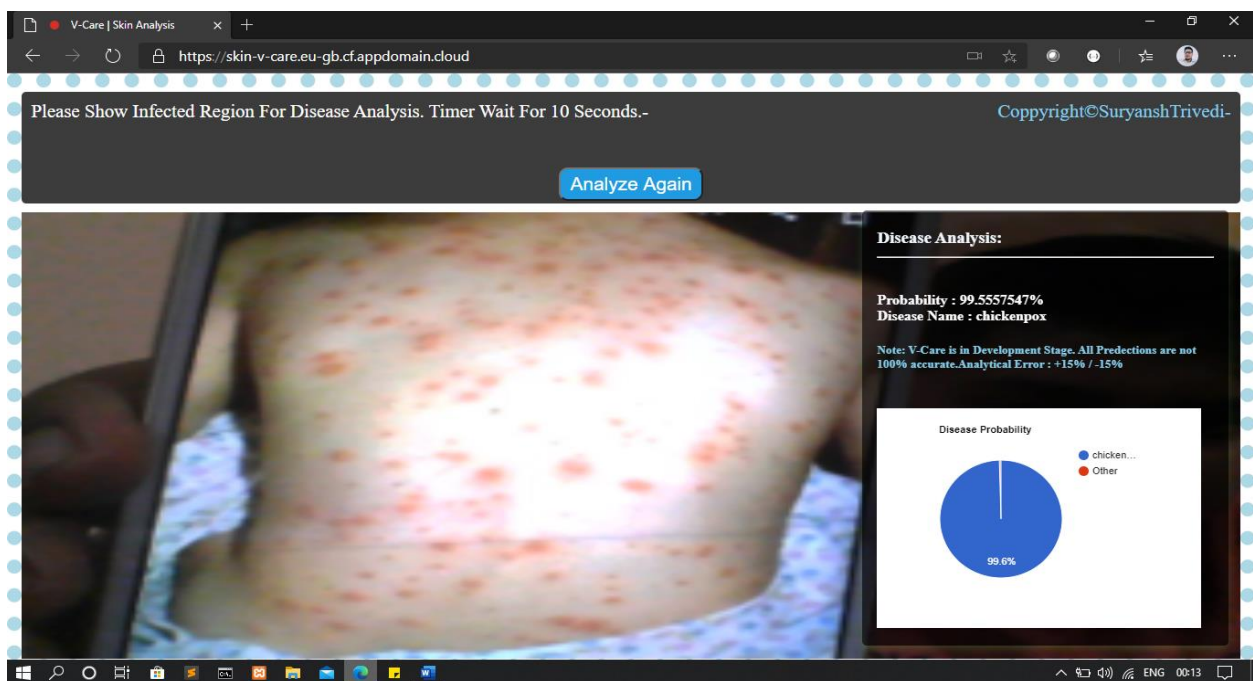
Calculate

BMI:
44.44444444444444

Result:
You are overweight.

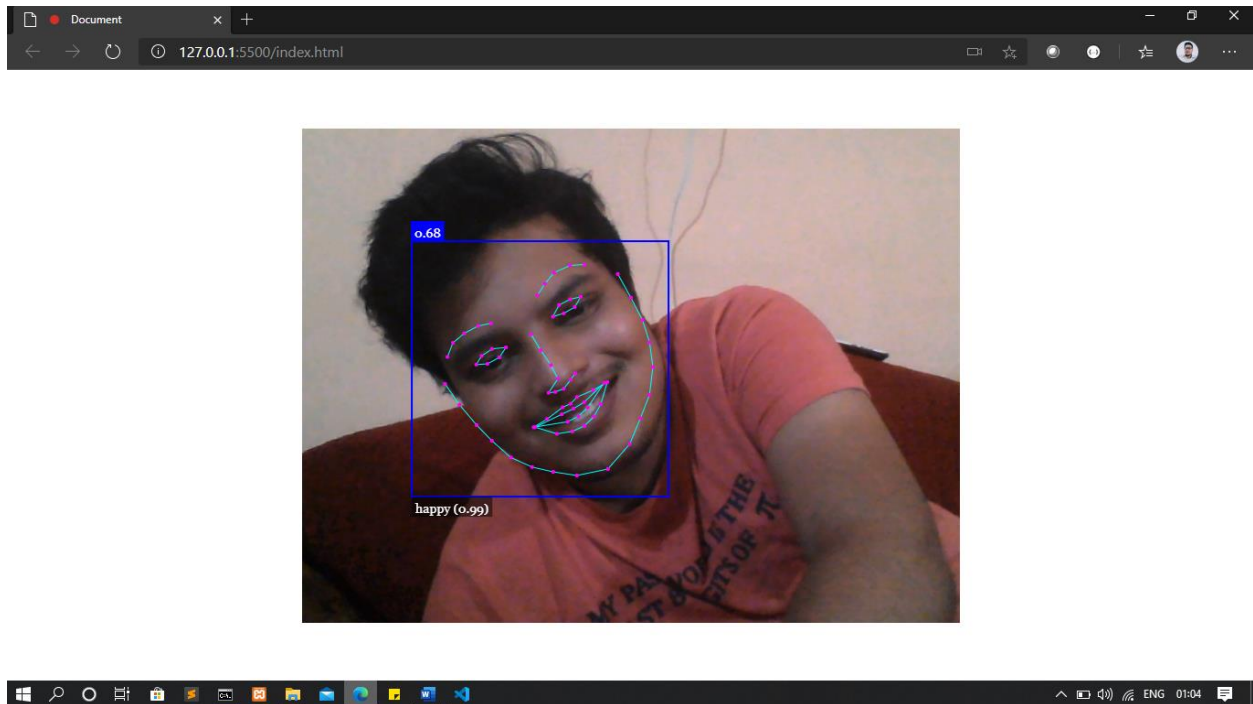
Skin Disease Analyzer

Skin Disease Analyzer will detect your skin disease with high accuracy once you show image of disease Infront of camera It will also plot graph to show its accuracy for disease.



