­­­­­Personal Development Report

Thomas van der Molen

S4-AI41



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| **Project Information** | |
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| Project name | Personal Development Report |
| Version | 1.9 |

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# Version History

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| **Version** | **Date** | **Change** |
| 1.0 | 15-02-2022 | Created document |
| 1.1 | 15-03-2022 | Added a personal Introduction |
| 1.2 | 13-04-2022 | Added Evidence gathered from feedback from iteration 0 and partially iteration 1 |
| 1.3 | 19-04-2022 | Updated structure and learning outcomes after feedback Evaluation 2 |
| 1.4 | 19-04-2022 | Fixed inconsistent fonts |
| 1.5 | 10-05-2022 | Added my grading goal to Introduction |
| 1.6 | 11-05-2022 | Added evidence for evaluation 3 |
| 1.7 | 12-05-2022 | Added final feedback from Frank for evaluation 3 |
| 1.8 | 23-06-2022 | Started on writing evidence for evaluation 4 |
| 1.9 | 24-06-2022 | Finished writing evidence for evaluation 4 |

# Introduction

My name is Thomas van der Molen, I am 19 years old and have previously done Mavo and Havo before coming to Fontys to study HBO ICT & Software Engineering. While I have always been interested in IT, I did not have a background in software before coming to Fontys. During high school I took an IT class, but this did not give me any extra knowledge in the field of software engineering that I had not learned before from myself.

I have chosen to do a specialization in AI because I am very interested in the subject and think it would round out my software background nicely.

I think there is a future in the AI sector and am very interested in where this area might go in the future. I also want to learn more on the process of creating a model and training it, because I think the algorithms used are very interesting.

Because I already have a background in software, I assume that the machine learning part will come easier to me and for this I also want to spend a lot of time on data preparation because I think that I could learn a lot in this part of AI.

As for what I want to achieve this semester, seen as my previous semesters, I have been able to finish with an outstanding grading I will be trying to get outstanding again this semester.

However, I do understand that this semester will be very different from the last, and if I am not able to get an outstanding grading, I will be fine with satisfactory as well.

# Data Preparation

You can **enrich/extend** and **clean** datasets and are able to investigate and argument the use of **data storing methods**.

Evaluation 2: I think this learning outcome is currently at an **Orienting** level, maybe even Beginning.

Evaluation 3: I think this learning outcome is currently at a **Proficient** level.

Evaluation 4: I think this learning outcome is currently at an **Advanced** level.

**Evidence Evaluation 2**

Thank you for your submission! I think you did a good job, very extensive data analysis. I would expect that for such big research you would have a bit longer conclusion. Also, I think what will help you is to write down some subquestions

Pencheva, Sabina S., 15 Mar at 10:15

From the quote above gotten from my Iteration 0 delivery on canvas by Sabina, she mentions that I did very extensive and well-done data analysis. She had no direct comments or changes that had to be made to this part of my iteration, only having improvement feedback on my research components for the analytic approach and reporting.

This feedback was very positive and showed that I am on the right track with my data preparation and EDA.

**Evidence Evaluation 3**

Very good provisioning phase. You demonstrated good understanding of your data. I really like the fact that you are very descriptive in your steps. Good job!

Pencheva, Sabina S., 1 May at 20:14

The feedback given above, was from Sabina based on my provisioning phase for iteration 1 and 2. During these two iterations I learned a lot, and especially during iteration 2 I significantly improve in my ability to investigate and give valid arguments for my data.

During iteration 2 I also improved my data gathering method to avoid previously found issues, these issues proved to not be as easy so solve as expected and taught me a lot about how to properly store and clean data.

Because of my significant improvements in my abilities to investigate and prepare data, an the generally positive feedback from Sabina, I think this learning outcome is on a proficient level.

**Evidence Evaluation 4**

Hello Thomas, I see that you put effort in your open programme. However, I am missing some components. For example, in the data requirements, you did not mention what are the variables that you will need later on in your assignment. The rest looks okay!

Pencheva, Sabina S., 21 Jun at 9:23

The feedback above is about my open program challenge, during this challenge I ended up doing a lot of data analysis. The feedback from Sabina ends overall positively, the problems that Sabina did mention I have implemented and shortly talked with Sabina about, and she seemed positive about my work.

