PDR

AI for Society

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Introduction

This is my Personal Development Report (PDR). My name is Tony, and I am from Aruba. I came to the Netherlands to study ICT software engineering. In my downtime, I like to go hiking or exploring different places in the Netherlands.

The reason I choose this minor is to learn how AI is developed like what type of data is it getting, how would it use the data, etc. This will give me insight into how AI models work, as I currently use AI primarily as a search engine or for explanations on software methodologies and best practices.

Individual Project

For my individual project, I want to create a top-hit song prediction AI that new artists can use to improve their songs and increase their chances of making a hit. For example, the AI could provide feedback on whether the energy of their song should be higher or lower to enhance its hit potential.

Group Project

For our group project, we have been tasked with creating an AI tutor for secondary schools in the Netherlands. The AI tutor will serve as an assistant to teachers, allowing them to manage all learning materials within the system. Students can use the AI tutor to ask questions about the materials when they need further clarification.

Additionally, the AI tutor will provide exercises tailored to each student's learning level and monitor their progress. If a student is struggling, the AI tutor will notify the teacher so they can provide additional support.

Learning Outcome 1 Societal Impact

This learning outcome focuses on considering the impact of your AI project on society in different perspective. Think about how your AI project will affect society and take data regulations regarding users into account.

First Evaluation: week 4

Self-assessment

I assess myself as orienting because I have started to consider the societal impact of my individual project, including both its positive and negative effects. The positive impact of my project is helping new artists improve their songs to become top hits. However, there are also potential negative impacts, which I have outlined in my Personal Challenge Proposal document.

I also talked to one of the teachers about the societal impact that I thought about. Some positive and negative impact it could have.

For the group we haven't think about it yet.