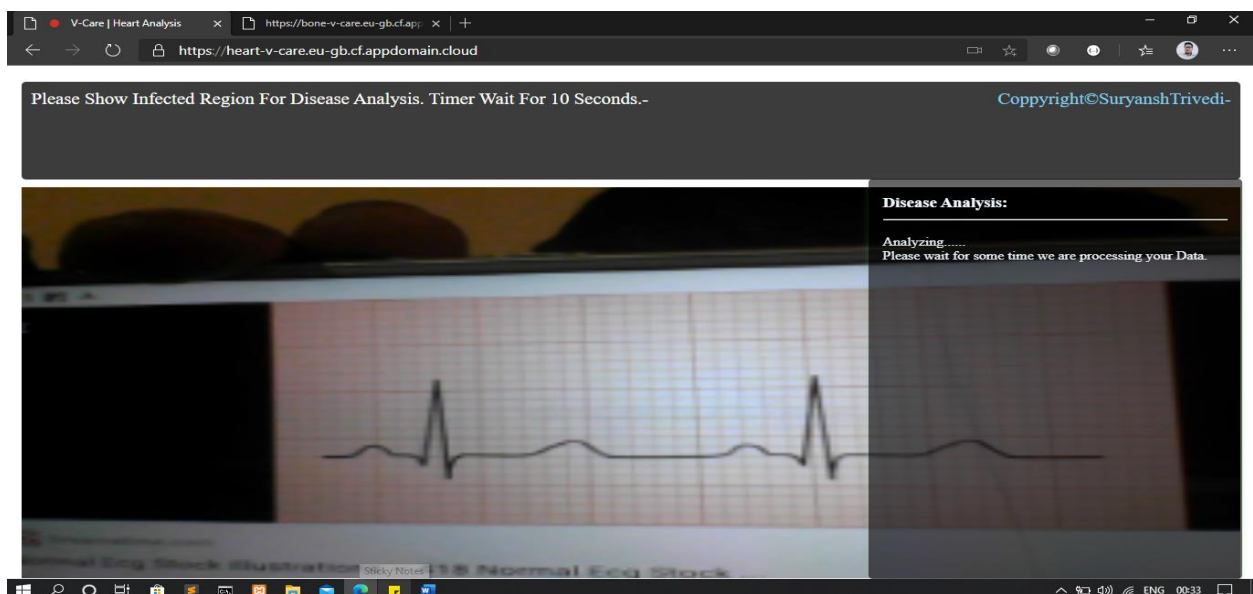
Anxiety Analyzer

Once the person comes Infront of camera Anxiety analyzer will shows his depression level and emotions by tracking 68 landmarks on his face.



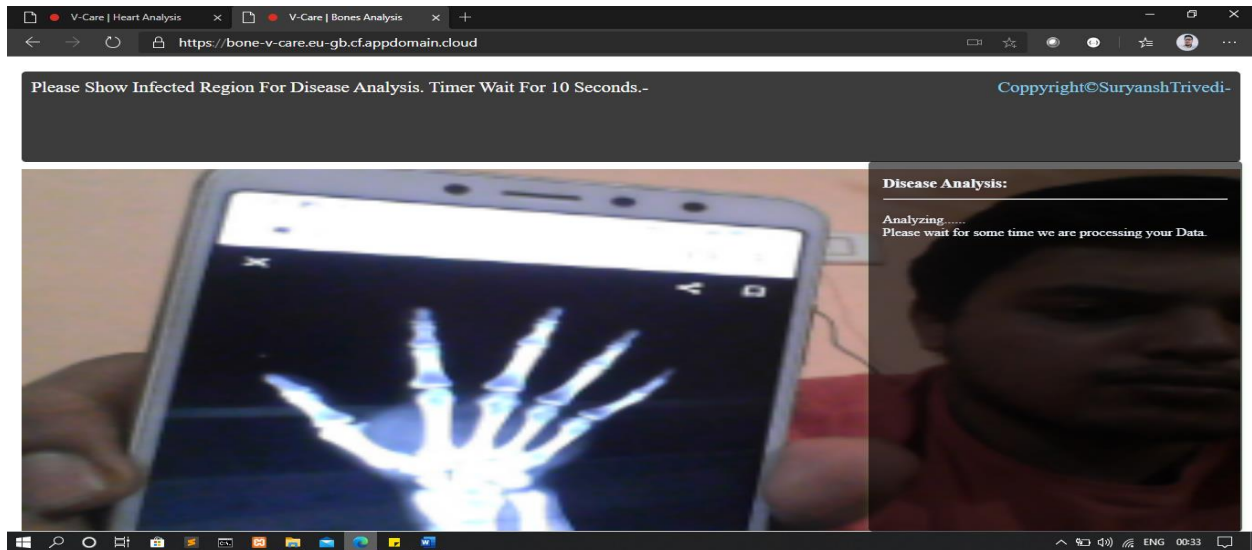
Heart Disease Analyzer

Heart Disease Analyzer will analyze your heart disease with high accuracy once you show image of ECG Graph Infront of camera It will also plot graph to show its accuracy for disease



