
AI Accountability Student Toolkit

Section 1: AI Basics

Introduction (For Educators)

This resource provides an overview of some of the key terms and concepts in the field of artificial intelligence (AI). It is designed to help students, including English language learners, become familiar with the vocabulary used when discussing AI technologies.

Engaging with this resource should also support student understanding of Pulitzer Center reporting on Information and Artificial Intelligence. The Pulitzer Center's Information and Artificial Intelligence initiatives support journalism and audience engagement on in-depth [AI accountability](#) stories that examine governments' and corporations' uses of predictive and surveillance technologies to guide decisions in policing, medicine, social welfare, the criminal justice system, hiring, and more. Pulitzer Center-supported AI reporting explores with nuance how AI systems are designed, sold, and deployed in communities around the world. This tool is meant to make this critical reporting more accessible and more meaningful to students.

For each vocabulary term provided, there is an accompanying piece of Pulitzer Center reporting students can explore to better understand the real-world applications of the vocabulary. There are also reflection questions and suggested activities for students to complete following engagement with the full vocabulary list to extend their learning.

Vocabulary List

- **Artificial Intelligence:** the ability of machines or computer programs to perform tasks that would normally require human intelligence, such as learning, problem-solving, or decision-making.
- **Data:** the information used to train and operate artificial intelligence systems. This can include numbers, text, images, or any other type of information.
- **Model:** a representation of a system or process that artificial intelligence technologies use to make predictions or decisions.
- **Algorithm:** a step-by-step procedure or set of rules to solve a problem or complete a task.
- **Bias:** the tendency of an AI system to produce results that are systematically prejudiced due to the data or algorithms used in its development.
- **Machine Learning:** the use of statistical techniques and algorithms that allow computers to learn and improve from experience without being explicitly programmed.
- **Deep Learning:** a type of machine learning that uses artificial neural networks with multiple layers to learn and make predictions from complex data.
- **Predictive AI:** a computer program that uses patterns in historical data to forecast future outcomes or classify future events.
- **Generative AI:** a computer program used to create new and original content, such as images, text, and other media, by learning from existing data patterns.
- **Computer Vision:** the ability of AI systems to identify and process visual information, like recognizing objects, faces, or scenes in images and videos.

Instructions

For each key term,

1. Review the definition provided and invite students to share other definitions they may know.
2. Engage students in a vocabulary exercise, like the provided Vocabulary Four-Square Activity.
3. Invite students to respond to the Personal Connection Question either verbally or in writing.
4. Introduce the aligned Pulitzer Center article with its keywords and essential questions.
5. Utilize your classroom reading strategies to read and discuss the Pulitzer Center article.
6. Respond to the essential question(s) for the article and complete any selected extension activities.

Student Work Pages - AI Accountability Toolkit

Review Key Terms

Artificial Intelligence

Definition

Artificial intelligence is the ability of machines or computer programs to perform tasks that would normally require human intelligence, such as learning, problem-solving, or decision-making.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. How have you seen people use technology to help with decision-making?
6. Are there any decisions you don't think should be made by machines?

Real-world Application

7. Review these keywords: affordable housing, housing development.
8. Read this article: [“How Do Public Officials Make Land Bank Decisions? Artificial Intelligence May Seek Patterns”](#).
9. Reflect on your reading: What are the pros and cons of public officials utilizing artificial intelligence in this context?

Data

Definition

Data is the information used to train and operate artificial intelligence systems. This can include numbers, text, images, or any other type of information.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. What technologies do you use most in your everyday life? How much do you know about how those technologies are created?
6. What do you think the relationship is between data and privacy?

Real-world Application

7. Review these keywords: India, election, WhatsApp.

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8. Read this article: [“How Digital Witness Lab Analyzed Data From BJP WhatsApp Groups Ahead of the Indian Elections”](#).
 9. Reflect on your reading: Why is data so important for AI? What are the privacy concerns related to data in AI use?

Model

Definition

A model is a representation of a system or process that artificial intelligence technologies use to make predictions or decisions.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. Have you seen the term “model” used in a similar way in other places?
6. What information might people want to know about how the models used in their artificial intelligence technologies are designed?

Real-world Application

7. Review these keywords: Europe, welfare fraud.
8. Read this article: [“How We Did It: Unlocking Europe’s Welfare Fraud Algorithms”](#).
9. Reflect on your reading: What is the relationship between data and models in AI? Why might different models produce different results in AI?

Algorithm

Definition

An algorithm is a step-by-step procedure or set of rules to solve a problem or complete a task.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. How have you used algorithms in your own life?
6. How do algorithms solve problems?