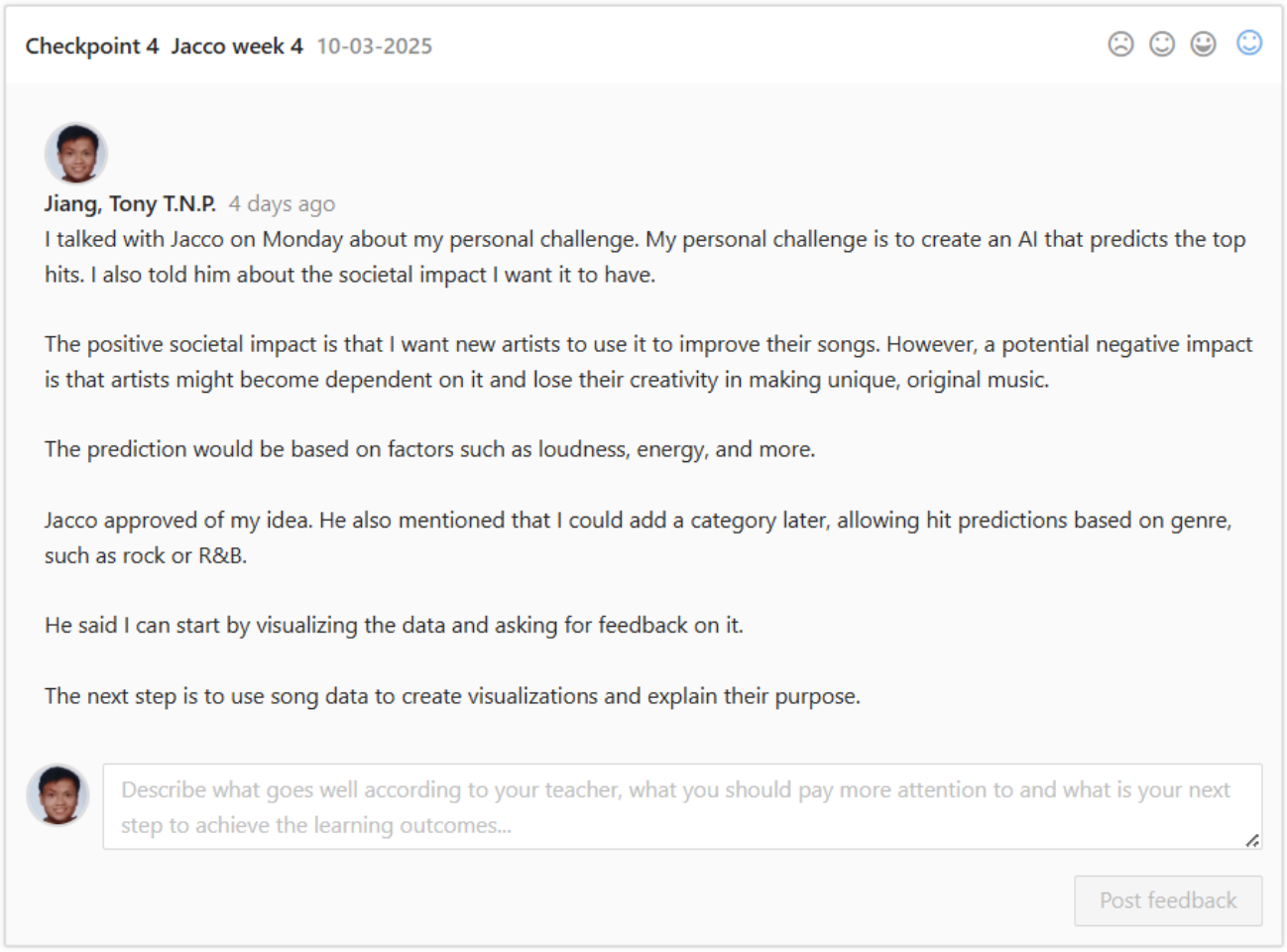
Feedback Evidence

Here is the part of the societal impact, that I wrote about in my Personal Challenge Proposal document.

Contextual Part

For the contextual aspect, I have considered the societal impact. On the positive side, it can help new artists refine their songs to increase their chances of becoming hits. However, a potential downside is that new artists might rely too much on it and lose their creativity in developing unique music. Additionally, my personal challenge includes problems I need to solve, such as defining what makes a song a hit. All challenges I face during this process will be documented in a report. With this, I will fulfill learning outcomes 1, 2, and 6.

Here is the FeedPulse feedback that I talked to Jacco about my Societal impact.



Learning Outcome 2 investigative Problem Solving

This learning outcome focuses on you to be able to identify problems within your AI project and develop solutions to address them.

First Evaluation: week 4

Self-assessment

4 pts	3 pts	2 pts	1 pts	0 pts
Advanced	Proficient	Beginning	Orienting	Undefined

I asses myself as undefined. I have yet to identify problems in my individual project and group project.

Feedback Evidence

No evidence.

Learning Outcome 3 Data Preparation

This learning outcome focuses on collecting data, estimating its volume, and using it appropriately in your AI project.