Technology: Amazing code, clearly has a good understanding of what he’s doing. Also made sure to use what he has learned in software engineering in this semester. His problem solving skills are well above the average 4th semester student I’m sure.

Peer review - 9 June – Feedpulse

From the peer feedback received, I also got overall positive feedback on data preparation phase, proving my abilities in this learning outcome.

# Data analysis & model engineering

*You can* ***train*** *different types of models and tune the* ***hyper-parameters*** *of these models. Furthermore, you can* ***evaluate*** *the results from a trained model and can use* ***other data analysis techniques****.*

Evaluation 2: I think this learning outcome is currently at an **Orienting** level, possibly closing in on Beginning.

Evaluation 3: I think this learning outcome is currently at a **Proficient** level.

Evaluation 4: I think this learning outcome is currently at an **Advanced** level.

**Evidence Evaluation 2**

Hi Thomas a few things to note: First off, I believe you went a little beyond the idea of the "iteration zero" and sort of included and iteration one" as well with the RANSAC. Which is ok, because there is still enough time for further iterations. I like that you reason on what the results are and why they are the way they are, so that is good! 👍 For me this challenge is a GO

Michielsen, Bas B.S.H.T., 15 Mar at 16:37

The above text is a snippet taken from feedback received on my Iteration 0 by Bas, he goes on to discuss possible food for thought which I dove deeper into during Iteration 1.

Bas mentions that I might have done a little too much for the scope of Iteration 0. However, Bas went on to explain that he thinks I did good research and had given valid reasoning for my results during the modelling phase.

I think this feedback was very positive combined with giving good future points of interest for further iterations and Bas also directly gave me a GO on this challenge, indicating that I have shown clear potential with my project.

**Evidence Evaluation 3**

Please note that I am possible in general about your work, you demonstrate an excellent level of subject comprehension but we do AI not because we can, but to "address a case", you seem to have changed it into a hobby to run models and fiddle with the hyperparameters and the goal has become sort of secondary.

Michielsen, Bas B.S.H.T., 26 Apr at 17:34

This snippet of feedback is taken from feedback given by Bas on my machine learning iteration 1 work. Bas gave a lot of feedback on mistakes that I made during this iteration, but as seen above did end it by saying that while I made plenty of mistakes with the way I approached my work, I do demonstrate a good level of knowledge on the subject.

Because of the feedback received from Bas I ended up having an extra one on one meeting to discuss my work and where I went wrong, seen as I do show my ability to work with models, but did not properly show it in correlation to the domain.

Hi Thomas, well done, I am not worried about your work in general, see if you can get your case oriented focus back and I believe the next iteration will be really good!

Michielsen, Bas B.S.H.T., 28 Apr – Feedpulse

During the meeting we discussed what I did wrong and ended up posting what we discussed on feedpulse, Bas also gave a response to my comment and wrote the above.

This response further indicates that while I do show a sufficient level of comprehension of the subject, I failed to apply it back to the domain I am working in and will improve on this during iteration 2.

Hi Thomas, it is clear to me that you are a very capable student / applied researcher and have also a way of explaining what you are doing such that the story is interesting to follow. I made a comment about you missing the point and you seem to have quickly recovered from that. You feel no "problem" stating that previous reasoning was flawed and now want to have another shot. Even though you are occasionally verbose, I never dislike reading your work. You have a sharp eye for the differences in details and you do not jump to conclusions and leave questions as they are.

Michielsen, Bas B.S.H.T., 10 May at 16:15

As written in the feedback from Bas above, I seem to have improved on the mistakes during iteration 1 in iteration 2. This chain of positive feedback I think proves that I am on a proficient level for this learning outcome.

**Evidence Evaluation 4**

Below I have pasted a snippet from the feedback received from Bas about my predictions phase for my open program challenge. My personal goal during my open program challenge was to use a form of unsupervised modelling, seen as this is something not covered in the regular curriculum, and I think is a very important part of AI in the real world.

Bas agreed with my ideas and mentioned that doing a form of unsupervised clustering is a great step up from what had been done during the semester, from the feedback I think it is visible that I achieved my goal to implement this different type of model to a sufficient degree.

