Ethical and legal/privacy/terms and conditions \*

Actual Text of such issues that will be put before the user to agree. Please write minimum 5000 and maximum 10000 Characters. This Question Carries Three Mark.

These are the following terms and conditions that we will like to implement:-

1) By accessing this website, we assume that you agree to all the fore mentioned terms and conditions. Please do not continue to the website without reading the terms and conditions first or if you disagree to any of the terms and conditions given below.

2) “You”, ”User”, ”Users” refers to the person(s) using this website and/or their representative. “Us”,” Our”,” We” refers to the people responsible for the maintenance of the website.

3)These Terms and Conditions may be updated at any given time. The user will be notified of the changes/updates before the changes/updates will be implemented. The continued use of this website makes signifies that you to agree to these new updates.

4)You agree that to submit correct information in all the required fields during registration. In case any of the submitted details change/update the user must update their credentials on the website at their earliest. Submission of incorrect/outdated information may lead to the termination of the account without any scope of refund/reimbursement.

5)You agree to be contacted by us and/or our representatives at the contact information submitted by you for verification and/or in case of any legal issue(s). If contacted the user agrees to provide to wait until the verification process is completed (if needed).

6)Those using the website as a professional service must be legally licensed to practice medicine. Legal action might be pursued against those who forge documents to use this website.

7)Registered accounts must only be used by the owners of the account. In case of any mishap, incorrect medical advice/diagnosis and/or violation of the Terms and Conditions, the owner of the account will be held responsible.

8)The website provides accurate predictions/classification using advance deep learning algorithms to the users most of the time. We do not guarantee these predictions to be 100% accurate at all times. If incorrect medical advice is provided by practitioners using our services, to patients, we will not be responsible for damages caused including personal injury and/or death.

9)You understand that the website at some rare cases may provide the users with incorrect results. The creators of this website will not be legally liable for any incorrect diagnosis.

10)You agree to have the images/scans uploaded to this website be added anonymously into the system’s database. This data will be used to improve the accuracy of the system. The user of the service is required to inform and obtain written agreement of the patient of this before a scan is uploaded into our system. In case a scan is uploaded without the prior agreement of the patient, the scan cannot be removed later from the system. In such cases, the creators of the website won’t be legally liable to cover for the damages of the patients.

11)You are only allowed to upload images of chest scans. Uploading images which are not scans can affect the accuracy of our system. Accounts found in repeated violation of this policy will be taken down without any updates and scope of reimbursement/refund.

12)Certain factors may cause delay, failure, interruption and/or corruption of data and/or services. While our team will work to get services back to normal in such circumstances, we will not be legally responsible for any loss of data and/or services. In case of loss of services for extended periods, a refund for the specific period may be provided to the users.

13)We will not be responsible for the theft of data and/or payment services from any intermediate website/service (search engines, websites recommending our services, blogs etc.) and websites posing as us (by phishing the original website) you may use to get to avail our services.

14)The following may hyperlink our website without prior approval –Search engines, Government entities, News providers, Web-based directories, Educational institutions. In case any incorrect information about our services (including but not limited to policies, pricing, use of underlying technology etc.) by such sources, we will not assume responsibility.

15)We reserve the right to change the pricing at the end of any given billing cycle. In such cases, users will be informed before the beginning of the new billing cycle.

16)The user is responsible for the confidentiality of their login combinations. The user must notify us immediately if they suspect any unauthorized use of their account and/or password. We encourage users to have strong passwords and not use passwords associated with other accounts.

17)We may use cookies, when you visit our website (www.pducv.com), to provide a custom user experience to you. We reserve the right to update our Cookie Policy at any time and for any reason. But we make sure that the Users will be alerted about the update/change in the policies before the update. We encourage the user to review the cookies policies to stay informed about the changes/updates. By selecting the terms and conditions you also select the uses of cookies on this website.

18)In case of any legal disagreement/dispute between the user and us, the disagreement must be settled in accordance with the laws/rules/regulations of India.