First Evaluation: week 4

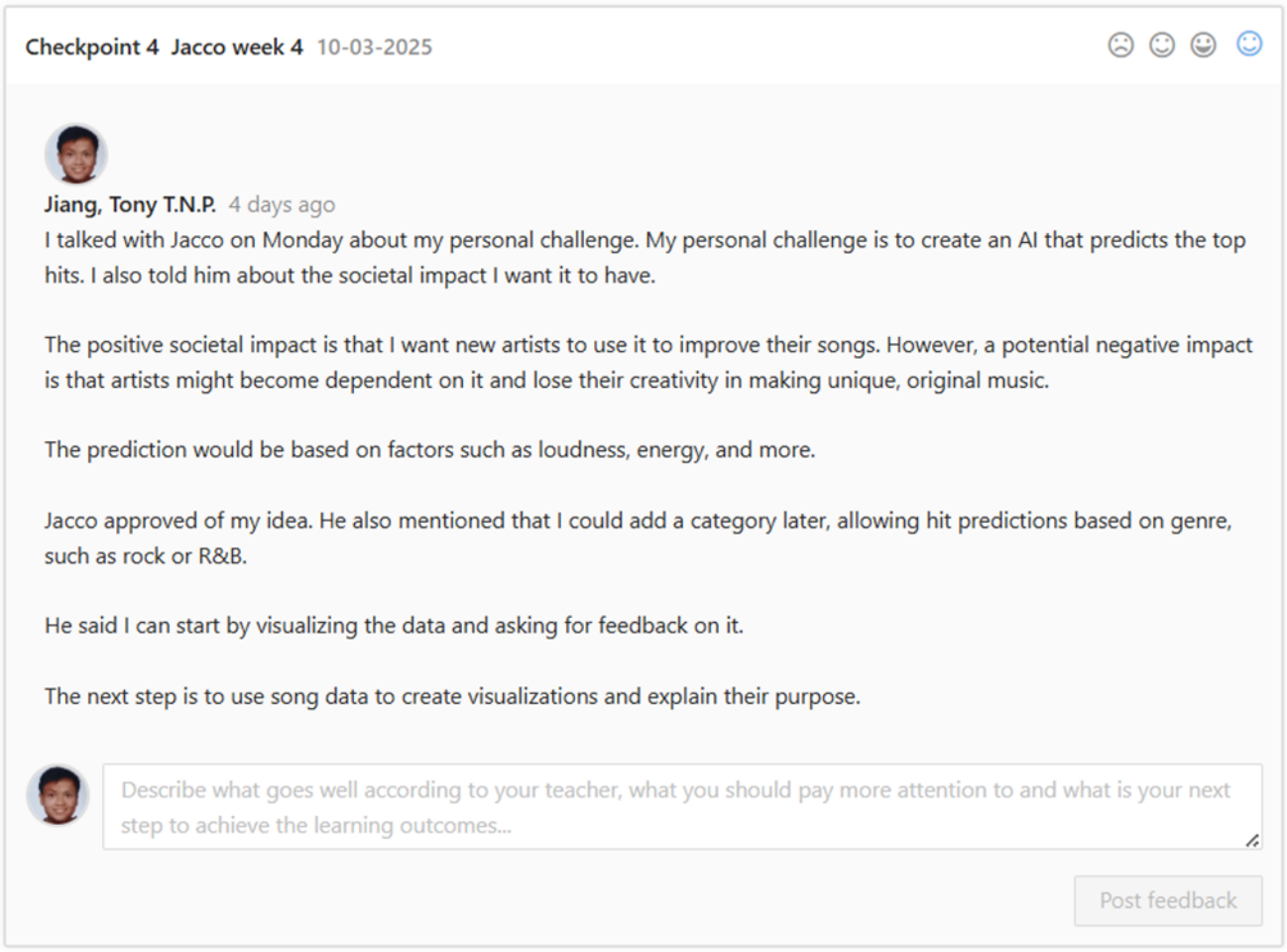
Self-assessment

I assess myself as orienting because I have explored the data I need for my individual project. Specifically, I analyzed song data for hit song prediction. I examined the attributes that could be useful for prediction, such as the song's energy, loudness, and other relevant features, instead of using the song's MP3 file.

Additionally, I received feedback from Jacco, who said it's a good idea.

Feedback Evidence

Here is the FeedPulse that I had feedback from Jacco after discussing the song data with him, including the attributes I can use for my hit song prediction.



Learning Outcome 4 Machine Teaching

This learning outcome focuses on training an AI model with the provided data to ensure it serves its intended use. Additionally, it involves testing the model to verify that it has been trained correctly

First Evaluation: week 4

Self-assessment

4 pts	3 pts	2 pts	1 pts	0 pts
Advanced	Proficient	Beginning	Orienting	Undefined

I assess myself as undefined because I haven't looked into training an AI model for my individual project and group project yet.

Feedback Evidence

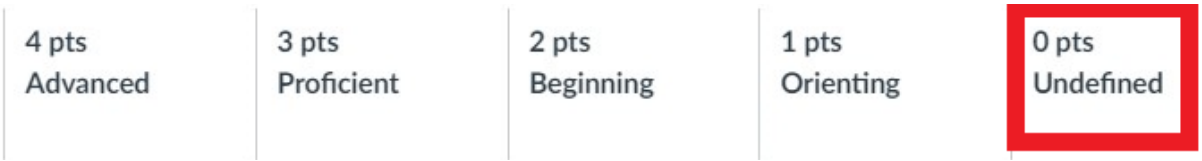
No evidence.

