Data literacy in the AI era

Educator's guide

Long ago, most people could easily live, work, and socialize without being able to read or write. But after the invention of the printing press, written information became cheaper, more people began to preserve everyday information in writing, and gradually those who couldn't read began to find themselves at a disadvantage. Today, we teach children to read very early, usually with stories they must interpret. This helps them develop early in life the ability to navigate their world more effectively. Adults who don't know how or who struggle to read face complex living and working challenges.

Similarly, recently developed artificial intelligence (AI) technologies are introducing significant changes to many aspects of society. Some of these technologies we already use daily. They use data to tell us "stories" about ourselves or about other things, whether displayed as google search results or social media feeds. Sometimes these stories fail to reflect the real world accurately. The earlier that we can give citizens the opportunity to conceptualize how AI works and grasp how AI tells us stories about ourselves, the better equipped they will be to navigate the changes that AI will bring to society.

Workshop Objectives:

1. Explore how AI uses data to make recommendations and consider the repercussions of having our decision-making informed by AI
2. Think more generally about the use of data in the context of AI.
3. Explore the two phases of AI: training the model and using it.
4. Coding using biometric data.
5. Train an AI to recognize images (extra activity)

What you will need:

- Slides

digitalmoment.org

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- Per student or team: a computer with a working camera.
- Programming activity: Scratch Lab Face Sensing.
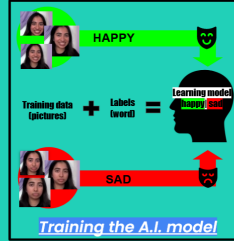- Additional programming activity: Scratch and Teachable Machine.

Overview :

SLIDES	INTENTIONS
Workshop objectives 1. Explore the workings of Artificial Intelligence (AI) that make recommendations and consider both the advantages and disadvantages of this technology 2. Examine how data is utilized in AI 3. Analyse the two distinct phases of AI: training and utilization of the model 4. Using biometric data as a coding tool. 5. Extra activity - Train AI to recognize images	Presentation of the objectives
	Through the topic of semi-automated input AI, get students to think about how it is easier to guess something if you have clues (data) about it.
	Have students reflect that they leave many clues (data) when using their devices and that the autocomplete (AI) can use their clues to make their predictions.

3. Recommendation system : what will I show you ?

Through the topic of recommendation AIs, have students think about the ones they know (Youtube, google, etc). Discover that AI works by comparing their interaction data to people with similar interactions and that this can put them in a "preference bubble" with people who are similar to them.

4. Train and use an AI

Discover that AI needs to be trained with data to develop a model of what it needs to know. Then the model can be used with data similar to the data used to train it.

5. Face filters !

Discover that our bodies can be seen as data and can be used with an AI like facial filters.

5. Let's program with our biometric data !

Through a programming activity with Scratch Lab, discover that we can develop the skills to understand and even work with AI to create artifacts using data and AI enabled software.

6. Train an A.I. to recognize images (additional activity)

We are going to train an AI to recognize a face that looks happy, a face that looks sad and another facial expression of your choice.

HAPPY

Training data (pictures) + Labels (word) = Learning model happy sad

SAD

Training the A.I. model

Through an activity with Teachable Machine, discover that you can train AI models from data yourself and then use them.

Our educational initiatives

kcj

digital 2030

social innovation lab