Hi Thomas, we discussed this work in a short meeting and even though I did my very best to shoot holes in it, I did not manage. The parts that are perhaps a little weaker you knew already about and have addressed as well in the document itself (transparency of clustering in general, the fact that you use the quantity as a metric, etc.) so all in all I am very happy about this work

Michielsen, Bas B.S.H.T. , 23 Jun at 15:39

# Reliability and transparency

You support conclusions based on **domain knowledge** and **sources**, and processes used should be **well** **explained** and make sense.

Evaluation 2: I think this learning outcome is currently at a **Beginning** level.

Evaluation 3: I think this learning outcome is currently at a **Proficient** level.

Evaluation 4: I think this learning outcome is currently at an **Advanced** level.

**Evidence Evaluation 2**

Hey Thomas, It seems you sufficiently dove into the domain of movies. Could be a little more extensive, and too bad you can't find an expert, but maybe you could then add some "literary source"(?) (<-maybe a piece about what makes the "world of movies" tick?) to use as an expert? If you can't really find that, don't put too much more time in that and go on with EDA-ing. Good start so far!

Bloks, Danny D., 8 Mar at 14:12

As we discussed recently, in this way the Proposal Phase seems sufficiently displayed in this document and your process. So good job. For the Provisioning Phase you should ask Sabina. Good luck!

Bloks, Danny D., 5 Apr at 14:36

From the feedback above received by Danny for Iteration 0 and 1 respectively, Danny states that I have sufficiently displayed my domain understanding and process. I have also taken Danny’s earlier feedback into consideration and improved on these aspects mentioned during iteration 1.

**Evidence Evaluation 3**

Firstly we discussed Reliability and Transparency, here Danny referred back to my overall grading for Domain Understanding, and mentioned that what I have done so far is good on this front, if I continue documenting and using valid sources for my Delivery phase I should be at a Proficient level.

Meeting Thomas - Bloks, Danny D., 22 Apr – Feedpulse

The feedback above was paraphrased by me during a meeting with Danny discussing my learning outcomes. During this meeting Danny mentioned that my skills for Reliability and transparency are on a high level and did not have anything to improve.

Danny mentioned that if I did the same work I had done so far for my delivery phase, that all my SI phases would be at sufficient. After finishing iteration 2 and handing it in together with my delivery phase, Danny indeed did give me sufficient for all phases indicating that I indeed have a proficient level for this learning outcome.

Hi Thomas, it is clear to me that you are a very capable student / applied researcher and have also a way of explaining what you are doing such that the story is interesting to follow. I made a comment about you missing the point and you seem to have quickly recovered from that. You feel no "problem" stating that previous reasoning was flawed and now want to have another shot. Even though you are occasionally verbose, I never dislike reading your work. You have a sharp eye for the differences in details and you do not jump to conclusions and leave questions as they are.

Michielsen, Bas B.S.H.T., 10 May at 16:15

The feedback given by Bas I think applies perfectly to my previous evidence and does indeed show my understanding of basing conclusion on domain knowledge and sources.

**Evidence Evaluation 4**

Goed bezig geweest. Uitstekend vooronderzoek gedaan in de verschillende use cases en mogelijkheden van unsupervised clustering voor recommendation systems!! Behalve een mogelijk interview (niet verplicht) zie ik niet in wat je op deze korte termijn daar nog voor tijd aan zou moeten besteden.

Bloks, Danny D., 18 Jun at 17:11

You way of documenting your process and in your notebook is well done.

Bloks, Danny D. , 23 Jun at 22:50

so all in all I am very happy about this work and also like the fact that you use the notebook as way to code and as a way to explain what you do as this improves the reliability of the work and also makes it transferable to another person or case.

Michielsen, Bas B.S.H.T. , 23 Jun at 15:39

During my open program challenge, I spent a lot of time deep diving into the domain of e-commerce recommendation systems, and I think in combination with the feedback above received from Danny and Bas about my domain understanding and way of explaining within the challenge, that I have done a good job and proven my abilities for this learning outcomes extensively.