Learning Outcome 5 Data Visualisation

This learning outcome focuses presenting data in a meaningful and educational way about the data, allowing the target users to interact with and understand the information that is being displayed.

First Evaluation: week 4

Self-assessment



I assess myself as undefined because I have not yet started visualizing my data in a meaningful way for either my individual or group project.

Feedback Evidence

No evidence.

Learning Outcome 6 Reporting

This learning outcome focuses on creating a report about your AI project or group project in a best-practice manner. The reporting can be from project proposal, process documentation, etc.

First Evaluation: week 4

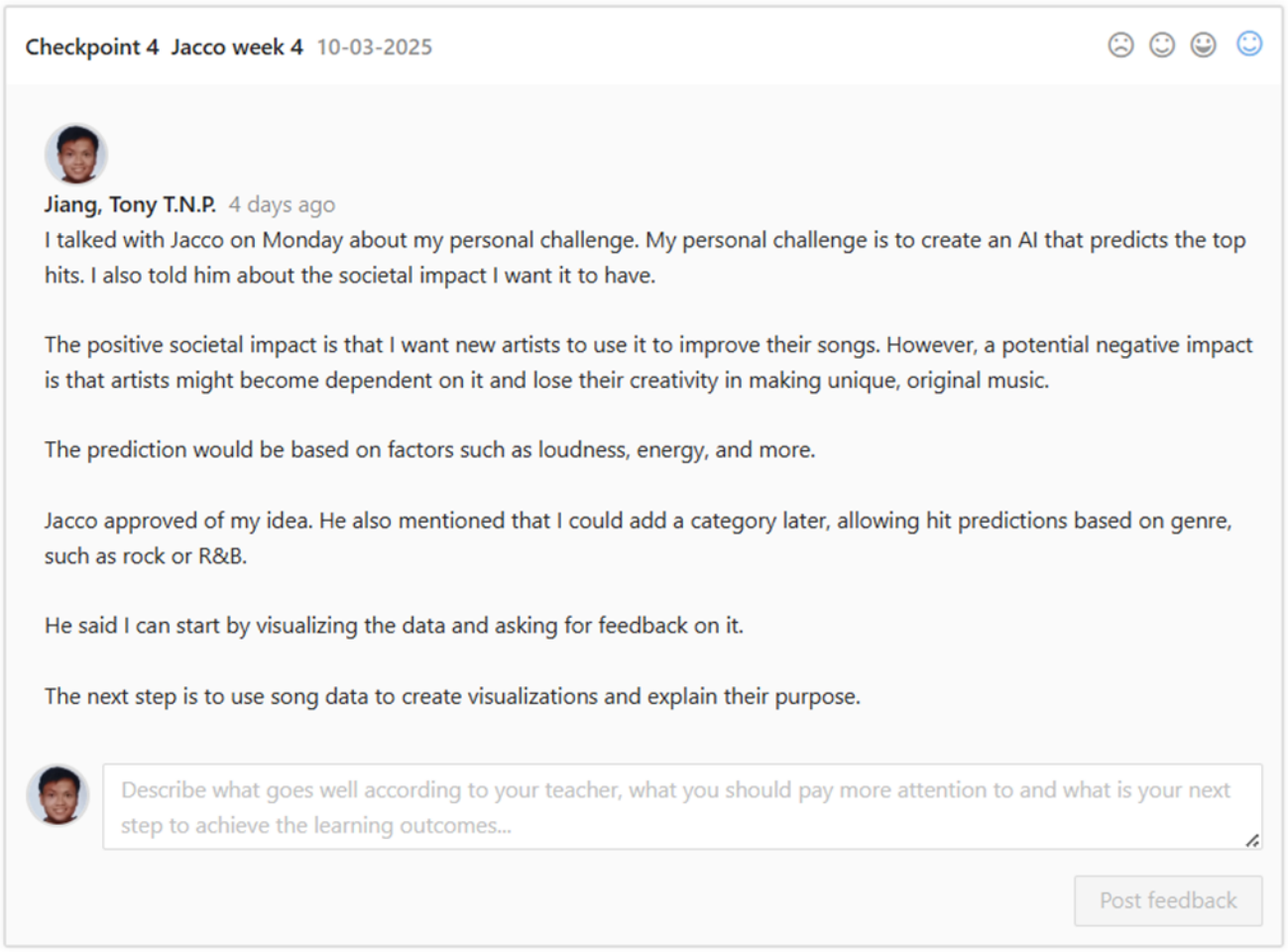
Self-assessment

I assess myself as orienting because I for my individual, I have created a Personal Challenge Proposal outlining what I want to do for my individual project. I also asked Jacco for feedback to ensure my idea is feasible.

