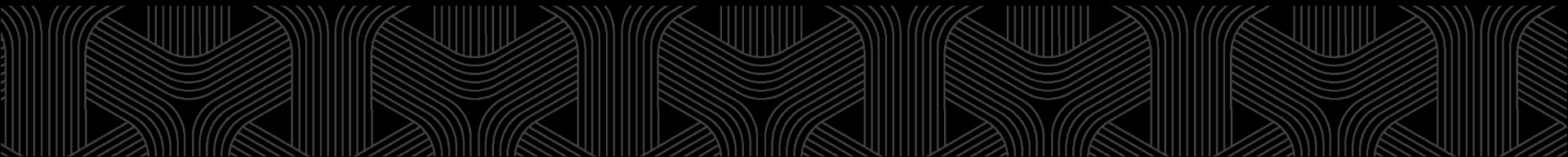




# Responsible AI Literacy for K12 Students





**Shana V. White**  
Director of CS Equity  
Initiatives  
Kapor Foundation



"Any situation in which some men prevent others from engaging in the process of inquiry is one of violence;... to alienate humans from their own decision making is to change them into objects."

Paulo Freire



**What are words that  
come to mind when  
you hear “AI in  
education”?**

# AI: Benefits and Opportunities

MACHINE LEARNING

## Breakthrough In Cancer Treatment: The Role Of Generative AI In Drug Development

**Bernard Marr** Contributor @

CHATGPT & GENERATIVE AI

### Using AI to Support Multilingual Students

Artificial intelligence tools can help multilingual students better understand complex texts in English.

By **Tan Huynh**

November 21, 2023



INNOVATION > AI

## Students Learned Twice As Much With AI Tutor Than Typical Lectures

By **Tor Constantino, MBA**, Contributor. ⓘ Tor Constantino is an ex-reporter, tur... ▾

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Sep 18, 2024, 01:03pm EDT

BBC

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## US farms are making an urgent push into AI. It could help feed the world

27 March 2024

Share

By **Sam Becker**, Features correspondent



# AI: Challenges and Risks

## Parents of teenager who took his own life sue OpenAI

27 August 2023

Nadine Yousif | BBC News

Share Save



THE SHIFT

### Can A.I. Be Blamed for a Teen's Suicide?

The mother of a 14-year-old Florida boy says he became obsessed with a chatbot on Character.AI before his death.

Popular Latest Newsletters

The Atlantic

IDEAS

## The Dangerous Experiment on Teen Girls

The preponderance of the evidence suggests that social media is causing real damage to adolescents.

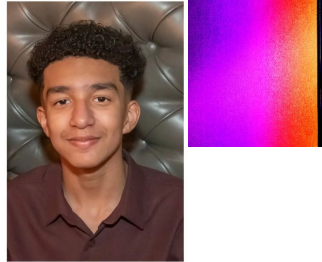
By Jonathan Haidt



Center of China Unicom, which uses artificial intelligence in its operations. TAO LIANG / XINHUA VIA GETTY IMAGE

## As Use of A.I. Soars, So Does the Energy and Water It Requires

Generative artificial intelligence uses massive amounts of energy for computation and data storage and millions of gallons of water to cool the equipment at data centers. Now, legislators and regulators – in the U.S. and the EU – are starting to demand accountability.



## Authors' lawsuit against OpenAI could 'fundamentally reshape' artificial intelligence, according to experts

Plaintiffs include famous authors like George R.R. Martin and Jodi Piccolt.

## NAACP launches lawsuit over pollution from Musk's xAI

### Why fake robocalls are sounding more and more real — and what's being done about it

Sabri Ben-Achour and Alex Schroeder | Feb 16, 2024

Heard on: MARKETPLACE MORNING REPORT

## AI Titans Back \$100 Million Super PAC to Boost Industry's Status in Washington



# Implications for Racial and Social Justice



Denied

## The Secret Bias Hidden in Mortgage-Approval Algorithms

These two people applied for loans in Baltimore, Md., in 2019. They both earned \$30K-\$45K and were approved for \$200K-\$300K of loans.