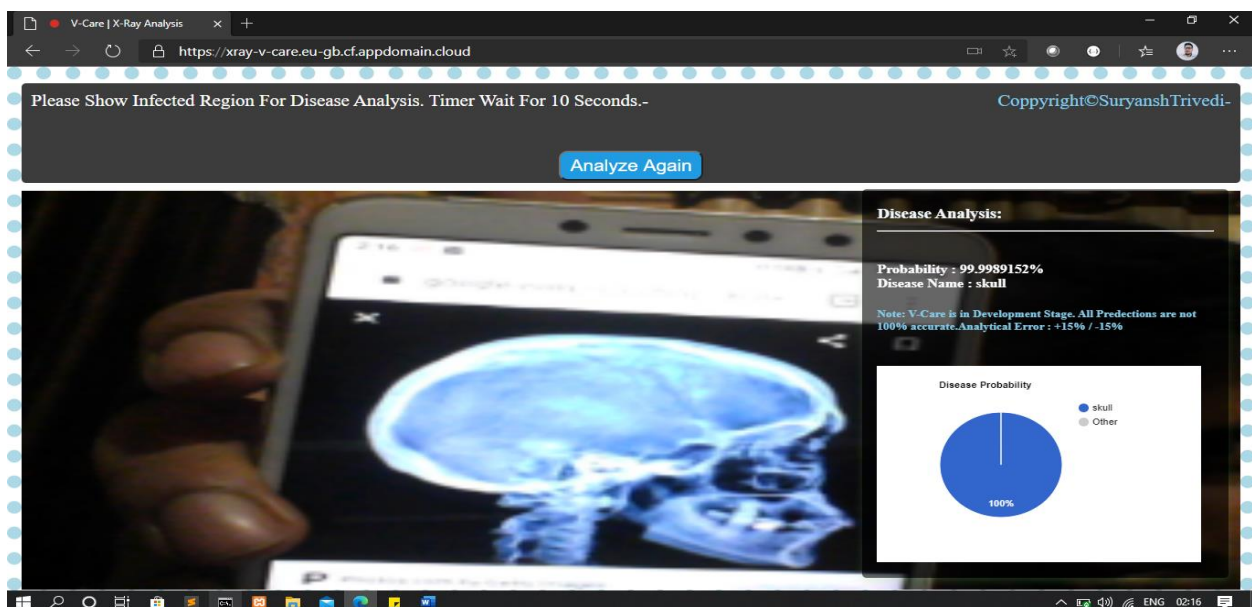
Bones Fractures Monitor

Bone disease monitor will detect your fractures in bones x-ray with high accuracy once you show image of x-ray Infront of camera It will also plot graph to show its accuracy for disease

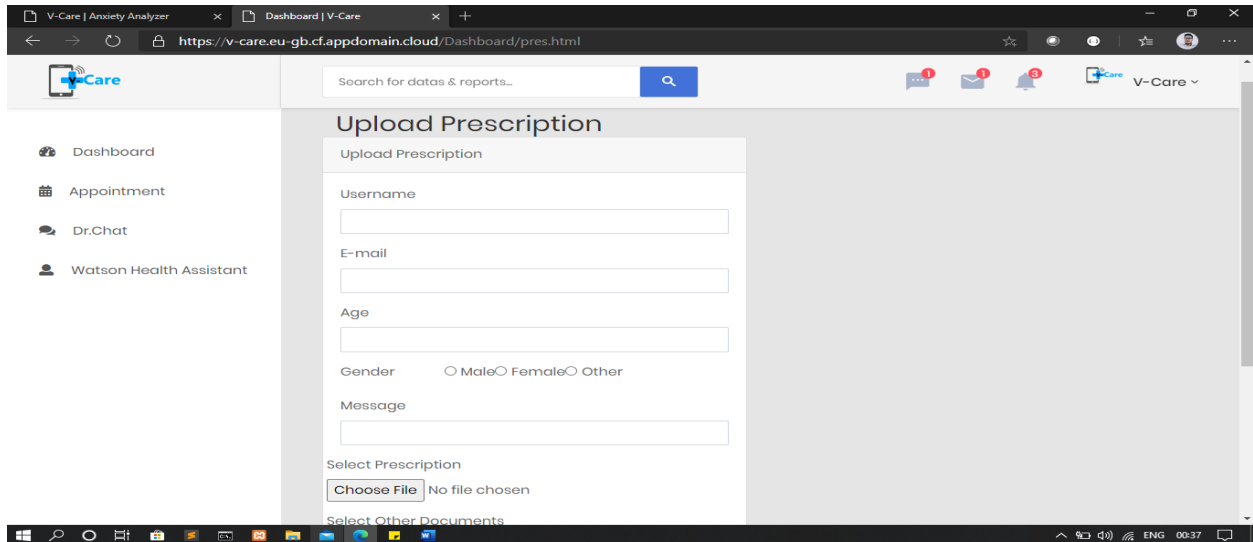


X-Ray Monitor

X-Ray monitor will analyze the x-ray of bones with high accuracy and tells the x-ray belongs to which part of body once you show image of x-ray Infront of camera It will also plot graph to show its accuracy for disease