# Targeted interactions

*You can* ***clearly communicate*** *with readers/audience, keeping into* ***consideration*** *the knowledge of set audience and the medium used to communicate information.*

Evaluation 2: I think this learning outcome is currently at an **Undefined** level, this is because I do not have any direct evidence to show this learning outcome and will be gathered for next evaluation.

Evaluation 3: I think this learning outcome is currently at a **Proficient**.

Evaluation 4: I think this learning outcome is at an **Advanced** level.

**Evidence Evaluation 3**

After discussing this learning outcome during Evaluation 2, I found that I do have evidence for this learning outcome, some of these have been posted below.

For Targeted Interactions, Danny also mentioned that this learning outcome is mostly displayed during phase 4, however during phase 1 I have done plenty of research and shown my understanding into the stakeholders involved with my domain. Danny thinks this learning outcome should currently be on Beginning.

Meeting Thomas - Bloks, Danny D., 22 Apr – Feedpulse

Hi Thomas, I am happy to read through this work, it is well structured, well explained in simple terms and concise wording. I even read through the Provisioning phase without getting bored (which I usually do because I am eager to see the models in actions 😁), but you seem to have a way of writing your reasoning and showing the graphs etc. that keeps the reader interested. Well done! 👍

Michielsen, Bas B.S.H.T., 26 Apr at 17:34

Very good provisioning phase. You demonstrated good understanding of your data. I really like the fact that you are very descriptive in your steps. Good job!

Pencheva, Sabina S., 1 May at 20:14

I think these 3 pieces of feedback from my different teachers perfectly show my understanding and proficient level of this domain. Danny starts by mentioning that this learning is mostly shown for him during my phase 4 and that I at that time (before iteration 2) was already at a beginning level for this learning outcome. After finishing iteration 2, Danny gave me a sufficient for this phase showing that I indeed showed what I had to during this phase.

Furthermore, both Bas and Sabina mentioned that they liked reading my submission, even going as far as to read my whole challenge because it was interesting.

Thomas. You have shown us (me and Sabina) so far that you communicate very well with us as teachers, with Jugo as a stakeholder and within the group. You have shown your proactive role in this. I have not seen any written communication with Jugo, but that is because you are not the contact person. But in all presentations, you are the one in the lead. Both learning outcomes are Proficient. Well done

Meeting Thomas - Schürgers, Frank F.P., 11 May - Feedpulse

Lastly, Frank also gave me feedback on this learning outcome, showing my ability to communicate not only in my written documents but also during meetings with stake holders and teachers.

I think these pieces of evidence clearly show my proficiency in being able to communicate in a well structured and easy to follow manner for my readers/audience.

**Evidence Evaluation 4**

During this semester I have tried having good communication both with my stakeholders such as in the group project, as in my delivery phases for my challenges.

You did great in my opinion. You know what you are doing and are always willing to help your group members. Communicating with the client was really good, as you knew exactly what you were talking about.

Peer review - 9 June – Feedpulse

Documentation: Made sure to explain every cell of code, which I took example of for my own project. Always has clear and concise explanations.

Peer review - 9 June – Feedpulse

From my peer feedback received from my group members, I got positive feedback when it comes to my communication to stakeholders and in documentation such as the delivery phase of the group project.

Below I have also posted a part of the feedback received from Danny with the first one being about my domain understanding which referenced my progress and delivery phase and the second being feedback on my delivery phase.

Als je in fase 4 met deze kwaliteit terugpakt op je proposal en dan een goede documentation en delivery report doet, dan is dat extra bewijs voor peeruitkomsten als Investigative Problem Solving, Future Orientation en Targeted Interaction. Ga! Zo! Door! :)

Bloks, Danny D., 18 Jun at 17:11

To start of, I really like that you tried something different for your open programme that also interested you. I think you have shown a quite proficient way of diving into the domain and reporting about it.

Bloks, Danny D. , 23 Jun at 22:50

The feedback from Danny was very positive and I think shows that I did a good job in communicating with my audience in a proper way during the whole challenge.

# Future orientation

*You can* ***identify and explore*** *the* ***context*** *in which your project takes place, and you can approach this from* ***multiple perspectives****.*

Evaluation 2: I think this learning outcome is currently at a **Beginning** level, it could still be considered **Orienting** with more direct evidence needed.

