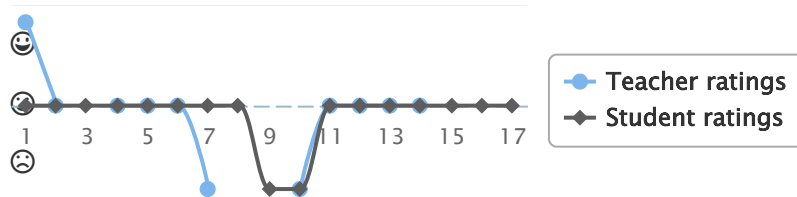




Krijnen, Maurits M.



Checkpoint 17 16-06-2022



Krijnen, Maurits M. 4 days ago

Today we shortly spoke on how my covid recovery is progressing, as I've been sick for 10 days now. Since I have not completed any new deliverables we had little else to discuss. Next week are the end of semester talks and I have promised to keep in contact on when I'm still Covid positive and when I recover.



Describe what goes well according to your teacher, what you should pay more attention to and what is your next step to achieve the learning outcomes...

Checkpoint 16 14-06-2022



Krijnen, Maurits M. 5 days ago

Today we discussed my goals for the final week. I missed last weeks meeting due to catching a bad case of Covid. This also made it impossible to work on my freaky friday project and fix my deliverables. We discussed the upcoming deadlines (20-06 9:00) for turning in the competence document and other deliverables. We also shortly discussed a few of the deliverables i was planning to turn in but it seems unlikely everything will be ready by monday, so the focus is on getting as many deliverables ready as possible.

Checkpoint 15 10-06-2022



⚠ No feedback submitted.



Slaats, Eric E.H.M.A. (Teacher) 10 days ago
9-6 meeting gemist

Checkpoint 14 02-06-2022**Krijnen, Maurits M.** 17 days ago

Had a discussion today where we spoke about my recent deliverables and did some reflecting on the semester. Since we're approaching the last few weeks of the semester I asked some questions about the final deadlines and turn in, apparently there is still an email coming that will depict the exact final day. It was recommended to me to have everything ready by Thursday however.

As I turned in my DRP dataset analysis document last week I received feedback on the document and we went over the various changes that should be made. We also discussed the progress of my freaky Friday project. I have promised to turn it in on Monday so we can make some iterative changes during the week.

I also updated my competence document and we spoke a bit about what I should add in the reflection section.

**Slaats, Eric E.H.M.A. (Teacher)** 6 days ago

Ondanks veel uitval door ziekte toch booruitgang

Checkpoint 13 24-05-2022**Krijnen, Maurits M.** a month ago

Today we discussed my progress on finishing the model and my deliverables in the short term.

To start we spoke about the evaluation document ive been working on. In this document I do analysis on the poor performance of the model and give some advice on how to proceed going forward. This document is planned to be turned in today.

After this I went over the conversation I had with the stakeholder last Friday. I discussed the models performance and the binary solution we discussed last week. The stakeholder mentions that a binary system does not give any value to the diagnosing of DRP and as such has been dismissed.

I also discussed the large amount of faulty images and asked if this was common in the field. Their response was that these faulty images are usually retaken and not submitted. This and other minor reasons have made me believe that the dataset currently in use is of lower quality then expected. If a better dataset was used the models performance would increase by quite a bit.

We also shortly discussed the added value of creating some research questions to aid me in improving the model. And the possibility of creating a research document on the findings.

Checkpoint 12 19-05-2022



Krijnen, Maurits M. a month ago

Today we discussed my plan on how to finish up the project in the coming weeks. There are about 4 weeks remaining and while the model is now working as intended, its performance isn't very good. We talked about various reasons that could be the cause for this such as the differences between category 1-2-3 being relatively small, leading to the idea of converting the labels to a binary system. We decided it would be for the best if I wrote an analysis/advice document on the topic.

Since the project deadline is approaching, I discussed the topic of whether to start focusing on the desktop application or continue improving the ML model. Eventually we decided that it should still be possible to do both with priority on improving the model since quality has priority over quantity in this case.

Checkpoint 11 12-05-2022



Krijnen, Maurits M. a month ago

Since the last meeting I've worked on various parts of the model to diagnose the problems it has and try to improve its results. We've discussed the progress and the current problems I'm working on specifically the recent one on the category 0 bias.

Some examples of progress that was discussed:

I created a new model with the scikit-learn library that work a lot more efficiently on how much time and RAM that is used while training the model.

Created an evaluation table using scikit-learn that shows a lot more information on the models performance. This confirmed my suspicion that large amount of category 0 present in the dataset causes the model to fail.

After the evaluation tool I started to do some research on how others fixed this problem (will create a assignment on this soon) and came to various websites (<https://machinelearningmastery.com/what-is-imbalanced-classification/> &

https://www.tensorflow.org/tutorials/structured_data/imbalanced_data).

