Product Backlog

Deep Learning Diseases

Facebook

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Product Backlog Document

Product: Deep Learning Diseases
Version: Final (3rd)

Product Description:

With this project, we aim to identify (and possibly discover) symptoms and patterns of lung cancer symptoms using Machine Learning. With this we hope to increase the accuracy of predictions for medical professionals with newfound or supporting information on patient x-rays. In addition, there are potential research applications upon successful completion of this project as the accuracy of these predictions can aid researches with confirming symptomatic diseases or similar virology research. The intended machine learning model must be able to process input data CT scans and ;labeled input data where the model must output signifying features indicative of cancer. While certain limitations exist for this input data, the project must function and return desirable output symptoms or virological features of the input disease given the constraint on said inputs.

Product Backlog

Priority	User Story	Estimated Hours	Notes
4	As a user, I want to explore additional information on the inner workings of the model and want to	2	- Add more printable statements in the colab notebook to

	see the progress.		see what the cells are doing and what they represent.
1	As a user, I want to view the classification results for a given lung image.	2	- Show what images are classified as positive and what images are classified as negative. - Show false-positives and vice versa.
6	As a user, I want to explore additional information and resources related to lung cancer.	5-6	- Add 3d models of lungs. - Add more research resources. - Add more visualizers and guides.
5	As a developer, I want to continuously improve the classification model's accuracy and performance.	Cannot estimate.	- Try to improve accuracy by adding more layers, changing hyperparameters, adding dropout layers, etc.
3	As a user, I want to upload a lung image for classification.	4-5	- Make a user interface where the user can upload their own images and run our model

			to get visual results of the classification and annotation. - Check the correct file format, contains annotations, etc.
2	As a user, I want to see annotations around the detected lung nodules in the output.	5-6	- Get annotations from the positive case. - Annotate using different colors and shapes exactly where the nodule is.