Evaluation 3: I think this learning outcome is currently at a **Proficient** level.

Evaluation 4: I think this learning outcome is currently at an **Advanced** level.

**Evidence Evaluation 2**

Hey Thomas, It seems you sufficiently dove into the domain of movies. Could be a little more extensive, and too bad you can't find an expert, but maybe you could then add some "literary source"(?) (<-maybe a piece about what makes the "world of movies" tick?) to use as an expert? If you can't really find that, don't put too much more time in that and go on with EDA-ing. Good start so far!

Bloks, Danny D., 8 Mar at 14:12

The feedback shown above was given by Danny on my Iteration 0, he starts this feedback by mentioning that I sufficiently dove into the domain of movies, Danny goes on further highlighting the problems that I have had trying to get in contact with a domain expert. It is also mentioned that I could add Literary sources to improve my understanding.

As we discussed recently, in this way the Proposal Phase seems sufficiently displayed in this document and your process. So good job. For the Provisioning Phase you should ask Sabina. Good luck!

Bloks, Danny D., 5 Apr at 14:36

During Iteration 1, I continued looking for domain experts with the help of my semester coach, however I also took Danny’s advice and tried finding more different angles to approach my domain from and adding literary sources.

As said in the feedback above from Iteration 1, I seem to have done this to a satisfactory degree, giving me no real points of improvement and mentioning that I can move on to the next phase.

From this feedback I think I have done plenty of research into the context and effects of my project and showing a good investigation into the different perspectives of my domain and project.

**Evidence Evaluation 3**

During iteration 1’s modelling phase I dropped the ball on this learning outcome, I mostly forgot the goal of the project and instead of finding the best model for my domain I tried finding the best model in general mathematically, as said in feedback from Bas.

but we do AI not because we can, but to "address a case", you seem to have changed it into a hobby to run models and fiddle with the hyperparameters and the goal has become sort of secondary.

Michielsen, Bas B.S.H.T., 26 Apr at 17:34

I made a comment about you missing the point and you seem to have quickly recovered from that. You feel no "problem" stating that previous reasoning was flawed and now want to have another shot. Even though you are occasionally verbose, I never dislike reading your work. You have a sharp eye for the differences in details and you do not jump to conclusions and leave questions as they are.

Michielsen, Bas B.S.H.T., 10 May at 16:15

I applied the feedback received during iteration 2, and as the feedback above shows have improved on this aspect.

Furthermore, Danny has graded all my SI phases as sufficient, showing that from a domain understanding perspective I have also shown this learning outcome to be on a high enough level.

**Evidence Evaluation 4**

Goed bezig geweest. Uitstekend vooronderzoek gedaan in de verschillende use cases en mogelijkheden van unsupervised clustering voor recommendation systems!! Behalve een mogelijk interview (niet verplicht) zie ik niet in wat je op deze korte termijn daar nog voor tijd aan zou moeten besteden.

Bloks, Danny D., 18 Jun at 17:11

During my open program challenge, I investigated different methods used for implementing and using recommendation systems in my domain, I think the feedback above shows that this was done to a sufficient degree.

To start of, I really like that you tried something different for your open programme that also interested you. I think you have shown a quite proficient way of diving into the domain and reporting about it.

Bloks, Danny D. , 23 Jun at 22:50

During the last phase of my challenge, I also asked Danny for more feedback on this, the feedback that I got which is shown above I think reinforces the point that I have done the goals for future orientation very well.

# Investigative problem solving

*You can Identify a problem and create a* ***hypothesis*** *and* ***research question*** *and can do this using a sound* ***research methodology****.*

Evaluation 2: I think this learning outcome is currently at an **Orienting** level, while lacking enough feedback for a higher grading.

Evaluation 3: I think this learning outcome is currently at a **Beginning** level, needing more direct evidence to show that I am on a **Proficient** level.

Evaluation 4: I think this learning outcome is at an **Advanced** level.

