**Front End integration explanation.**

The front end of the application sits as a web application built utilising Django, Django was chosen as it serves the purpose perfectly, which is to facilitate a user application interface, to facilitate the integration of artificial intelligence learning algorithms and to serve a way for the user to easily and conveniently use the web application as a service.

Below are bullet points on the main pages of this web application interface that will be implemented and the purpose for said pages.

**Main user interactive information.**

* Landing Page:
  + The landing page serves as the home page for the service, I.e. the business home page, this is where information about the (fictious) company can be found, I.e. the packages they offer, the services they offer and how to implement their service.

This page was implemented to give the whole service more validity in terms of the assignment and to allow information about the service to be conveyed in a coherent fashion.

* Login Page:
  + The login page is self-explanatory, this is the way in which a professional or patient accesses the service and the way in which the system starts checks to see the type of account the user is trying to login into, I.e. doctor, patient or administrator, please see, ***Accounts*** in the functionality section.
* Main Interaction Page:
  + This is the page where account depending, the main information can be found, please see, ***Accounts*** in the functionality section, the main page will host all the relevant information about accounts, patients and any other information the system would require, I.e. last logged in, profile for contact information and more.

**Main functionality information.**

* Accounts:
  + The web application has the ability for three account types, these are doctor or professional, patient and administrator.
  + The doctor will have the ability to view all of their patients, there records including there profile for contact information and any documents which have been uploaded to facilitate the diagnostic process, this along with the ability to upload new, images, documents, audio and video will serve to aid in the process of gaining a diagnose.
  + The patient will be able to login and view their own profile, update their profile, view any and all doctors assigned to them and what their current status is, I.e. diagnosed (which would be carried out in person first), undiagnosed or as an example awaiting procedure.
  + Administrator accounts will have the features of the previous two accounts along with the ability to add, remove and update accounts, along with the ability to remove documents, images, audio and video from the system, it is with the above that administrator accounts should only be given to senior and trusted members of the organisation.
* Artificial intelligence functionality integration information:
  + The web application will integrate and utilize four artificial intelligent learning algorithms to facilitate doctors in the diagnoses of patients, the web application will do this by utilising Django python backend, a page will be present where uploading of images, videos, documents and audio file may be uploaded and with a simple click of a button Django will start the process of running the appropriate script.

Examples of the above are as follows,

* + - A doctor wishes to upload a document which holds information about the patient’s latest check-up, the system takes the document and analyses its text contents and once the analyses is complete, uploads the result to the web application for the patient to login and read through.
    - A doctor uploads an images of the patients latest scan (in person scan checks should be performed also) and the system checks the image for any signs of disease, once the system has finished it’s check it then prompts to the doctor to either hold and not publish the information to the patient or to publish and notify the patient there has been an update.
    - A doctor uploads a video, this could an MRI (Magnetic resonance imaging) scan video, the system then takes the video and analyses it to detect any signs of disease, as with images the system then prompts to the doctor to either hold and not publish the information to the patient or to publish and notify the patient there has been an update.
    - Finally, a doctor wishes to upload some audio, this could minutes taken from a recent appointment or the doctor wishes to convey information, the system then takes this audio and process it to detect and extract the information held within the sign waves of the audio file.