## Medical Algorithms Are Failing Communities Of Color

## Wrongfully Accused by an Algorithm

In what may be the first known case of its kind, a faulty facial recognition match led to a Michigan man's arrest for a crime he did not commit.



TOP STORY | BUSINESS | JUL 22, 2019 7:00 AM

## The Best Algorithms Struggle to Recognize Black Faces Equally

US government tests find even top-performing facial recognition systems misidentify blacks at rates five to 10 times higher than they do whites.

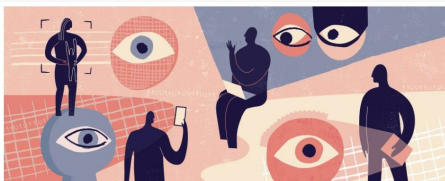
## Commission on Civil Rights rings alarm bell on law enforcement use of AI tool

Minnah Arshad

## AI-Detectors Biased Against Non-Native English Writers

Don't put faith in detectors that are "unreliable and easily gamed," says scholar.

May 15, 2023 | Andrew Myers



10.1377/foref

Seminar | Rights | Mar 23, 2024

## The Rise of AI and Technology in Immigration Enforcement

Saba Mengesha, Korinne Dunn, and Narintohn Luangrath

Home / Resource Extraction / The Human Cost of Every ChatGPT Query: Inside the Cobalt Mines That Power AI

## The Human Cost of Every ChatGPT Query: Inside the Cobalt Mines That Power AI

# Justice-Centered AI: A New Approach to Education



**“Although AI systems are powerful, they remain tools made by humans, and their uses are not preordained. Their effects are not inevitable.”**

Dr. Alondra Nelson, Former Acting Director of the White House Office of Science and Technology Policy (OSTP)



Photo Credit: Dee Dwyer for Nature



# A New Vision for Responsible AI and Tech Justice in K-12 Education

A robust and comprehensive course of study that utilizes an **explicit racial and social justice lens** to equip all students with the knowledge and resources to ***critically interrogate*** the ethical and equitable development, deployment, and impacts of AI, while simultaneously ***challenging, disrupting, and remedying*** the harms that these technologies can produce within individuals' lives, communities, and society at large.

# Goal

To develop a robust, clear, and compelling guide for ethical AI/tech justice in education, which articulates the following:

- The **need for a guidance** on responsible AI and tech justice
- A **definition** of “responsible AI and tech justice”
- A set of **core components** of responsible AI and tech justice
- Robust set of **interrogation questions** for each core component for learning in the classroom
- A set of **resources/case studies** for utilization in classrooms



*"A lot of the times, the failings are not in AI. They're human failings and we're not willing to address the fact that there isn't a lot of diversity in the teams building the systems in the first place."*

– Vivienne Ming

*"You want people in AI who have compassion, who are thinking about social issues, who are thinking about accessibility."*

– Dr. Timnit Gebru

## RESPONSIBLE AI AND TECH JUSTICE: A GUIDE FOR K-12 EDUCATION

A guide designed for K-12 educators and students, to support the critical interrogation of artificial intelligence and its implications on individuals, communities, and the world.

Responsible AI and Tech Justice Guide © 2023 by Shana V. White and Allison Scott is licensed under Attribution-NonCommercial 4.0 International. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/>



## RESPONSIBLE AI & TECH JUSTICE: A GUIDE FOR K-12 EDUCATION



Articulating a new vision for K-12 computer science education, the [Justice-Centered Computing Education](#) framework outlines an approach to addressing structural educational inequality, critically interrogating the computing ecosystem, and developing with intentionality the resources, programs, and policies to achieve full access and meaningful outcomes for students of all identities and abilities. Within this framework, there is an explicit focus on prioritizing the interrogation of ethics, equity, and justice in the creation, deployment, and utilization of AI technologies as a component of a robust K-12 education such that all students and educators are equipped with the knowledge, resources, and opportunities to critically interrogate AI technologies and to challenge and disrupt their harms.