**Evidence Evaluation 2**

Also, I think what will help you is to write down some subquestions

Pencheva, Sabina S., 15 Mar at 10:15

During Iteration 0, Sabina gave me the feedback to add sub questions besides my main question to give me a better Idea of what to expect and what could impact my challenge. I added these sub questions afterwards and did indeed do more research into different aspects of my domain and possible factors that could affect my approach.

One of these factors were other features that I had not considered during my Iteration 0 initially such as actors impacting the performance of a movie, I had written this out with my reasoning for this. Bas had later given me feedback on this which is displayed below.

I do agree with your statement that perhaps enriching the dataset will give you more usable features.

Michielsen, Bas B.S.H.T., 15 Mar at 16:37

From this it seems that I have done a good job at being able to formulate and convey my reasoning and hypotheses made, with the example above given as one indication of this process.

**Evidence Evaluation 3**

Hi Thomas, it is clear to me that you are a very capable student / applied researcher and have also a way of explaining what you are doing such that the story is interesting to follow. I made a comment about you missing the point and you seem to have quickly recovered from that. You feel no "problem" stating that previous reasoning was flawed and now want to have another shot. Even though you are occasionally verbose, I never dislike reading your work. You have a sharp eye for the differences in details and you do not jump to conclusions and leave questions as they are. I would not be surprised if at some point in your future you find yourself publishing a paper, and I would certainly like to read it. 👍

Michielsen, Bas B.S.H.T., 10 May at 16:15

While I do not have a lot of direct evidence to show for this specific learning outcome, I think the feedback Bas gave me perfectly shows my progress when it comes to working in a research-based environment.

The fact that he both directly indicates that the research that I done in a sound way, and believes in my ability to do this, even going as far as to suggest that I perhaps in the future would publish a paper shows my proficiency when it comes to investigative problem solving.

**Evidence Evaluation 4**

Goed bezig geweest. Uitstekend vooronderzoek gedaan in de verschillende use cases en mogelijkheden van unsupervised clustering voor recommendation systems!! Behalve een mogelijk interview (niet verplicht) zie ik niet in wat je op deze korte termijn daar nog voor tijd aan zou moeten besteden.

Bloks, Danny D., 18 Jun at 17:11

During domain understanding for my open program challenge, I created a main question with sub questions to investigate, I think the feedback above from Danny proves that I did this to a sufficient degree.

Furthermore, after the challenge was finished, I asked Danny for final feedback in which he mentioned that I did the whole domain and delivery phase in a proficient way.

To start of, I really like that you tried something different for your open programme that also interested you. I think you have shown a quite proficient way of diving into the domain and reporting about it.

Bloks, Danny D. , 23 Jun at 22:50

Hi Thomas, we discussed this work in a short meeting and even though I did my very best to shoot holes in it, I did not manage. The parts that are perhaps a little weaker you knew already about and have addressed as well in the document itself (transparency of clustering in general, the fact that you use the quantity as a metric, etc.) so all in all I am very happy about this work

Michielsen, Bas B.S.H.T. , 23 Jun at 15:39

Lastly, during a feedback meeting with Bas we went into my research and possible problems I had encountered or issues with my methodology, I think the feedback above shows that even though my challenge had possible issues with the research methodology used, I had already accounted for this and done plenty of further research into my domain as to be able to create a good hypothesis and project.

# Personal leadership

*You are* ***proactively*** *looking to improve your own* ***development*** *and* ***learning****, while taking a* ***leading position*** *in your projects.*

Evaluation 2: This learning outcome will be at **Undefined** Because I currently have no evidence to show my progress, however I have discussed this with my study coach who will give me feedback on this in the future.

Evaluation 3: I think this learning outcome is at a **Proficient.**

Evaluation 4: I think this learning outcome is at an **Advanced** level**.**

**Evidence Evaluation 3**

Because this learning outcome is not as easily shown via direct evidence, I had asked my semester coach for a feedback session focusing on gaining evidence for this learning outcome which is shown below.

Besides asking for direct evidence for this learning outcome, I have also focused more of my attention since last evaluation on getting feedback session with my teachers helping me get a better understanding of what I can improve on and what I am doing well, together with giving me direct evidence to use in this PDR.