For the group project, we created a Group Project Proposal, which is currently in draft form. We have already asked Danny for feedback on areas for improvement. Currently, the proposal is under review by the client.

Feedback Evidence

Here is the FeedPulse where I have talked to Jacco about my Personal Challenge Proposal.



Learning Outcome 7 Personal Leadership

This learning outcome is about innovating, problem-solving, adaptability and taking initiative in your personal AI project, the group project and personal development. Additionally, it emphasizes on being aware of how much you can learn and keeping your professional goal in mind for your future work field.

First Evaluation: week 4

Self-assessment

I assess myself orienting because I have taken the initiative in my individual project by seeking feedback and consulting teachers on how to begin and what to consider. I asked for guidance on where to find data online and whether my project idea was feasible. Initially, I was unsure where to start, but after discussing my ideas, reflecting, and receiving feedback from the teachers, I was able to define a project that I wanted to create.

Before joining a group project, my groupmate Le Thi Thuy (Sally) and I worked together to come up with an idea for the ideation project. We discussed the project's problem, goal, advantages, disadvantages, and other relevant aspects. After the discussion we created an ideation document for the idea we had discussed.

For the group project, we have thought about our priorities, what tasks to complete first, and the time constraints we must consider before the end of the semester. We have outlined our plans for this semester in the Group Project Proposal. We had feedback from Danny on what to improve on the Group Project Proposal and currently it’s in review with the client.

Feedback Evidence

Here is some feedback from FeedPulse that I had discussed with the teachers about the individual project.

Checkpoint 2 Wk02 - Contextual Consult (DannyB) 17-02-2025

Jiang, Tony T.N.P. a month ago

I talked with Danny on Monday about the individual project and what is needed for it. I told him about some of my interests, like skateboarding and baseball, and how I could use these interests to create a topic for my individual project.