Prescription Upload

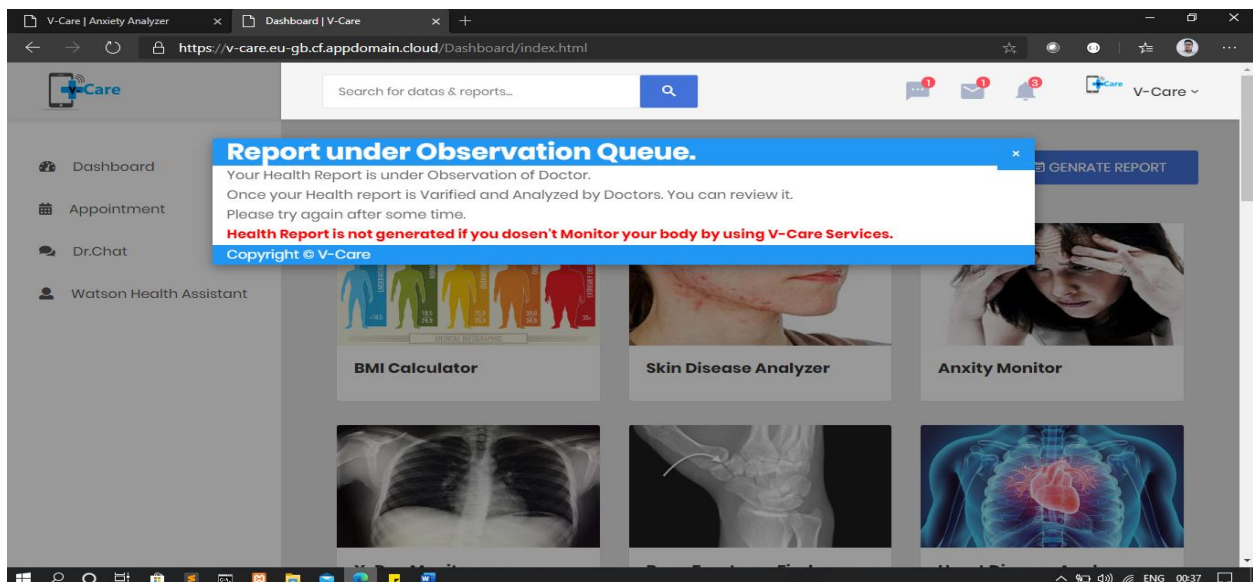


The screenshot shows the 'Upload Prescription' form in the V-Care dashboard. The form includes fields for Username, E-mail, Age, Gender (Male, Female, Other), and a Message. There is a 'Select Prescription' section with a 'Choose File' button and a 'No file chosen' status. The dashboard sidebar on the left contains links to Dashboard, Appointment, Dr.Chat, and Watson Health Assistant. The top navigation bar includes a search bar and notification icons.

Once you click on prescription upload button you need to fill some basic details in form and upload prescription submit it. Doctors will review it and consider it while analyzing your health.

