

Change – The transformative power of citizen science

“A song all about AI”: a musical exhibition booth to foster artificial intelligence literacy

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Abstract

In a participatory project to improve general artificial intelligence (AI) literacy, we worked with citizen scientists, artists and AI experts to collect pressing questions about AI and to answer them creatively. The result, created in collaboration with the singer-songwriter “Blonder Engel”, was “A song all about AI”, written in Upper Austrian dialect in order to reach a target group that differs completely from that of English-language specialist publications on AI. To add interactive elements and to address a wider audience, we used the song and its music video as a starting point for developing a participatory exhibition booth that debuted at the ECSA 2024 Citizen Science Day. Results gathered at its first outing show that it is a successful means both of interactive, art-based science communication and of collecting data on a diverse audience’s AI awareness.

Keywords: art and science, citizen science, human-AI interaction, music, open innovation in science, participatory science, science communication.

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Introduction

Whether we like it or not, artificial intelligence (AI) is here to stay and affects us all, making it essential that as many people as possible gain a basic understanding of it – “AI literacy” (Long and Magerko 2020; Ng et. al. 2021) –, which in turn raises the question of how to achieve this.

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The LIT Robopsychology Lab researched this in a participatory process: Within the project “How to explain AI”, we worked with 20 citizen scientists, AI experts and artists as co-researchers. Together we explored questions on the subject of AI in everyday life and how to answer them creatively (Meyer et al. 2023). The results: a collection of questions about AI, a wealth of answers, and a particular form of knowledge communication: “A Song all about AI” (original title: “A Liadl, ans üwa KI”), created in cooperation with the singer-songwriter “Blonder Engel.”

The song was written in Upper Austrian dialect and therefore speaks to a completely different target group than English-language specialist publications. However, for those who do not understand this dialect, to whom this particular style of music does not appeal or who cannot hear music, the ability of this song to foster AI literacy is limited. We thus used the song as a basis for further work on encouraging broad and diverse exchange on AI.

Approach: A participatory exhibition booth

The song resulting from the participatory project conveys the questions and topics collected with the group of citizen scientists. A single song can neither reach everyone nor address all the questions and explanations around a complex topic such as AI. It can, however, encourage people to think about the topic, to exchange ideas and to engage with it further. The song is therefore ideally suited to (i) interactive, art-based science communication and (ii) triggering collection of further, more diverse qualitative data on citizens’ opinions, observations, knowledge and ideas about AI.



Figure 1. The participatory exhibition booth

The exhibition booth (Figs 1, 2) offers various possibilities to delve personally into the topic of AI in daily life:

- listen to the song via loudspeaker or headphones and watch the music video with subtitles in Upper-Austrian dialect, German or English
- leave a voice note by pressing a voice button
- listen to voice notes left by others
- answer the impulse questions in writing on a card and attach it to the interaction wall (Fig. 2)
- read other people's contributions
- take away a copy of the lyrics in Upper-Austrian dialect, German or English
- fill in gaps in the lyrics to formulate one's own thoughts
- take a sticker showing a quote from the song and a URL linking to more information
- discuss own questions or opinions with a member of the team
- read background information on AI literacy and the participatory project behind the song

These forms of interaction were designed to be simple and low-tech in order to avoid additional barriers to engagement with the complex and technical topic of AI: Pen and paper are very common, and the voice buttons are easy to use.

The questions in the big white bubbles on the left side of the booth (Fig. 1) are exchangeable and chosen from a pool of seven impulse questions in both German and English. Each relates to a specific part of the song, e.g.:

- In what areas are you better than AI?
- What is your most pressing question about AI?
- Where do you encounter AI?
- What price do we pay for AI?
- What should everyone know about AI?

Results of the booth's debut

The ECSA 2024 Citizen Science Day in the Natural History Museum Vienna (April 6, 2024) brought a wide audience to our exhibition booth: persons of all ages, some coming alone, some in groups, some particularly for the event, some just for the museum. Below we present an overview of their participatory contributions (Fig. 2).



Figure 2. Participation at the Citizen Science Day

Written contributions

In total, 27 cards were pinned to the interaction wall. Answers were written in both German and English. For this paper, we translated all contributions into English. All questions and answers are published on the [project website](#).

Answers to the impulse question: In what areas are you better than AI?

- Making friends
- Diversity
- Humor
- Organization
- Cycling
- Laughter
- Critical questioning
- Personal hygiene

- Love
- Discursive thinking
- Sport
- Cooking
- Emotion
- Transferring “old” knowledge to a new context
- Creative areas such as: writing/photography

Voice contributions

In total, seven voice contributions were recorded by visitors. Some contained single words, others longer statements of the visitor’s personal perspective on AI, one a verse of the presented song in another language and one a performance of a visitor’s own made-up song about AI.

Personal discourse

At all times, members of our team were available for questions and discussions. As expected, this proved to be a very important part of the exchange on the topic. Some visitors became involved in conversation and then captured their thoughts as notes on the interaction wall or as voice recordings. Some listened to the song first and then engaged in discussions with us.

Classification of the results

The number of contributions from this first outing does not yet suffice for a sound evaluation of the covered topics. However, a favorite question to which people related the most emerged, both in written and spoken contributions as well as conversations: “In what areas are you better than AI?”. This question addresses the differences between humans and AI and was of particular concern to many in the prior participatory process as well. In respect to AI literacy, it is important for people to realize they have abilities that AI does not have.

Conclusion & Outlook

In the process of the underlying project the citizen scientists defined the requirement to develop an interactive intervention. The song has its advantages: It is available online and can be consumed and used as often as desired, regardless of time and place. However, it is not interactive. The debut of the participatory exhibition booth showed it to be an effective addition to the song, fostering interaction and personal, on-site engagement. The interaction and discourse with the visitors demonstrated that – as intended – the booth works well both for art-supported science communication and for collecting qualitative data on a diverse audience’s level of knowledge about AI.

The results affirm our intention to continue using the exhibition booth at further locations with various audiences. The data will be published on the [project website](#) and analyzed in terms of the most frequently represented topics. Over time, the contributions of those who engaged with the booth enrich the song for a diverse exchange on AI.

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