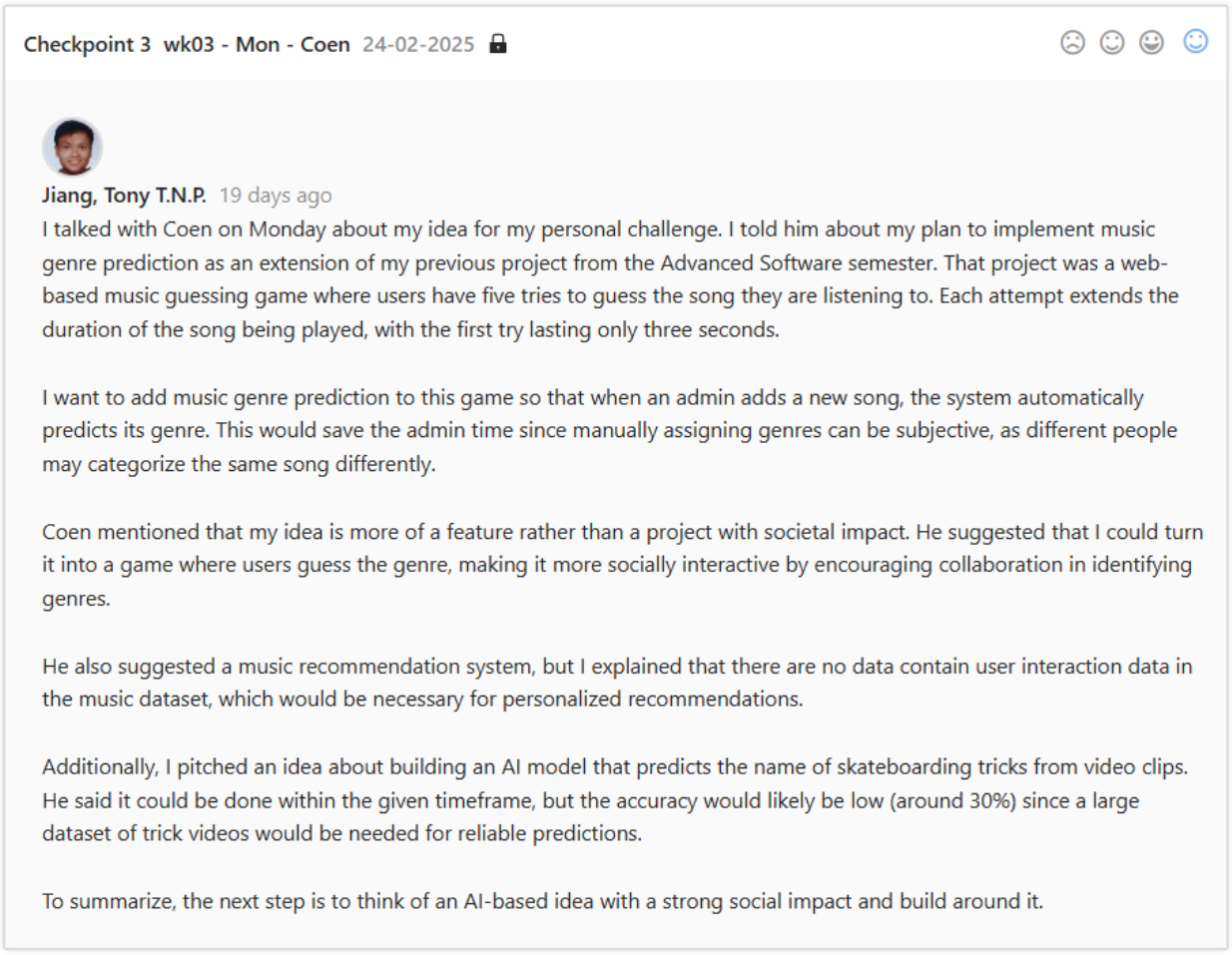
He told me that skateboard data is hard to obtain and that there isn't enough of it available. He mentioned that I could try reaching out to a company partnered with Fontys that works with skateboard data, but he wasn't sure if they would provide access.

On the other hand, baseball is a good option because a lot of data is available. He suggested checking Kaggle for datasets. He also advised that it's better to have a large dataset, ideally around a million data points, so I can explore various aspects of the data. For example, with baseball data, I could make predictions about a player or a team's performance for the season.

He gave me an idea of what to focus on: finding a dataset with a large amount of data, choosing a topic that interests me, consulting with others if needed, and then developing my project.

We also discussed PDR, which is somewhat like a portfolio. The PDR serves as a reading guide and is used to evaluate whether a student understands the material before discussing it with the teacher.

For my next step, I plan to search for a dataset with a large amount of data that interests me and then determine what I want to do with it.



Checkpoint 3 wk03 - Mon - Coen 24-02-2025

Jiang, Tony T.N.P. 19 days ago

I talked with Coen on Monday about my idea for my personal challenge. I told him about my plan to implement music genre prediction as an extension of my previous project from the Advanced Software semester. That project was a web-based music guessing game where users have five tries to guess the song they are listening to. Each attempt extends the duration of the song being played, with the first try lasting only three seconds.

I want to add music genre prediction to this game so that when an admin adds a new song, the system automatically predicts its genre. This would save the admin time since manually assigning genres can be subjective, as different people may categorize the same song differently.