Furthermore, I have also taken a leading position in my group project during this semester, while I am also trying to give my other team members the possibility to take the lead for their own development, I have consistently been in a front position during meeting with the stakeholders or when discussing what to do for the project itself.

Thomas. You have shown us (me and Sabina) so far that you communicate very well with us as teachers, with Jugo as a stakeholder and within the group. You have shown your proactive role in this. I have not seen any written communication with Jugo, but that is because you are not the contact person. But in all presentations, you are the one in the lead. Both learning outcomes are Proficient. Well done

Meeting Thomas - Schürgers, Frank F.P., 11 May - Feedpulse

I think these written and general pieces of evidence show my progress and level of personal leadership, both within my group project as in my own development.

**Evidence Evaluation 4**

During the last part of the semester, we had a peer review moment where the 3 other members from my group gave me peer feedback, I think this feedback clearly shows my proficiency in this learning outcome.

You know what you are doing and are always willing to help your group members. Communicating with the client was really good, as you knew exactly what you were talking about. Communication in general was good. Always aware of the deadlines, so you were sure that the project was delivered on time. You are able to self-reflect and receive feedback.

Peer review - 9 June – Feedpulse

Initiative: You always go the extra mile to make sure everything’s great.

Reflection: You’re able to reflect properly on yourself, but sometimes I think you are too hard for yourself. For example when our whole class is behind, and you were way ahead, even then you were working hard on your individual project. I don’t know if this is because you want to score high, or this was because you weren’t sure if you would’ve been scored sufficient. But maybe you are underestimating yourself since everything you do is great.

Peer review - 9 June – Feedpulse

Thomas is super motivated. He shows that he knows what he's doing and he is a natural leader.

Peer review - 9 June – Feedpulse

The feedback received from my group members above, highlight my attempts to be as proactive as possible and to try and improve based on the feedback I have received.

## Full peer feedback

You did great in my opinion. You know what you are doing and are always willing to help your group members. Communicating with the client was really good, as you knew exactly what you were talking about. Communication in general was good. Always aware of the deadlines, so you were sure that the project was delivered on time. You are able to self-reflect and receive feedback. Your technical knowledge in the project was really good.

Anonymous - Peer review - 9 June – Feedpulse

Documentation: Made sure to explain every cell of code, which I took example of for my own project. Always has clear and concise explanations.

Presentation: Great explanation towards JUGO, so I am sure you are a great presenter.

Collaboration: Easy to work with and willing to explain something, even when it’s unneeded. He will go the extra mile to make sure you totally understand what he’s talking about. Which is an amazing trait you have.

Communication: When we we’re working together for the group project, you were easy to work with even when I wanted to start early or late. You communicate clearly when you missed your buss for the schooldays. You also communicated clearly what days you wanted to work on the group project and what times.

Initiative: You always go the extra mile to make sure everything’s great.

Reflection: You’re able to reflect properly on yourself, but sometimes I think you are too hard for yourself. For example when our whole class is behind, and you were way ahead, even then you were working hard on your individual project. I don’t know if this is because you want to score high, or this was because you weren’t sure if you would’ve been scored sufficient. But maybe you are underestimating yourself since everything you do is great.

Technology: Amazing code, clearly has a good understanding of what he’s doing. Also made sure to use what he has learned in software engineering in this semester. His problem solving skills are well above the average 4th semester student I’m sure.

Anonymous - Peer review - 9 June – Feedpulse

Thomas is super motivated. He shows that he knows what he's doing and he is a natural leader. Always eager to help others and at ease for presentations. Always on time and at location except when discussed otherwise. Small tip: Communication could be a bit more, for example when making a planning that involves the whole group, take them in the loop when coming up with it.

Anonymous - Peer review - 9 June – Feedpulse

# Internship Preparation

*You create* ***opportunities*** *for finding an* ***internship****, that aligns with your* ***personal needs*** *and the* ***school requirements****.*

Evaluation 2: I think this learning outcome is on a **Beginning** level.

Evaluation 3: I think this learning outcome is on an **Orienting** level.

Evaluation 4: I think this learning outcome is on an **Advanced** level.

**Evaluation 2**

For my Internship Preparation I have been building up a list of internships provided on the [ASAM](https://asam.fhict.nl/student/) Fontys platform that I am interested in. The plan for this list is to be able to identify what kind of internship I want and give me a list of internships I can contact.