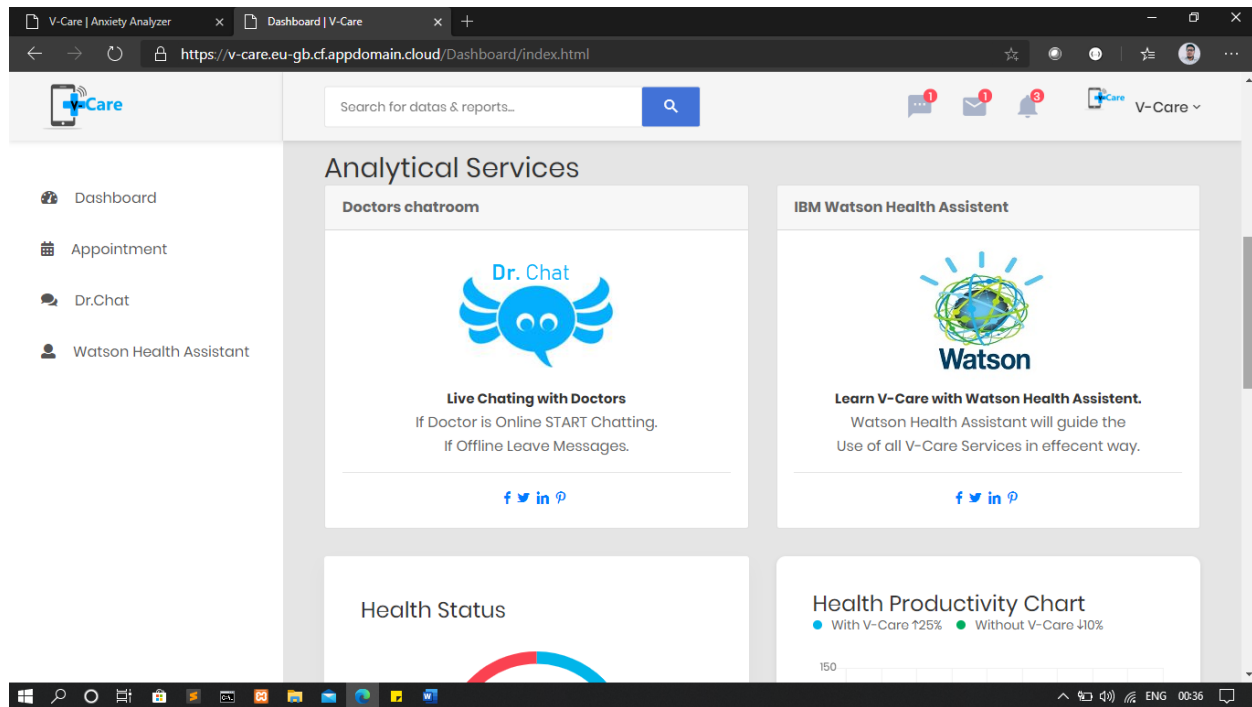
Generate Report

Once you will analyze your body by V-care services you will generate personalized health report from here after doctor's validation.

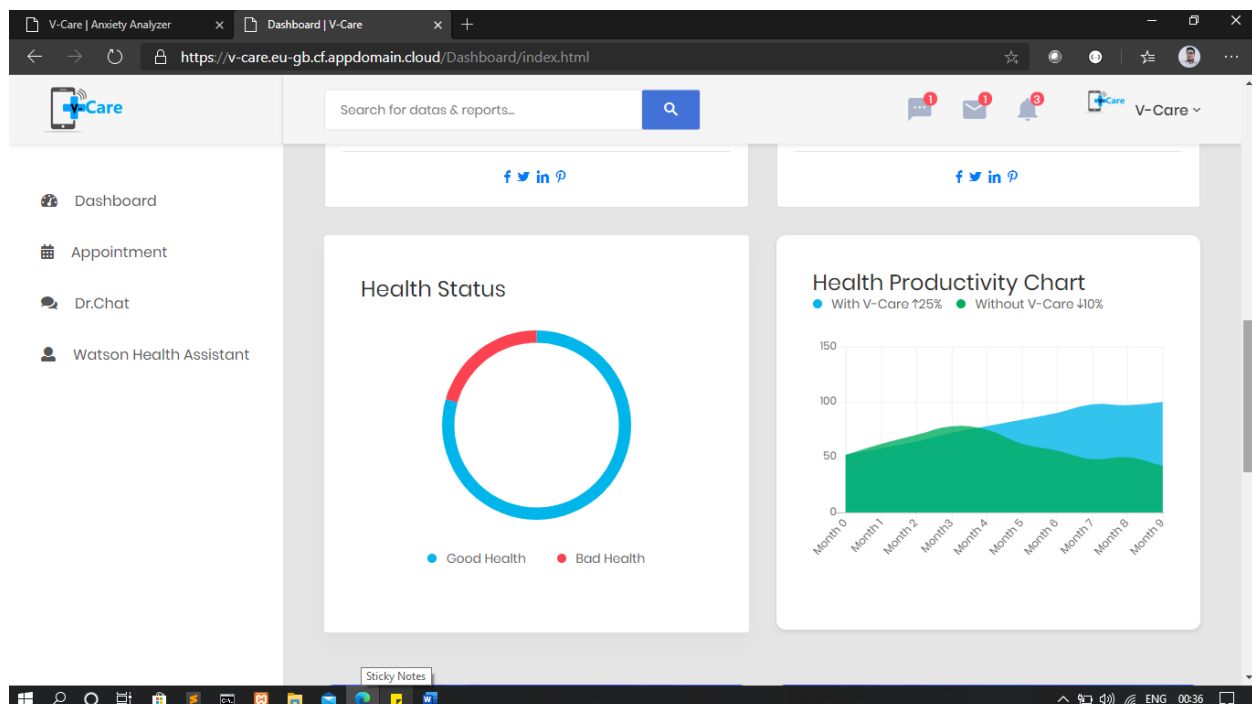


The screenshot shows the V-Care dashboard with a 'Report under Observation Queue' message overlay. The message states: 'Your Health Report is under Observation of Doctor. Once your Health report is Varified and Analyzed by Doctors. You can review it. Please try again after some time. Health Report is not generated if you dosen't Monitor your body by using V-Care Services. Copyright © V-Care'. The dashboard features a 'GENRATE REPORT' button and several health analysis tools: BMI Calculator, Skin Disease Analyzer, Anxiety Monitor, and a chest X-ray image.

Analatical Services:



Analytical Service Section is a group of 6 services i.e. Doctors Chat room, Watson health assistant, Health status, Health productivity chart, best doctors' recommendations, best hospitals recommendations.