Real-world Application

7. Review these keywords: India, welfare.
8. Read this article: [“How We Investigated Welfare Algorithms in India \(Part 1\)”](#).
9. Reflect on your reading: What kind of information is needed to investigate an algorithm? Who do you think should be responsible for that investigative work?

Bias

Definition

Bias is the tendency of an AI system to produce results that are systematically prejudiced due to the data or algorithms used in its development.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. What does it mean to be prejudiced? Do you think you've ever encountered a prejudiced machine or AI system?
6. How do you think AI systems become biased?

Real-world Application

7. Review these keywords: ethnic groups, bias.
8. Read this article: "[Kristin Pauker: The Fight for Fairness](#)".
9. Reflect on your reading: What are some of the impacts of biased algorithms? How can bias be prevented in AI systems?

Machine Learning

Definition

Machine learning is the use of statistical techniques and algorithms that allow computers to learn and improve from experience without being explicitly programmed.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. How is machine learning different from other types of computer programming?
6. Can you think of any technological tools or programs you use that change or improve based on how you engage with them?

Real-world Application

7. Review these keywords: environmental crisis, the Amazon, rainforest.
8. Read this article: [“Investigating Rainforest Destruction: Finding Illegal Airstrips With the Help of Machine Learning”](#).
9. Reflect on your reading: How did machine learning support these journalists in their investigation? What different types of expertise were needed to solve the challenge they faced in their reporting?

Deep Learning

Definition

Deep learning is a type of machine learning that uses artificial neural networks with multiple layers to learn and make predictions from complex data.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. Unlike more simple AI systems, technologists don't always understand which rules deep learning systems are using to solve problems. What might be some pros and cons of this type of AI?
6. Are there any decisions you don't think should be made by machines?

Real-world Application

7. Review these keywords: public records, computer patterns.
8. Read this article: [“Sidebar: What is Artificial Intelligence and Why Use It To Look at Public Records”](#).
9. Reflect on your reading: What are some misunderstandings people have about AI? How does better understanding AI allow you to make more effective use of it?

Predictive AI

Definition

Predictive AI is a computer program that uses patterns in historical data to forecast future outcomes or classify future events.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. In what areas of life do you think predictive AI could be most helpful? Most problematic?
6. How might predictive AI change the way we make decisions in the future?

Real-world Application

7. Review these keywords: refugee camps, border
8. Read this article: [“How We Investigated Automated and Predictive Technologies at Refugee Camps and Borders in Europe and the U.S.”](#)
9. Reflect on your reading: What types of questions do you think we should ask when new AI technologies are being implemented in our communities? How does asking questions better help us understand the limitations of AI?

Generative AI

Definition

Generative AI is a computer program used to create new and original content, such as images, text, and other media, by learning from existing data patterns.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. How might generative AI impact creative fields like art, music, or writing?
6. What are some ethical considerations we should keep in mind with generative AI?

Real-world Application

7. Review these keywords: blindness, accessibility.
8. Read this article: [“Blind Internet Users Struggle with Error-Prone AI Aids”](#).
9. Reflect on your reading: What happens when AI tools are not designed with consideration for the people and communities they’ll impact?

Computer Vision

Definition

Computer vision is the ability of AI systems to identify and process visual information, like recognizing objects, faces, or scenes in images and videos.

1. Use this term in a sentence correctly.
2. Describe something that is essential to understanding the term.
3. Share some examples of the term.
4. Share some non-examples of the term.

Personal Connection

5. How might computer vision technology change the way we interact with our devices?
6. What are some potential benefits and concerns of widespread use of computer vision?

Real-world Application

7. Review these keywords: public surveillance, data collection.
8. Read this article: [“Paid Pennies to Train Tools of Repression: The Humans Behind Moscow’s State Surveillance”](#).
9. Reflect on your reading: Why is it important to understand the work that goes into training and developing AI technologies?

Reflect On The Activities

- How do you think AI might affect your future career or daily life?
- Which of these AI concepts do you find most interesting or concerning? Why?
- How might the widespread use of these AI technologies change society in the next 10 years?
- What responsibilities do you think individuals, companies, and governments have in ensuring AI is used ethically?
- How might AI technologies based on these concepts be used to address global challenges like climate change or health care?

Extend Your Learning

- Create a scavenger hunt to help another reader navigate the Pulitzer Center article you read.
- Create a bingo game using essential AI terms and compete with a reading buddy to see who can score a bingo while reading your article.
- Create a concept map of this term and how it relates to other essential AI terms.
- Create a video to explain this term and what you learned in your reading.
- Create a timeline of the key events in the history of AI, focusing on the term you learned.
- Create an image that illustrates your understanding of the term.