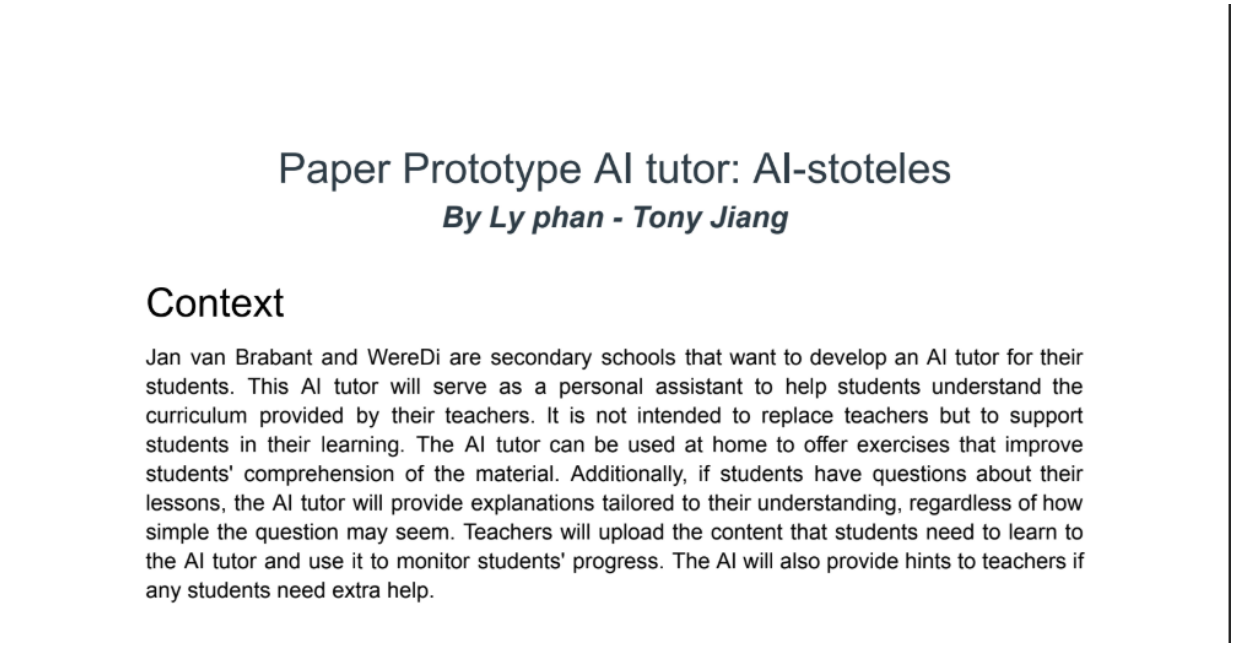
Coen mentioned that my idea is more of a feature rather than a project with societal impact. He suggested that I could turn it into a game where users guess the genre, making it more socially interactive by encouraging collaboration in identifying genres.

He also suggested a music recommendation system, but I explained that there are no data contain user interaction data in the music dataset, which would be necessary for personalized recommendations.

Additionally, I pitched an idea about building an AI model that predicts the name of skateboarding tricks from video clips. He said it could be done within the given timeframe, but the accuracy would likely be low (around 30%) since a large dataset of trick videos would be needed for reliable predictions.

To summarize, the next step is to think of an AI-based idea with a strong social impact and build around it.

Here is a snippet of the ideation document that we created.



Paper Prototype AI tutor: AI-stoteles

By Ly phan - Tony Jiang

Context

Jan van Brabant and WereDi are secondary schools that want to develop an AI tutor for their students. This AI tutor will serve as a personal assistant to help students understand the curriculum provided by their teachers. It is not intended to replace teachers but to support students in their learning. The AI tutor can be used at home to offer exercises that improve students' comprehension of the material. Additionally, if students have questions about their lessons, the AI tutor will provide explanations tailored to their understanding, regardless of how simple the question may seem. Teachers will upload the content that students need to learn to the AI tutor and use it to monitor students' progress. The AI will also provide hints to teachers if any students need extra help.

Learning Outcome 8 Personal Goal

This learning outcome is about defining your own goals for your future field of work. It serves as your personal challenge for growth and development.

First Evaluation: week 4

Self-assessment

I assess myself as orienting because I have defined my personal goal in my Personal Challenge Proposal. I have reflected on what I want to learn from AI for Society and how I can apply it to my future work.

Feedback Evidence

Here is the part where I define my personal goal in my Personal Challenge Proposal.

> ## Personal Goal
>
> My personal goal is to learn the basics of how an AI model works, including the process of providing it with data and how it will use that data in a practical way. This will help me understand the fundamental concepts needed to implement an AI model in my own applications or future company projects, giving me a solid starting point in my software development.

Retrospective

Fill in for the final version.

Conclusion

Fill in for the final version.