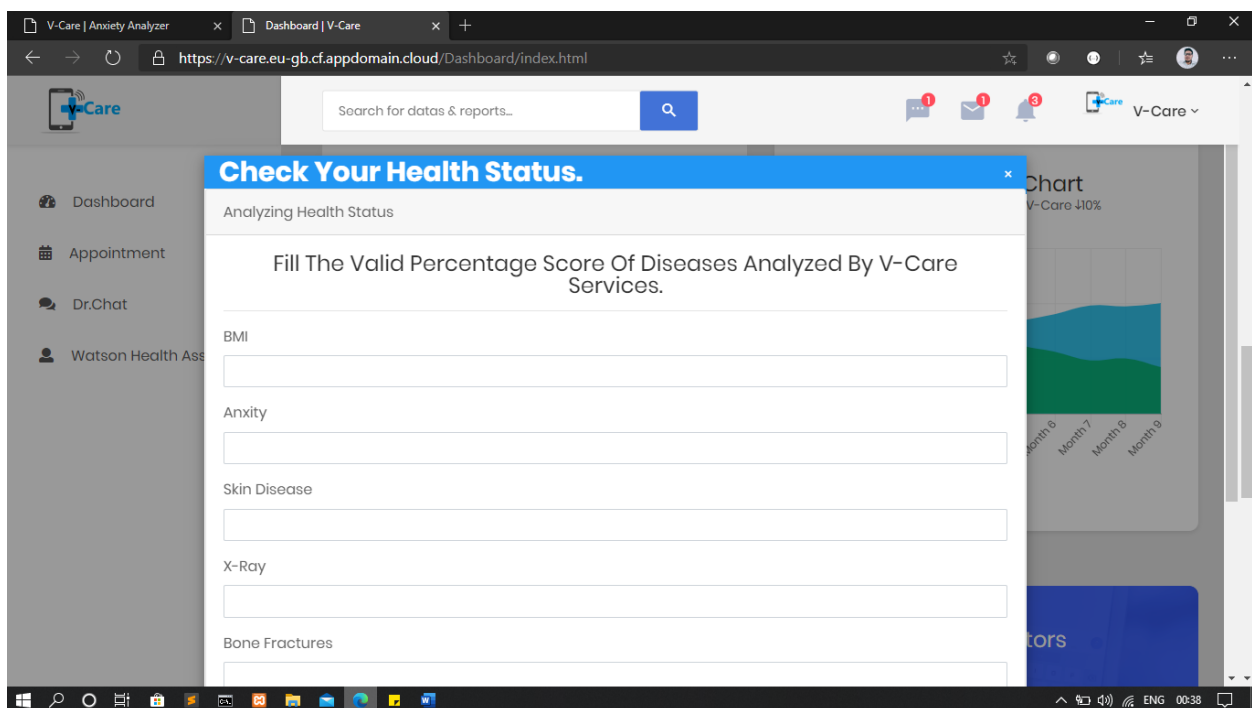
This section under analytical services contains 2 services i.e. health status, health productivity chart.

Health Productivity chart

Health Productivity chart will show the graph of health scale with respect to time (in months) and show the improvement in your health ones you start using V-Care .V-Care will provide stability in your health scale readings.

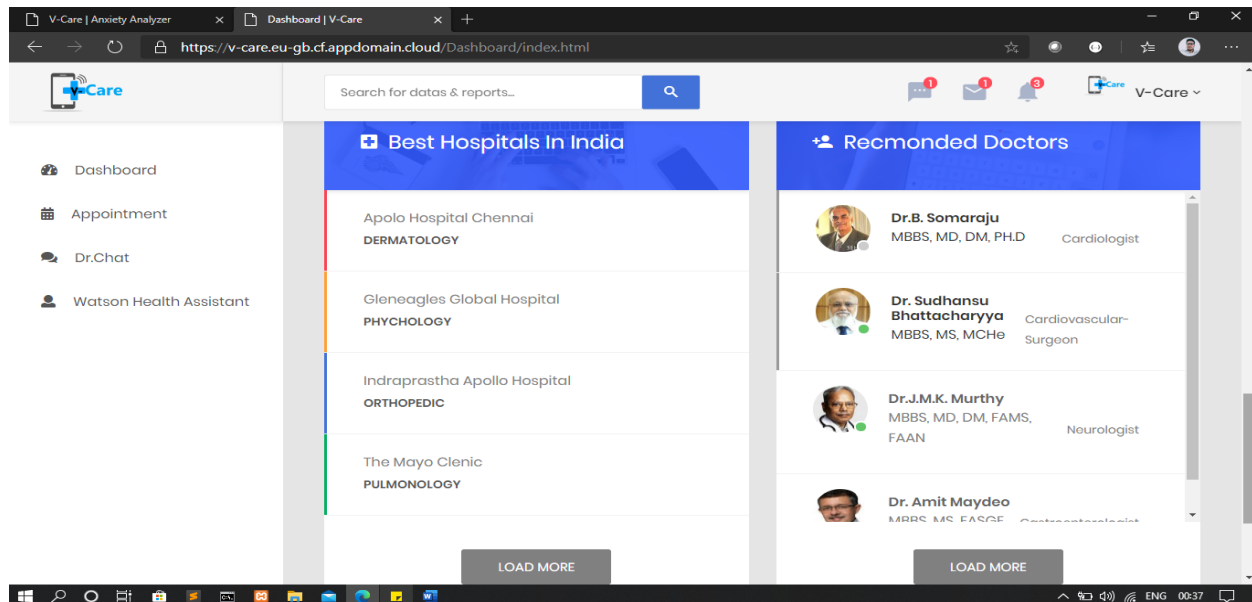
Health status

Health status by default show you normal health status of average fit human when you hover a mouse cursor over it . When you click on this service you will encounter one model window on which you need to fill all the details and then it will show a personalized health status of you .



