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| Wit met zwarte robothanden  Personal development report | Nick van Beek  AI for society |

# Introduction

**Personal background**

My Name is Nick van Beek, I’m from a little village in Brabant called Zundert. In my free time I am busy doing either research on local history specifically World War 2 because I am a World War 2 reenactor and collector or building a big parade float for Corso Zundert where I build for Buurtschap ‘t Stuk. I do understand that not everyone knows about Corso Zundert so here is the official website: <https://corsozundert.nl/>.

**Educational background**

After high school I started a MBO 4 Education in IT-Management, after this I decided I wasn’t done with learning and started a bachelor IT at Fontys Tilburg in September 2019. The first 2 years (main direction) I took the Software engineering route. In Semester 4 I chose Cyber Security as a specialization and liked that so much I also did my first internship in this direction. After the internship I did Cyber advanced and now I’m taking this minor. I chose this minor for 2 main reasons, firstly because it fits well within my IT education and therefore I think it will help me in my future career, and secondly I have always found it an interesting technology and with the recent big steps forward I believe you can’t go without it in the future.

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# LO-1 Societal impact

*The student is able to approach the context and impact of their own AI project(s) from different perspectives in a sustainable way. In addition, the student is able to reflect on their own choices, taking into account data legislation and the (possible) impact on society.*

**Explanation:**

Societal impact is simply put the impact my choices and projects have on society. This can have to do with things like, is it good for the environment or can this be used by every member of our society?

## First evaluation:

I followed Danny’s seminar on societal impact and what it means in relation to AI.

**Self-assessment:**

Orienting

## Second evaluation:

In my research document I’ve put the societal impact of my personal project.

**Self-assessment:**

Beginning

## Third evaluation:

This period I made a quick scan with the TICT Tool, got feedback from Danny about this and made an Impact report that dives deeper into the subjects.

**Self-assessment:**

Beginning / Proficient

**Feedback/Feedpulse:**

**Afbeelding met tekst, Lettertype, schermopname, wit

Automatisch gegenereerde beschrijving**

Afbeelding met tekst, schermopname, Webpagina, Website

Automatisch gegenereerde beschrijving

# LO-2 Investigative problem solving

*The student is able to critically look at their own AI project(s) from different perspectives, recognize problems and come up with appropriate solutions.*

**Explanation:**

It is about looking at your project differently and try to find problems and there solutions before you just call your project done.

## First evaluation:

Did nothing on this subject yet.

**Self-assessment:**

Undefined

## Second evaluation:

Started on a research document regarding my personal project, also made a document about different natural language processing models for the group project to determine which ones we can use.

**Self-assessment:**

Orienting

## Third evaluation:

Look at the societal impact and made a report with possible negative outcomes/influences of my own project, this helps me to think about how I’m going to make my application.

**Self-assessment:**

Beginning

# LO-3 Data preparation

*The student is able to collect data and estimate its quality and usability. The student is also able to adjust the data if necessary for proper usage in their project(s).*

**Explanation:**

Not all datasets you encounter are clean or fully usable, so preparing the data is necessary before using the data. This involves cleaning the data and getting rid of unnecessary data.

## First evaluation:

I followed the python courses, this included some data preparation, mostly explaining what it is rather than doing it by myself. We did look more into it in the Utrecht housing case and did a little bit of Data preparation ourselves.

**Self-assessment:**

Orienting

## Second evaluation:

Did nothing on this subject this period

**Self-assessment:**

Orienting

## Third evaluation:

Used different datasets this period which all required some preparation for both the group project and my personal project. I did things like dropping duplicate rows and deleting rows with null values.

**Self-assessment:**

Beginning/Proficient

# LO-4 Machine teaching

*The student is able to use data to train models in a way that fits the intended purpose. The student is also able to test whether the models have been adequately trained.*

**Explanation:**

Machine teaching entails training an AI model an testing their ‘skills’ with test data. Also if you get an 100% test score on the first try this doesn’t mean you made the perfect AI model.

## First evaluation:

During the Python courses we also trained our first models using different libraries. I’ve made one for determining weight in correlation whit height. And one for determining housing prices for houses in Utrecht.

**Self-assessment:**

Orienting

## Second evaluation:

Did nothing on this subject this period

**Self-assessment:**

Orienting

## Third evaluation:

For my personal project I tried to train my own model on the MNIST dataset so that it could recognize numbers, after a meeting with Coen I changed directions to training a model to recognize whole sentences at the same time. For the group project I trained a model to recognize fake news with a dataset from Kaggle, later we decided to use a pre trained model in LM studio with PHI-3 so I’ve also been working with that.

**Self-assessment:**

Beginning/Proficient

**Feedback/feedpulse:**

**Afbeelding met tekst, schermopname, Lettertype

Automatisch gegenereerde beschrijving**

**Afbeelding met tekst, schermopname, Lettertype

Automatisch gegenereerde beschrijving**

# LO-5 Data visualization

*The student is able to use data to create an interesting, informative and compelling story in an (interactive) data visualization product, tailored to the right target group.*

**Explanation:**

This has to do with selecting which data you want to show and how you are going to show said data.

## First evaluation:

During the python courses we also visualized data for the Utrecht housing case, we saw some different graphs and how we could create them in Python. Also we got tips on when to use what kind of graph.

**Self-assessment:**

Orienting

## Second evaluation:

Did nothing on this subject this period

**Self-assessment:**

Orienting/Beginning

## third evaluation:

Did some data visualization for my own project with the MNIST dataset. Also made the poster for the group project with some data visualization on it.

**Self-assessment:**

Beginning

**Feedback/feedpulse:**

**Afbeelding met tekst, schermopname, Lettertype

Automatisch gegenereerde beschrijving**



# LO-6 Reporting

*The student is able to report in a methodologically sound manner on (the outcome of) own AI projects (project proposal, process documentation, reporting of final results, etc.).*

**Explanation:**

This is for measuring your reporting skill by looking at the documents rather than the technical side.

## First evaluation:

This first phase I’ve been involved in making a Project proposal for the group project and for my own project.

**Self-assessment:**

Orienting

## Second evaluation:

Made some documentation for both personal and group projects.

**Self-assessment:**

Beginning

## Third evaluation:

This period I documented the impact report for my own project, also I made the midterm event poster for the group. And for both I’ve explained what I coded in my python notebooks.

**Self-assessment:**

Proficient

# LO-7 Personal leadership

*The student shows an entrepreneurial mindset regarding their own AI project(s) and personal development, while being aware of their own learning capacity and keeping in mind professional ambitions in their future work field.*

**Explanation:**

This is about expanding your knowledge on the subject matter instead of repeating things you already know by finding your own challenge inside the minor.

## First evaluation:

To early to say

**Self-assessment:**

Undefined

## Second evaluation:

Started looking into new technologies that I’ve never worked with.

**Self-assessment:**

Orienting

## Third evaluation:

The societal impact part of this semester was all new to me, this period I kind of focused on that part and learned new things that you should consider before starting on a project. Also worked with new technologies that I had never worked with, like LM studio for the group project, and for my personal project some OCR techniques.

**Self-assessment:**

Beginning

# LO-8 Image processing

**Explanation:**

Most AI’s are text based, for my project I need images so that is a whole different technology, in this LO I will score on how that part of the project goes.

## First evaluation:

**Self-assessment: not started with it**

## Second evaluation:

**Self-assessment: not started with it**

## Third evaluation:

Started in my own project with simple images of 28x28 pixels which al contained a different number, after that I tried to train a program to recognize sentences in a image, it is not working 100% right now but I’ve made some big steps this period with this.

**Self-assessment:**

Beginning