**Meeting Time:** 3:00 -3:50 pm April 10, 2023

**Attendees:** Xia Jiang, Zhen Yang

**Meeting agenda**

1. Tested iMedbot for new work done since last meeting.
2. Provided feedbacks and written comments based testing.
3. New work assignment.

**Comments**

Feedbacks from Dr. Jiang based on the new test done today.

1. Question regarding the ROC curve: what exactly was plotted, currently via the iMedbot app, the mean\_test or the true validation AUC? We will exam this in details next meeting.

Our code generates the true validation AUC, not the mean test AUC.

1.The data is split into two parts using StratifiedShuffleSplit: 80% for cross-validated grid search (X\_CV, Y\_CV) and 20% for validation (X\_val, Y\_val).

2.Grid search is performed with cross-validation using GridSearchCV, and the best model is selected based on the AUC metric.

3.The best model's predictions on the validation set (X\_val) are used to calculate the true validation AUC. The true positive rate (TPR) and false positive rate (FPR) are computed using roc\_curve(Y\_val.astype(float), Y\_pred1.astype(float)), and the AUC is calculated using auc(FP, TP).

1. When testing with new patients, the values are retrieved automatically from datasets which only contain digits, which are hard understand for human. This is a tough issue because we assume the user uses his/her own dataset what we can’t control. But still hope there is a solution. We worked around this with the iMed.
2. Not sure how you determined the waiting time, but I noticed it is different for different figures (see below), and the estimate is off. For example, you said to wait for 60 seconds in the message shown below, but I waited way longer to see the output figures.

Graphical user interface, text

Description automatically generated

Text

Description automatically generated

1. Since the warning will delay generating the figure, should you remind the user to close the warning message? (See the screenshots above).
2. The heatmap plot I tested has “strange looking” fonts in the printed pdf file (see the screenshot below). Please fixed the problem.

Chart, bar chart, treemap chart

Description automatically generated

**Specific tasks before next meeting.**

1. Refine iMedbot based on Dr. Jiang’s new comments as shown above. Respond to questions.
2. Remove the redundant datasets in the dataset folder, and add the new datasets you found.
3. When user upload their local datasets for using the “model training”, you said you have done a lot of manual work to revise the dataset. You should work on adding features that allow the data error checking ahead of time (for example, if there are a lot of missing values you could provide methods to fill in missing values), automatic reformatting of the user dataset so that the iMetbot can recognize and use it, and etc. Can you look into free programs for filling in missing values such as Amelia II. Will test this next meeting.
4. Once 1. Above Is finished, please do more testing and pay attention to not just the logic flow of the software, error handling, and the correctness of the results. Apply HCI everywhere as it fits. Record your improvements and report to me next meeting.

**Less urgent tasks**