I have also gone to the career day organized in the Fontys TQ building, during this day I talked with many companies, such as Axians, Mobeye, Vanderlande, Alten, LiveWall, BDO and more.

Many of these I have signed into their systems as provided by them either via a website or on paper, hoping to get an interview with them in the future.

I have also asked some companies who might not have been giving internships for year 3 students questions about applying for jobs/internships seen as I would like a clearer picture of this.

From the companies that I spoke to during the career day, BDO stood out to me, the representatives were very welcoming and nice to talk to, we also discussed BDO’s currently used technologies, and these aligned very well with my experience so far.

Furthermore, I have been looking into creating a CV to share with companies, I already have a LinkedIn page that I have built up over the years, and a GitHub page for my technical projects, but I lack a CV and am not sure how to structure one properly.

I have asked my semester coach on feedback for this, and he is planning on doing a workshop for this in the future.

**Evaluation 3**

After the last evaluation, I had it very busy with my challenge and thus did not have as much time to work on finding an internship.

However, during this period I have created a CV that I can share with possible internships (one company asked for mine and I did not even have on to give) with the help of my semester coach Frank, seen as he has experience in this area.

Furthermore, I have started contacting companies from the ASAM platform asking about their available internships and am currently waiting on their replies.

**Evaluation 4**

Since the last evaluation, I have had multiple interviews and meetings with possible internships that I had contacted, A couple of them have offered me an internship and I ended up choosing the company Author-e because of the easier accessibility and the assignment lining ­up very well with my current experience.

Akkoord met bedrijf en opdracht

Heck, Petra P.M., Jun 8 at 10:59am

I have created my internship proposal and had it approved by both the internship company and Fontys and I am ready to start the internship next semester with all other preparations being finished already (such as signing internship trainee agreements and other forms).

# Retrospective

During this semester, I have done three different challenges to try and gain knowledge into the AI domain, during the semester I have learned many things and noticed things that I can improve on in the future.

During my projects this semester I have done a lot more documentation than in any previous software semester, while over time during software I started to realize the importance of documentation and research, during this semester it really became clear.

For my challenge two whole phases were designed almost exclusively around doing research into the domain and documenting any findings, this helped a lot with getting a good grasp of the project itself and things to consider, this is something that I will continue doing in my software projects.

Furthermore, during the group project I noticed that our planning was not sufficiently discussed or managed resulting in periods where people were behind on their work or people did not know what other group members were working on, in the future I would try making it more of a priority to set up a proper planning and make sure that everyone takes a part in it.

It was also noticed in the group that the workload was not evenly distributed with some members working slower and taking their time causing other people to start working ahead and end up doing most of the work, this could have been managed better.

Lastly, at the start of my semester I was lacking in my frequency of asking for feedback, towards the end of the semester I became better at this, but I feel I still did not give myself the chance frequently enough to talk to a teacher and discuss my progress.

One example of this was at the end of the group project, where one of the group members spent a lot of time on a specific phase of the project and wanted feedback on this to use in their PDR, however because of a misunderstanding we were not allowed to use any of our group project work in our PDR.

# Conclusion

While I had a lot to learn this semester, I think I did this fairly well. During this semester I spent a lot of time really learning how the concepts work that were used during this semester, such as the principles of data analysis (which after reading many research papers, I now know why this is an entirely separate study), the technologies for modelling and even the thought that goes into doing good domain research and delivering a satisfactory result.

This semester was very new for me, seen as it was not focused on software engineering as I am used to, this gave me a chance to learn a lot of new things very quickly, but this also meant I had to spend a lot of time learning everything possible to create an as good as possible project.

Over the course of my 3 different challenges that I took a part in, I can see my improvements over time and I think that with the last unsupervised recommendation system challenge, that I proved the skills that I learned so far.

I also believe that I have gone beyond the regular curriculum that was set out to get a satisfactory or good result at the end of the semester. As stated in the [Introduction](#_Introduction), I wanted to get an outstanding this semester and with the effort I have put in and the results I have to show for it, I think that I accomplished this goal.