I've been trying to implement some of the suggestions but with no succes yet due to the examples being too different from my project.

I said that my next goal was to try to create a dataset of even partitions per category. Since this would reduce the dataset to about 3500 images from 40.000, a suggestion was made to edit the images in different rotations to increase the data available.

Finally we spoke about the assignments in my personal course. I've not updated these in a while but promised to update them this week so they can be graded.

Since not a lot of time is left the goal is to finish with the model soon and get to working on the full application.

Checkpoint 10 10-05-2022

 No feedback submitted.



Slaats, Eric E.H.M.A. (Teacher) a month ago
sinds 16 maart geen vooruitgang meer in de personal course. Probeer hier wat vaart achter te zetten

Checkpoint 9 28-04-2022

 No feedback submitted.



Slaats, Eric E.H.M.A. (Teacher) 2 months ago
week 25-4 ziek

Checkpoint 8 28-04-2022

 No feedback submitted.



Slaats, Eric E.H.M.A. (Teacher) 2 months ago
week 18-4 ziek

Checkpoint 7 12-04-2022

Krijnen, Maurits M. 2 months ago

I was able to get the model to work with a test data set of 100 images and discussed some of the issues I was having. The main problem we discussed was the size of the numpy array that I wanted to load into the model was too large for my RAM. I was considering writing it to disk but a different solution is available at Fontys through the number cruncher at the delta location this would be a lot faster than doing it myself. I received the email address of Jelle Maas who I can contact for permission/reserving the machine.

We also discussed some other issues with the model. For example the accuracy of the initial test was 78%, but from my analysis this is mostly due to the large amount of category 0 (no dr) in the data set. Most of the not 0 images were wrong, leading to a very low recall performance where those that are sick would be diagnosed wrong.

This is likely a common problem in these kinds of ML algorithms so I will do some research on solutions.

Finally we shortly spoke on my canvas course, since I've been working on the ML model in the notebook I haven't been as active on my course and will deliver my current progress instead of waiting till it's done.



Slaats, Eric E.H.M.A. (Teacher) 2 months ago
Denk dat je op de goede weg bent, maar we hebben afgelopen weken echt wat te weinig contact gehad. Dat weerspiegeld ook in je persoonlijke course op dit moment.

Checkpoint 6 04-04-2022**Krijnen, Maurits M.** 2 months ago

Today we talked about the progress of creating a Proof of Concept for the ML model. I am working with a tensorflow tutorial to get a POC ready to convert into a model that can take in the fundus images.

We discussed some possible ways to improve the model with data cleaning and found an algorithm that can detect the location of veins in the eye.

I also scheduled another meeting with the stakeholder to discuss these ideas and if he himself has any knowledge that might be helpful.

Checkpoint 5 28-03-2022**Krijnen, Maurits M.** 3 months ago

Today we reviewed the progress of sprint 1 with the stakeholder. I held a short presentation on the sprint goals, what the progress for sprint 1 is and what goals I'm aiming for in sprint 2.

We also discussed the topic of holding user tests at the stakeholders location(they could do it themselves). And the possibility of the stakeholder retrieving more images for testing.

Checkpoint 4 24-03-2022**Krijnen, Maurits M.** 3 months ago

We discussed the KPI's I've added and where to make some changes. We also spoke a bit on the general progress of the documents and training architecture of the AI, and what expectations there are for the next sprint demo. The stakeholder meeting planned for 18-03-2022 was moved to 28-03-2022.

Checkpoint 3 17-03-2022

⚠ No feedback submitted.

**Slaats, Eric E.H.M.A. (Teacher)** a month ago

no Entry this checkpoint

Checkpoint 2 10-03-2022



Krijnen, Maurits M. 3 months ago

Today we spoke about my progress on the technical documentation since the last meeting. We discussed the importance of creating Rubrics early on so that I can better define the rating of an assignment. This also helps with adding outcomes which I struggle with.

We also decided that setting sprint goals will be important for this project since I am working as the only developer. During our meetings we will review if I am staying focused on the sprint goals or if there is some adjustments to be made.

There is a stakeholder meeting planned for 11:30 18-03-2022.

I have a short meeting planned with the stakeholder this evening, where I will gather some feedback on the project requirements and functionalities planned.

Checkpoint 1 24-02-2022



Krijnen, Maurits M. 4 months ago

We discussed the interview I had with the stakeholder on the datasets I found (see assignment debriefing interview). After this we decided on a direction for the project while brainstorming a bit for possibilities of increasing the scope of the project by adding more data or creating multiple networks. We planned a meeting with the stakeholder for the Monday after sprint 1 but this hasn't been confirmed yet.