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:

A bit of a late reply, sorry. It reads as a bit of a superficial reflection, maybe it's because of the subject. Maybe you can go deeper in this subject? Or for the Group Project?

- Bloks, Danny D.

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.

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

Did nothing on this subject this period

Self-assessment:
Orienting

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.

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

Did nothing on this subject this period

Self-assessment:
Orienting

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:

Beek, Nick N.J.P. van a month ago
Project voortgang besproken (handschrift herkenning):
- Ik heb uitgelegd waar ik mee bezig was op dit moment (1 letter per keer proberen te herkennen).
Koen gaf aan dat het misschien beter was om echt te kijken naar wat je wilt bereiken met dit project en vanuit daar te gaan kijken wat de beste manier is om een model te trainen.
- na dit gesprek heb ik besloten om echt vanuit de handgeschreven brieven te gaan trainen.
- Wel data visualisatie uitgelegd, en naar mijn mening ben ik daar mee vooruit gegaan.
- Vaker gesprekken hebben!!

Crombach, Coen C.J.H. (Teacher) a month ago
Ja, vaker gesprekken is superbelangrijk! Checkpoint 1 in wk10 en er dan achter komen dat je belangrijk werk aan het begin nog niet gedaan hebt (dat had ik je 5 weken geleden ook kunnen vertellen, dan zou je er nu makkelijk beter voor hebben gestaan). Enfin, met zichtbaar hard werken en communiceren kan het waarschijnlijk nog wel, maar je moet wel echt anders er in gaan staan. Ik hoop je gauw weer te spreken. Succes!

Beek, Nick N.J.P. van 7 days ago
Aan Coen laten zien wat ik heb gedaan na ons laatste gesprek (Data visualisatie en model die Karakter herkent). Op aanraden van Coen overgeschakeld van karakter herkenning naar een dataset met hele zinnen erin, omdat deze overeen komen met de brieven die ik heb. Ik ben nu bezig met een model te trainen om deze zinnen te kunnen herkennen (liep tijdens het gesprek helaas tegen wat errors aan dus heb ik nog niet helemaal kunnen laten zien), daarna wil ik iets maken om mijn brieven op te delen in zinnen zodat deze aan dit model gegeven kunnen worden, de laatste stap van de tool is dan om de resultaten te spel checken omdat het model soms bijvoorbeeld een L en een I door elkaar haalt.

Ook gesproken over mijn maatschappelijke impact rapport na feedback die ik heb gehad van Danny, deze moet ik nog laten zien aan een contextual consultant om specifieke feedback te krijgen, maar volgens Coen al een hele vooruitgang op de vorige versie.

Crombach, Coen C.J.H. (Teacher) 4 days ago
Yes, I can recall that.

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:

Beek, Nick N.J.P. van a month ago

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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

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