**Project cost estimation**

Though no costs have been incurred so far in the course of the project since most of the resources are used in such a way as if we were to make this project as budget-friendly as possible.

But for the project to run at its maximum efficiency, there are some expenses that we need to incur, and they are broken down as follows.

1) Cloud-based GPU – 17000 per month A GPU is critical for the deep learning side of the project since a good GPU will guarantee faster experimentations and thus leading to better results. A better GPU will also decrease training time exponentially. The GPU will not be used throughout the development of the project, but only when the models need to be trained.

2) Website Hosting – 300 per month - Every domain name works as a website address on the internet so we needed to host our website on the internet under a simple and relevant name so that the users can find the website with ease.

3) Hardware Requirements- it includes Laptop, Network, etc which costs approximately around 40,000.

**Discuss your project with Two Persons outside Bennett University (apart from your family members and preferably from industry.) and ask them how they rate your project and its progress from 1 to 10 scale. Write both names, who they are, email and Mobile No of those. They should be ready to confirm if they are called on their mobile number.**

Gargi Nayak - Analyst at Ernst and Young

The project idea is very relevant, especially at such times. It can help doctors in diagnosing patients quickly to reduce the risk of further infection. I hope the model sizes are appropriate along with robust backend design to guarantee acceptable prediction times.

Project 9/10 Progress 8/10

9600523340

[gargi.nayak@gmail.com](mailto:gargi.nayak@gmail.com)

Biswajit Mishra - Cognitive Head at IPSoft

It would be great if some techniques can be used to show patients’ previous diagnosis when a new scan is uploaded, to assess their recovery. Furthermore, I would also recommend practising good techniques while committing code to a repository such as using markdown titles and maintaining an updated README.

Project - 8.5/10 Progress 7/10

7204075600

biswajit.mishra@IPsoft.com

**Week wise Updates/ Diary/ Proportional achievement of stated outcomes/ Graded Functionality etc**

Week 1 – The team discussed the basic workflow of the project. This discussion included the basic ideas of the project including the technologies to be used, techniques to be used to link backend and the frontend of the website. After this, the process of data gathering had begun to create a dataset which could be used to train and then test the models.

Week 2 – Basic python scripting was done to arrange the dataset in a desirable manner to get good training and testing split. Basic data visualization to obtain a good idea about the data including the resolution, number of images, etc. Furthermore, mockup UI/UX designs were done, shaping the look of the website. We also took a MOOC in order to learn some new skills relating to front-end and UI/UX design and to learn whether we can execute what we have in mind in the website.

Week 3 –The creation of the first model began. Since training each instance of the model took about 45 minutes. So, iterating over many such models in order to obtain an acceptable accuracy took about 3-4 days of the week. The rest of the week was dedicated to completing the first Milestone documentation. We also start working on the wireframing of the website.

Week 4 – In the fourth week, the designing of the second begun. Here Anwesh encountered a problem with the image data generator which would case the models to give low accuracy all the time. Figuring out how to tackle this error took up a good chunk of time this week. After figuring out this error, the second model was trained in 3 days which continued into early 5th week. The team also discussed to select the best design so far, so as to finalize the front-end design and Tarun along with Tanuj starts coding it into the website using HTML/CSS/Bootstrap.

Week 5 – After completion of the second model, creation and training of the third model began and was completed by the 5th day of the week. After this Anwesh went back to the first model and started improving the model even more to get an improvement of about 2-3%. Progress was made in the frontend part of the project where the basic structure of the website was coded.

Week 6 – In this week the accuracy of the second and third models were improved again by about 2-3%. Another meeting was held between the team members to review the work that had already been done and to determine if we were working at the correct pace. All members got up to speed with the future work that needs to be done in each aspect of the project.

Week 7 – In this week several model pruning techniques were explored and the first model was pruned and the accuracy of the pruned model was improved to get a satisfactory result. Tarun and Tanuj continued with the MOOC to now learn the techniques which should be used for the backend of the website to get a fast and efficient website.

