

Personal development report

Othermeal





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## PDR Learning Outcomes

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.

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.

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).

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

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.

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.).

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.

8 - Personal Goal - <With this learning outcome, the student can set its own goal in relation to their future field of work. Describe this Learning Outcome in your PDR.>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Advanced | Proficient | Beginning | Orienting | Undefined |
| 1 | Societal Impact |  |  |  |  |  |
| 2 | Investigative Problem Solving |  |  |  |  |  |
| 3 | Data Preparation |  |  |  |  |  |
| 4 | Machine Teaching |  |  |  |  |  |
| 5 | Data Visualization |  |  |  |  |  |
| 6 | Reporting |  |  |  |  |  |
| 7 | Personal Leadership |  |  |  |  |  |
| 8 | Personal Goal |  |  |  |  |  |

# Learning outcome – Societal Impact

In this chapter, I will summarize the research process from projects and challenges I participated in. Defining the societal impact of ai its ethics and different causes in current and future technology.

## First evaluation

Achieved level – week 3: Undefined

During the introduction to societal impact from the workshops I got introduced to a new point of view on possible unintended consequences of current and future technology. Considering the given new perspective, I tried to apply the same base questions to my project idea to foresee possible societal issues. So far, I need to research more upon the topic to gain more insight.

For this, I believe I have reached the level of ‘Undefined.

## Second evaluation

Achieved level – week 7: Orienting

During this iteration in my study, I had an opportunity to participate in several workshops regarding positive and negative ai effect on society. I got informed on AI capabilities to improve daily human tasks and improve their productivity, but Ai can have coded biases that can be missed very easily or even ignored entirely due to presumption that the build product is doing what it was designed for purely that is using AI.

* [The danger of AI is weirder than you think](https://www.youtube.com/watch?v=OhCzX0iLnOc)
* The role of ai in society
* [What Is The Impact Of Artificial Intelligence (AI) On Society?](https://www.youtube.com/watch?v=_eaJd3muf2E)

Because I have researched on positive and negative impact of technology in a society and its vulnerabilities as well as the effects it causes for people

, I believe that I have reached the level of ‘Beginning’.

# Learning outcome – Investigative Problem Solving

In this chapter, I will approach different problems and try to define the research questions applicable to appropriate problems. As well I will support my own choices with critical analysis finding for any alternative perspective.

## First evaluation

Achieved level – week 3: Undefined

During this iteration I have defined what my personal project idea could be and what societal factors could be considered useful for society. In addition, I have to consider what data I must use for delivering complete description of my projects functionality. In addition, I was working on the group project solution defining the idea for the air quality company.

For the current reporting and documentation process I went through, I believe I have reached the level of ‘Undefined’.

## Second evaluation

Achieved level – week 7: Beginning

For individual project I have created an initial project proposal where I analyzed my idea to describe the requirement, deliverables, scope, benefits, and its goal which can be found in the git repository. In addition, I have made a wireframe to make a graphical template visualizing the possible interface for the application.

Through workshops I got some information upon identifying kp[[1]](#endnote-1)y values on different datasets which allowed me to inspect my datasets critically. Allowing me to separate required values to get critical data defining my datasets status. This distinction allowed me to define average amount of reviews that exist on individual recipe. Providing us an average estimate of user interactions on recipes that could be used later in applying a machine learning model.

As for the group project, I have participated in the group sessions where we analyzed the client’s proposal to formulate the initial projects idea. By Defining the projects requirement, deliverables, scope, benefits, and its goal we expanded on the idea taking in consideration clients requirements. By researching we formulated the main research questions regarding the building requirements criteria, for determining the most suitable building site. From these research questions I have tackled selection of data sets, the creation of functional requirements, and the wireframe development which was a collaborative activity.

For the current reporting and documentation process I went through, I believe I have reached the level of ‘Orienting.

# Learning outcome – Data Preparation

In this chapter, I will describe my work cleaning, filtering and preparing the initial data using varied methods to highlight significant date in my models to be later used for further implementations for my projects.

## First evaluation

Achieved level – week 3: Undefined

From the workshops I got introduced to data preparation process. From this I was able to search for a recipe data set that would be extensive in usable data for processing. But regarding the data cleaning and estimating its quality I must do some more research.

For this reason, I believe that I have reached the level of ‘Undefined.

## Second evaluation

Achieved level – week 7: Beginning

During the group work process, we worked together on finding datasets that would add value to the products functionality. This allowed us to debate on its usefulness and choose the most significant data that would give value to product. This documentation could be found on teams file folders.

To better my understanding to Data preparation I have followed several tutorials that teach how to use the Pandas and NumPy libraries which allow me to manipulate the datasets.

I have looked through the data set and defined what values I identify as key values. To get a numerical indication for later machine learning. I have tried getting all the unique ingredients to represent possible selections in the recipes.

I started manipulating the data set first extracting the unique ingredients that exist in the data set and getting a count of them to get overall overview of the existent data.

Because of the following research, I believe I have reached the level of ‘Beginning’.