The screenshot displays the V-Care web application interface. A modal window titled "Check Your Health Status." is open, prompting the user to "Fill The Valid Percentage Score Of Diseases Analyzed By V-Care Services." The modal contains five input fields for the following categories: BMI, Anxiety, Skin Disease, X-Ray, and Bone Fractures. The background shows the application's dashboard with a sidebar menu (Dashboard, Appointment, Dr.Chat, Watson Health Ass) and a main content area featuring a "Chart" and a "V-Care 410%" indicator. The browser's address bar shows the URL "https://v-care.eu-gb.cf.appdomain.cloud/Dashboard/index.html".

Best doctors and hospitals Recommendations



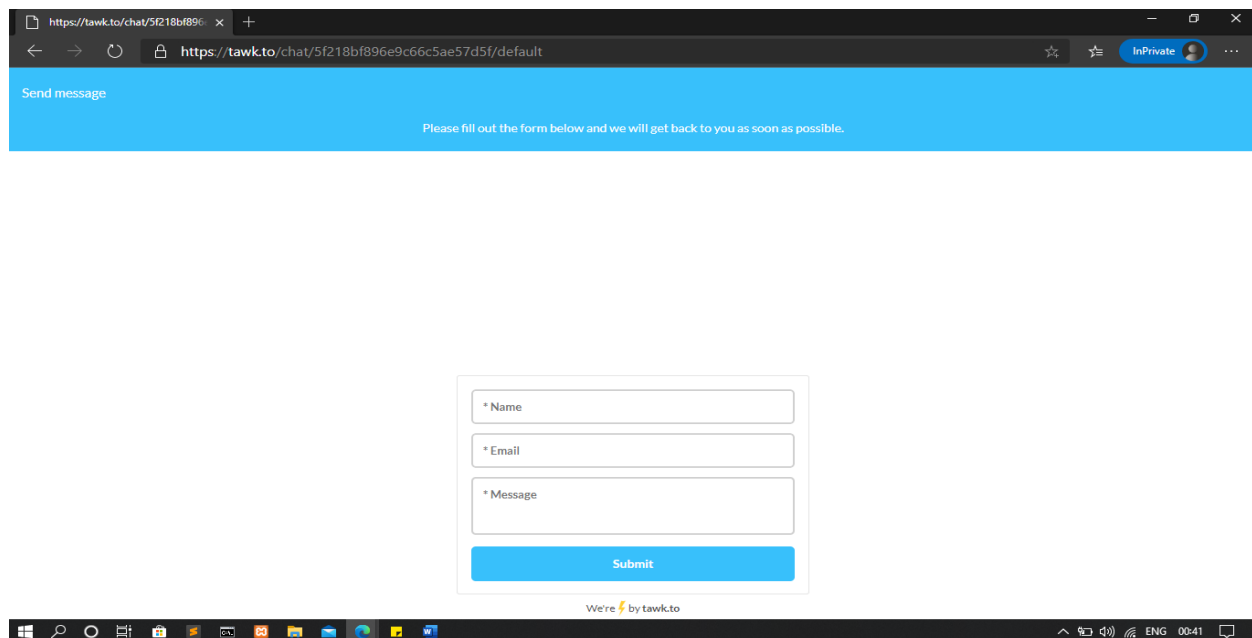
The screenshot shows the V-Care dashboard with the following sections:

- Best Hospitals In India:**
 - Apolo Hospital Chennai (DERMATOLOGY)
 - Gleneagles Global Hospital (PHYSIOLOGY)
 - Indraprastha Apollo Hospital (ORTHOPEDIC)
 - The Mayo Clinic (PULMONOLOGY)
- Recommended Doctors:**
 - Dr.B. Somaraju** (Cardiologist): MBBS, MD, DM, PH.D
 - Dr. Sudhansu Bhattacharyya** (Cardiovascular-Surgeon): MBBS, MS, MCh
 - Dr.J.M.K. Murthy** (Neurologist): MBBS, MD, DM, FAMS, FAAN
 - Dr. Amit Maydeo** (Oncologist): MBBS, MS, FASGE

Navigation menu on the left: Dashboard, Appointment, Dr.Chat, Watson Health Assistant.

This section of analytical services will provide you information regarding best doctors and hospitals available in India for specific diseases.

Dr. Chat



The screenshot shows the Dr. Chat interface with a message form:

Send message

Please fill out the form below and we will get back to you as soon as possible.