Week 8 – This week the team worked collectively on the milestone 2 documents. Questions were divided among teammates and some questions were collectively worked upon by the whole team to get cover all the work that had been so far. A day before the submission the team held another meeting to compile the answers and to make sure there aren’t any errors in the document.

Week 9 – In this week attempts will be made to prune the first model even more while preserving the accuracy. If the pruning reduces the model size while keeping a satisfactory accuracy, the newly pruned model will be used, else it will be discarded. If some other method of pruning yields better results, these new techniques will be used and the older pruned models will be discarded.

Week 10- In the tenth week, the work-pace will be slowed down due to upcoming examinations. Work will be done in the backend section of the website but, as compared to the previous week there will be considerably less work. New ideas will be explored individually by teammates so they can be discussed later if they can be implemented into the project.

Week 11 – In the eleventh week, the pace will be reset for the project. All the work done so far will be analyzed and the teammates will hold a meeting to discuss the ideas that had been explored in the previous week. More work will be done in the backend of the website to ensure a robust input of data from the user end to the model to make predictions.

Week 12 - In the 12th week, the models will finally be deployed on the websites. The speed/smoothness of the website will be examined to check if there are any necessary changes in the backend of the website and/or in the models. The website will be tested by all three members to find any possible bugs in the website so they can be solved.

**Is your idea/Project/Product is applicable for patent? If Yes then, Why do you think it can be submitted for patent? How do you plan to proceed for Patent? (Even if your answer is no, explain why do you think it cannot be submitted for patent? (Minimum 300 characters maximum 1000, this question carry 1 Mark) \***

We don’t think our idea qualifies for a patent. We are making the use of previously existing technologies and techniques like web development, deep learning, model pruning, deployment etc. Even if we are able to attain the best accuracy compared to existing solutions, since it will only be an improvement and not a new invention, our project still won’t be applicable for a patent.

User Interface Design \*

Salient Points/ How it meets the characteristics of User-Centered Design etc. ( Minimum 500 character and maximum 1000 character and at least 4 figures of the User interface or other related figures of your project) This Question Carries Two Mark.

our website is more focused on getting things done so we designed the website in such a way that the work needed to do can be completed in minimum click as possible. for that, we created few mockups of the website and let some test-subjects try it without telling them anything and they were able to do their required task very easily. There is also an overall consistent feel on the website, which was achieved by keeping the same colour palette, fonts and overall design. The website also provides adequate feedback so that the user is assured that their actions have been executed or not. The website uses simple and natural dialogue for the user to see only relevant information that is essential for task completion. We tried to keep the design clutter-free by using the intuitive symbols instead of unnecessary text. This helped us in achieving a clean and sober user experience overall.

feasibility study/ Business Context of the idea/ Monetization/ Opportunity Analysis \*

Please write Minimum 1000 Maximum 2000 Characters. This Question Carries two Mark.

Our vision is to create better healthcare for all. Our business idea supports this vision by offering well-thought plans so that there is something for everyone from small-scale clinics to well-established hospitals. Our prime business market will be healthcare where there is an urgent need for groundbreaking innovations in many of its fields and to serve that purpose this project has been created. The prime focus is on user-friendly design and functioning at a reasonable price which will be implemented by the following plans:-

Free plan:

The plan will be freely available to all the hospitals and clinics that are in double minds regarding investing in it or not. 1 x-ray/day is allowed to the customer under this plan so that they can judge the benefits of our product and will in turn increase the ideal scenario to buy the full product.

Economy (Rs 2000/month)

The plan is for those healthcare facilities which want to advance in technology without spending a lot of prices. It will allow the user to scan up to 10 x-ray/day and hence our focal point will be to sell it as a budget-friendly deal that covers all the required needs of all.

Premium (Rs 5000/month)

The plan is the largest among the ones we are going to offer in which there is no limit in the number of x-rays that the user can scan. The users of this plan will have priority on the server and will be provided with the latest update as soon as they will be available.

We thought of monetizing the website through google advertisement but we want to keep the user experience a priority so we decided to go with subscription-based plans.