# Learning outcome – Machine Teaching

In this chapter, I will report the use of acquired data to modify and prepare the information to be used for AI training models providing an effective solution to my problems.

## First evaluation

Achieved level – week 3: Undefined

I have gotten an introduction to the machine learning in the workshops. So far, I still need to figure a way how I would apply AI to recognition to the users preferences both in saved ingredients and recipe selections.

For researching requirements for my project, I believe that I have reached the level of ‘Undefined’.

## Second evaluation

Achieved level – week 7: Orienting

From the given workshops on machine learning I used the provided notebook tutorial to better my understanding of KNN algorithm and decision tree models. From the given notebooks I was able to further determine what machine learning models would suit my project more.

As I will need to do recommendations, I have considered 2 types of machine learning models. Linear regression to make recommendations based on preferred ingredients and k-nearest neighbors algorithm model to get recipe recommendations based on similar user patterns. But to apply it I need to prepare my data and research more on linear regression.

Because I have trained an AI model from the notebook and started researching on appropriate models for the personal project, I believe I am at the level of “Orienting”.

# Learning outcome – Data Visualization

In this section, I will describe the process of preparing and processing the data to be visualized in insightful graphs and charts giving indications of data quality.

## First evaluation

Achieved level – week 3: Undefined

I still haven’t prepared any data sets to visualize the obtained data.

Because of this I believe my learning outcome is “Undefined”.

## Second evaluation

Achieved level – week 7: Undefined

In the personal project I have researched the mathplot library which allows use of data visualization with graphs. I have practiced recreating the plots using the university notebooks as guideline, this allowed me to visualize the overview of the current data status. I have made a bar plot to define the unique ingredients and a scatter plot to visualize the recipe ratings. But the returned graphs showed a lot of empty values resulting in not properly scaled data. Furthermore, I will have to access the data to provide a clear definition for the plots. The practice notebooks can be found here.

Because I have reviewed the notes from the university and tried to plot the data using various graphs from the provided info and tried to apply the graphs to personal project visualizing the existent data I believe I have reached the level of “Orienting”.

# Learning outcome – Reporting

In this section I will report my professional attitude on how I interact with the consultants on my personal development progress. Providing my actions both in group and personal project and application of received feedback.

## First evaluation

Achieved level – week 3: Undefined

For the first iteration I have yet to set my first meeting with a consultant because of little understanding of the topic and need of further research in both personal and group project.

Because of this I believe I am at the level of “Undefined”.

## Second evaluation

Achieved level – week 7: Beginning

I have worked on documenting my personal project proposal, PDR, and group projects proposal where I got to document the feature planning. This allowed me to create estimations on what I will have to deliver in the following iterations. With having an idea on how I will proceed on next steps I made my first meeting with a consultant giving an overview of my progress, showcasing a wireframe of the application for reference and the following steps I’m considering of taking. The given feedback provided me with the next steps that the consultant expects me to follow.

Because I have worked on documenting the projects and researching the topics in-depth and asking for feedback from consultants, I believe I at the level of “Beginning”.

# Learning outcome – Personal Leadership

In this section I show my entrepreneurial mindset approach providing a description on personal development both in communicative approach and independent work done in my personal and group projects.

## First evaluation

Achieved level – week 3: Undefined

For this iteration I still must set up my project plan that I could follow along, this will require more research of the project’s idea. This documentation is required for smoother development in latter stages of project implementation.

For this I believe I’m still at the level of “Undefined”.

## Second evaluation

Achieved level – week 7: Orienting

During the group projects meetings, I had discussed my ideas on the projects initial idea and tried to understand what the essential functionalities of the application are. To addition had an opportunity to question the client on dataset quality and restrictions of building permissions. This allowed to expand on research questions that we would need to adhere later when developing a prototype.

For personal project I have developed a project proposal where I describe required features that I foresee in implementing. Defining the required features in a MOSCOW prioritization table to arrange the important features I want to deliver in the future iterations. To help me visualize what I believe my website should have I made graphical wireframe displaying the website pages.

Because of active behavior in group meetings and personal project documentation and feature planning organization I believe I have at the level of “Orienting”.

# Learning outcome – Personal Goal

In this section I highlight my personal goals during the iterations in my perspective what is important to grow professionally.

## First evaluation

Achieved level – week 3: Undefined

For the personal goal I must set a clear goal what I want to improve upon. But as an initial idea I want to learn how AI works what machine learning model types are and how can I apply it in practice for my personal project.

For the moment I still need to research more on machine learning to define my goal for this I believe I am still at the level of “Undefined”.

## Second evaluation

Achieved level – week 7: Undefined

For this iteration I participated in the lecture that give different aspects of ai appliance. Got to learn societal impacts of ai and multiple machine learning models as KNN and decision trees which allow the data to be trained to make predictions based on scaled inputs.

Personally I feel I need to research more about ai models and different use of it for my personal project to be able to apply the best machine learning model type to be able to make best predictions.

Because I have participated in workshops regarding use of ai and researched online on video tutorials showcasing AI application, I believe I have reached the level of “Orienting”.

1. Key point index [↑](#endnote-ref-1)