Form fields:

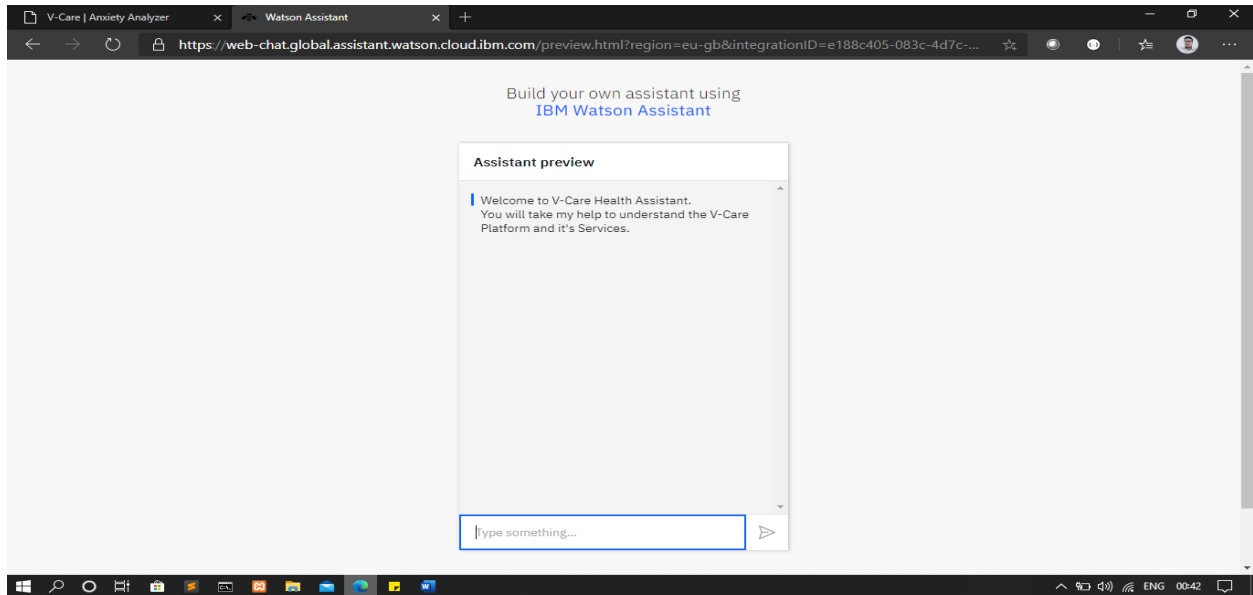
- * Name
- * Email
- * Message

Submit button

Footer: We're by tawk.to

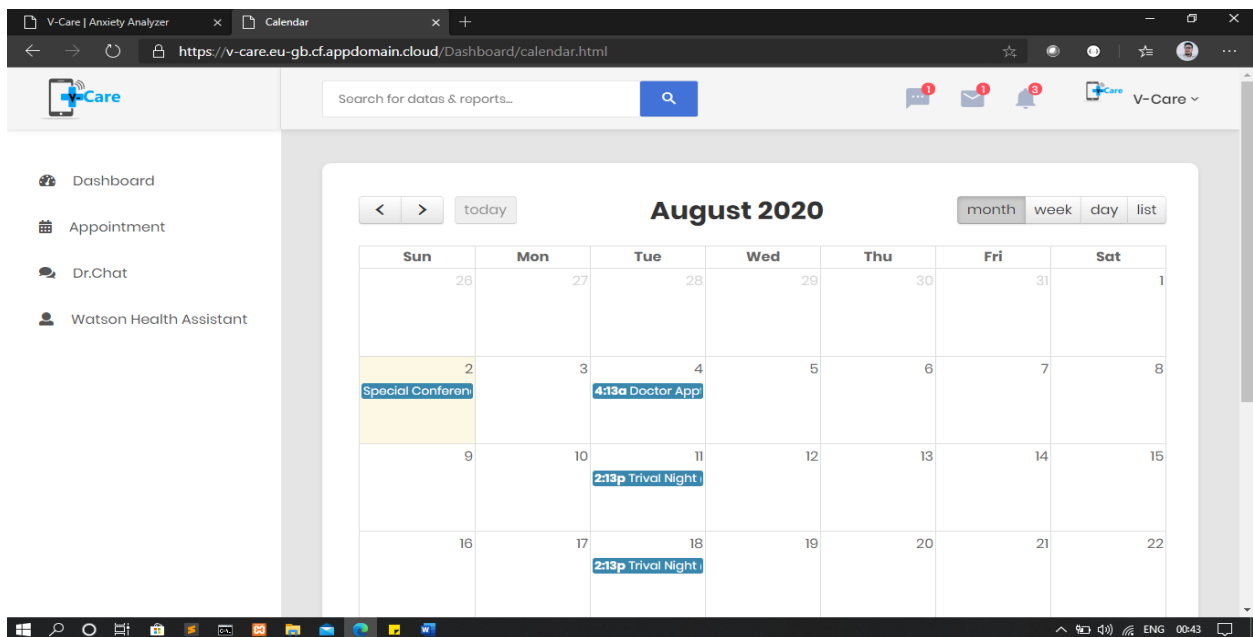
Dr. Chat will provide personalized chat room with doctors you will ask any queries with doctors. If doctors will be offline simply drop your message here.

Watson health assistant



Watson health assistant will guide you about V-Care platform and its services you will take help from Watson Assistant to V-care in an effective way.

Appointments



Fix your virtual health appointment with doctors by clicking appointment in navigation pane.

NOTE:

V-care is currently in development stage so there must be always a high chance of AI model Failure. It is not advised to trust completely and depend over our services. It is designed for provides primary health monitoring.

It is highly recommended to take expert advice and conformation from professional doctors before taking any preventive and remedial measures for diseases.