­­­­­Personal Development Report

Thomas van der Molen

S7-AI-A-RB

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

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# Introduction

My name is Thomas van der Molen, I am 21 years old and have previously done Mavo and Havo before coming to Fontys to study HBO ICT & Software Engineering.

I am currently working for the software company Author-e where I lead several different software projects.

I have done Advanced Software in my previous semester, and while I still want to focus on Software I think there is a lot to learn within the domain of AI, hence I decided to do Advanced AI as well.

During this semester, I want to learn more about the underlying algorithms power large AI models.

All previous semester I have been able to achieve an Outstanding grading, so I will try to achieve Outstanding this semester as well. However, I did recently learn that getting Outstanding every semester does not actually directly affect graduating with Cum Laude and for this reason I have put less importance on it.

# Data Preparation

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

Evaluation 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 1**

During the start of the group project, I have spent a lot of time researching varying DevOps tools specifically for machine learning projects, especially DVC for which I have created a research document, with guide for fellow students and have implemented my findings for data / model / experiment -management in the group project.

Furthermore, I have started performing data analysis on the data of the group project together with my project group, and have done initial dataset exploration for smaller datasets used during exercises which I have extensively discussed with Technical tutor (Olaf).

# Data analysis & model engineering

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

Evaluation 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 1**

Besides the workshops offered during this semester, I have explored models of which I had limited understanding such as CNN, for which I had actually found very unique issues while evaluating the model, which I have extensively discussed and further explored based on feedback from the Technical tutor (Olaf).

# 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 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 1**

During the early parts of the project, I have created a Business Proposal in collaboration with my project group, for which feedback from the Process tutor (Martijn) was very positive, keeping the audience in mind. Furthermore, I have created a DVC research intended to document my findings and be able to share this with my fellow students for them to use it as a guide, also providing a README in my group project with instructions of how to use DVC within our project.

During the initial meeting with SUE, I have also taken a leading position in communication both during the meeting and general communication via email/google chat in which I showed my ability to communicate clearly with stakeholder.

# Future orientation

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

Evaluation 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 1**

For the set-up of the group project, I ensured that a Business proposal was created that could clearly show our understanding and vision of the project, to ensure that no unexpected issues will be encountered later on, including setting up effective communication channels with the stakeholders.

Secondly I have spent a lot of time researching and setting up a robust DevOps environment for the group project that the stakeholder company can adopt even after the project in finished, using best practices and tools explored in my DVC research.

# 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 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 2**

I have created a research document, exploring DVC. This research document is done using the DOT framework methodology, including the machine learning extension specifically added for the machine learning context.

This research document has been shown to the Process tutor (Martijn) who was positive about the methodology and research done.

# Personal leadership

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

Evaluation 1: I think this learning outcome is currently at an **Orienting** level.

**Evidence Evaluation 1**

From the start of the semester, I have tried to ensure that my work can properly cover the learning outcomes set out for this semester. Secondly, I have taken a leading position within the group project, often leading meetings both within the group and with stakeholders.

Furthermore, I have spent significant time performing research and exploring machine learning within my own time to try and further understand topics that might not be covered by the normal curriculum (excluding the Open Program). I have also tried to be very proactive in asking for feedback on my work done, giving me valuable knowledge and ideas from both tutors and fellow students.

# Graduation Preparation

*You create* ***opportunities*** *for finding a* ***graduation internship****, that aligns with your* ***personal needs*** *and the* ***school’s requirements****.*

Evaluation 1: I think this learning outcome is currently at a **Beginning** level.

**Evaluation 1**

Before the start of the semester, I have already spent a lot of time building up an understanding of what I want to do after graduation, including interviews and domain explorations and improving my outwards appearance for companies by improving my LinkedIn, GitHub, CV and creating a portfolio website.

I already have created a full planning for finding a graduation internship, including fallback plans which can be found in my Open Program Plan.

The work done so far has already seemed to pay of with me getting semi-daily emails and LinkedIn messages from new companies and previously approach companies both for working opportunities and internships.

# Retrospective

# Conclusion