NAME: Virtual AI coach

DATE: July 12, 2025 9:18 AM

DESCRIPTION OF TECHNOLOGY

The virtual AI coach is there to support students by listening to their personal wellbeing concerns. The virtual coach acts as a confidant, listening attentively and asking relevant questions based on the context. The most important goal is for the student to feel heard. When topics become too personal, especially those related to mental health, the coach will refer the student to a real coach or professional.

HUMAN VALUES

The Virtual AI Coach can affect the users identity in several ways. It fills a role traditionally held by a human confidant, allowing students to talk openly about personal struggles without fear of judgment. For some, this can feel empowering and supportive, especially for those who struggle to open up to real people. However, others might feel uncomfortable relying on a non-human for emotional support, which could create a sense of isolation or stigma. The technology encourages reflection and emotional openness, but also risk…

TRANSPARENCY

Yes, the idea and purpose of the Virtual AI Coach are clearly explained to both users and stakeholders through interviews, test reports, and documentation. We explain that the coach is meant to talk about personal wellbeing and refer users to real professionals when needed. The system prompt and boundaries are based on expert input and user feedback. However, we do not always explain why the AI gives specific responses, as it is not always fully transparent how the AI model makes decisions. The business model is not yet…

IMPACT ON SOCIETY

The purpose of the Virtual AI Coach is to support MBO students by offering a low-threshold way to talk about personal matters. Many students struggle with planning and motivation due to personal issues, but hesitate to approach a real coach. The virtual coach acts as a first stepa listening ear that makes it easier to open up. It does not replace professionals but refers students when necessary. This helps reduce pressure on student support staff and ensures students feel heard before issues escalate.

STAKEHOLDERS

- Geert-Jan van Ouwendorp
- Tim Deynen
- Regio Deal Broad Prosperity

SUSTAINABILITY

The Virtual AI Coach runs locally on the users device, which significantly reduces the need for constant cloud server access and thus minimizes indirect energy use from large-scale data centers. This approach was chosen specifically for privacy and sustainability reasons. However, running AI models locally does require sufficient hardware resources, which still consumes energy. Improvements could be made by optimizing the model size or allowing users to choose between different lightweight models based on their needs.

HATEFUL AND CRIMINAL ACTORS

Yes, the Virtual AI Coach could be misused under certain conditions. If someone gains access to another students conversation history, it could lead to privacy violations or emotional manipulation. A bad actor could also reprogram the AI to give harmful advice or impersonate a coach to gain trust and exploit users. In extreme cases, students could rely on the AI to avoid talking to real professionals, potentially hiding serious issues that need urgent human attention.

DATA

Yes, the Virtual AI Coach is fully dependent on the data it receives from the user. We are aware that this data can be incomplete, subjective, or biased. The AI may form incorrect assumptions or correlations based on limited input. To address this, the coach is designed to ask clarifying questions and avoid making conclusions. Users are also informed that the AI is not perfect and cannot replace real human judgment or professional help.

FUTURE

The Virtual AI Coach could become a common tool for students to open up about personal struggles, potentially lowering the barrier to seeking help. It might help normalize mental health discussions and reduce the workload for real coaches. However, there is also a risk of emotional overreliance on AI or students avoiding real human contact. A better AI coach does not automatically mean a better or more emotionally healthy student.

PRIVACY

Yes, the Virtual AI Coach may register personal data, depending on how it is configured. Conversations with the coach can include sensitive topics such as emotional wellbeing, family issues, or school problems. If stored, this data could fall under the GDPR as it relates to an identifiable living person. Although the AI is designed to run locally, users might still share private thoughts that indirectly reveal identity, mental health, or other special categories of data. This makes data protection and user consent extremely important.

INCLUSIVITY

Yes, there is a built-in bias in the Virtual AI Coach. The system prompt, model behavior, and data it learns from are all influenced by the developers assumptions about students needs and communication styles. Most input is based on interviews and surveys with Dutch MBO IT students, which may not reflect the diversity of all student backgrounds, cultures, or emotional expressions. The AI may also respond differently depending on gendered or culturally loaded language. We try to limit this bias by allowing users to…

FIND US ON WWW.TICT.IO

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HUMAN VALUES

How is the identity of the (intended) users affected by the technology?

To help you answer this question think about sub questions like:

- If two friends use your product, how could it enhance or detract from their relationship?
- Does your product create new ways for people to interact?…

TRANSPARENCY

Is it explained to the users/stakeholders how the technology works and how the business model works?

- Is it easy for users to find out how the technology works?
- Can a user understand or find out why your technology behaves in a certain way?
- Are the goals explained?
- Is the idea of the technology explained?
- Is the technology company transparent about the way their…

IMPACT ON SOCIETY

What is exactly the problem? Is it really a problem? Are you sure?

Can you exactly define what the challenge is? What problem (what 'pain') does this technology want to solve? Can you make a clear definition of the problem? What 'pain' does this technology want to ease? Whose pain? Is it really a problem? For who? Will solving the problem make the world better? Are you sure? The problem definition will help you to determine…

STAKEHOLDERS

Who are the main users/targetgroups/stakeholders for this technology? Think about the intended context by…

When thinking about the stakeholders, the most obvious one are of course the intended users, so start there. Next, list the stakeholders that are directly affected. Listing the users and directly affected stakeholders also gives an impression of the intended context of the technology.
…

SUSTAINABILITY

In what way is the direct and indirect energy use of this technology taken into account?

One of the most prominent impacts on sustainability is energy efficiency. Consider what service you want this technology to provide and how this could be achieved with a minimal use of energy. Are improvements possible?

HATEFUL AND CRIMINAL ACTORS

In which way can the technology be used to break the law or avoid the consequences of breaking the law?

Can you imagine ways that the technology can or will be used to break the law? Think about invading someone's privacy. Spying. Hurting people. Harassment. Steal things. Fraud/identity theft and so on. Or will people use the technology to avoid facing the consequences of breaking the law (using trackers to evade speed radars or using bitcoins to launder…

DATA

Are you familiar with the fundamental shortcomings and pitfalls of data and do you take this sufficiently into…

There are fundamental issues with data. For example:

- Data is always subjective;
- Data collections are never complete;
- Correlation and causation are tricky concepts;
- Data collections are often biased;…

FUTURE

What could possibly happen with this technology in the future?

Discuss this quickly and note your first thoughts here. Think about what happens when 100 million people use your product. How could communities, habits and norms change?

PRIVACY

Does the technology register personal data? If yes, what personal data?

If this technology registers personal data you have to be aware of privacy legislation and the concept of privacy. Think hard about this question. Remember: personal data can be interpreted in a broad way. Maybe this technology does not collect personal data, but can be used to assemble personal data. If the technology collects special personal data (like…

INCLUSIVITY

Does this technology have a built-in bias?

Do a brainstorm. Can you find a built-in bias in this technology? Maybe because of the way the data was collected, either by personal bias, historical bias, political bias or a lack of diversity in the people responsible for the design of the technology? How do you know this is not the case? Be critical. Be aware of your own biases.…

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