As a key component of Justice-Centered Computing Education, this guide articulates a vision for [Responsible AI and Tech Justice in K-12 Education](#) as:

***A robust and comprehensive course of study that utilizes an explicit racial and social justice lens to equip all students with the knowledge and resources to critically interrogate the ethical and equitable development, deployment, and impacts of AI, while simultaneously challenging, disrupting, and remedying the harms that these technologies can produce within individuals' lives, communities, and society at large.***

To translate this vision into action, six core components serve as a guide for educators, parents, policymakers, and advocates seeking to design learning experiences for students and teachers across educational settings, where both the critical interrogation of technologies and the disruption and creation of more ethical and equitable solutions are prioritized. The core components cover the large concepts and are complemented by a set of sample interrogation questions, which provide suggested ideas to cover, while allowing space for creativity, innovation, and evolution in content as the space continues to rapidly evolve. It is our goal that these six core components will be used by a range of K-12 educators, including teachers, instructional coaches, administrators, and curriculum providers to directly inform their policies, practices, and resources.

# Core Components

- 1. *Examine the AI technology creation ecosystem*** from who designs and develops products and how they are developed, to who invests in their creation and benefits from their adoption.
- 2. *Interrogate the complex relationship between technology and human beings,*** including human-computer interaction and topics of values, ethics, privacy, and safety.
- 3. *Explore the impacts and implications of AI technologies on society,*** including positive benefits, negative consequences, and the perpetuation of exclusion, marginalization, and inequality.



# Core Components

**4.** *Interrogate personal usage of AI technologies* to become critical consumers of products and address misuse, exploitation, and safety concerns.

**5.** Build a *critical lens in the usage, analysis, interpretation, and reporting of data.*

**6.** *Minimize, mitigate, and eliminate harm* and injustice caused by AI technologies through both the responsible and ethical creation process and individual and collective right to refusal.



# Digital Education Council AI Literacy Framework

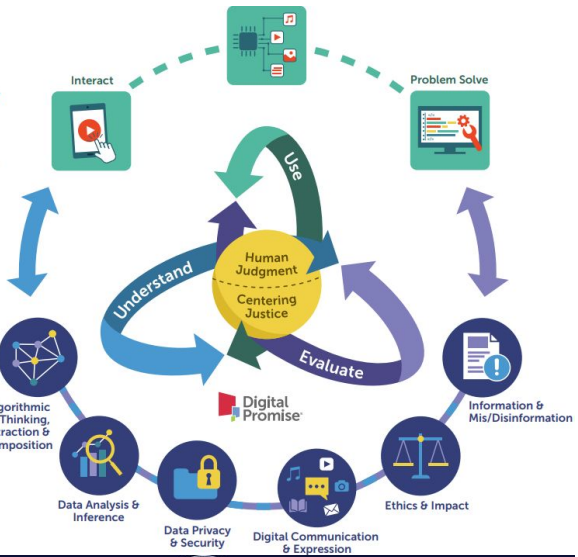


## Empowering Learners for the Age of AI

An AI Literacy Framework for Primary and Secondary Education



safely  
ate in  
world.



Literacy Practices, Core Values, Modes of Engagement, and Types of Use that support the knowledge and skills to enable people to critically understand, evaluate, and use AI systems and tools.

**U.S. Department of Labor's AI Literacy Framework**

Foundational Content Areas of AI Literacy

<p><b>1</b></p> <p><b>Understand AI Principles</b></p> <p>Understanding AI's core concepts, capabilities, and limitations, creating the foundation for effective use</p>	<p><b>2</b></p> <p><b>Explore AI Uses</b></p> <p>Directly exploring different AI tools and relevant use cases, and how AI can complement human expertise</p>	<p><b>3</b></p> <p><b>Direct AI Effectively</b></p> <p>Understanding how to provide the right context to AI and how to create clear prompts that produce effective outputs</p>	<p><b>4</b></p> <p><b>Evaluate AI Outputs</b></p> <p>Assessing AI-generated results for accuracy and relevance, and understanding how to iterate on AI outputs</p>	<p><b>5</b></p> <p><b>Use AI Responsibly</b></p> <p>Using AI in ethical and secure ways, protecting critical information, and ensuring accountability for outcomes</p>
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**Responsible AI and  
Tech Justice Guide  
Update (August 2026)**

# Update Goals

To build upon our original guide, the update provides:

- A **definition** of responsible AI literacy
- A set of **principles** of Responsible AI literacy based on **Belmont Report**
- A clear description of **considerations** for responsible consumers and producers of AI technology
- A set of **competencies** of responsible AI literate K12 students
- A **definition** of terms list on artificial intelligence and generative AI
- New, robust set of **interrogation questions** aligned with **core components and new competencies** divided by grade band and aligned with 2026 **CSTA standards**

# Responsible AI Literacy

## Definition (Part 1)

---

**Responsible AI Literacy** is an explicit approach that helps individuals in K12 to develop a critical lens, distinguish differences, and take informed action around all forms and aspects of artificial intelligence. **Responsible AI literacy** involves an **inquiry method** that students can use to **critically analyze** various aspects of **artificial intelligence** seeking answers to both **simple and complex questions** about computing, people, rationales, and the complexities surrounding **artificial intelligence**. By conceptualizing artificial intelligence as various automated processes completed by a computer, this framing will support learners' inquiry, encouraging them to ask not only **who**, **what**, and **when** questions about artificial intelligence, but also critical interrogation of **why** and **how** AI systems are designed, deployed, and normalized, as well as their various impacts on individuals, the environment, and communities.



# Responsible AI Literacy

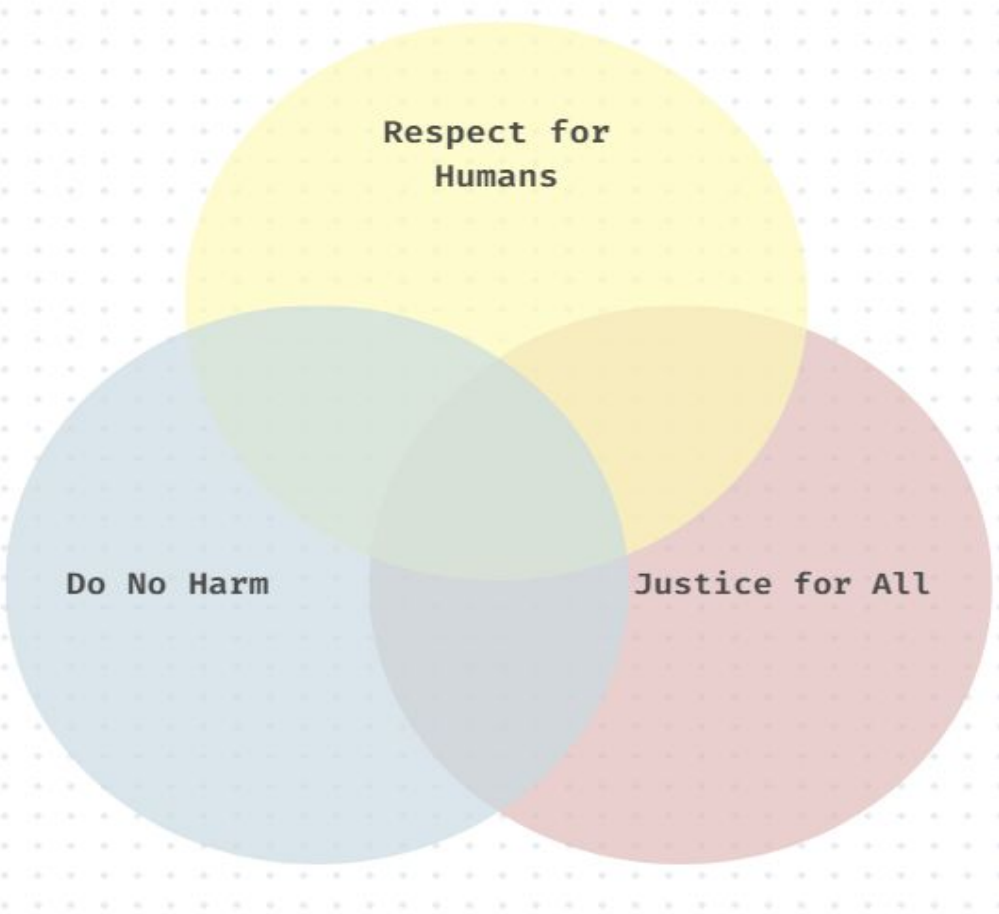
## Definition (Part 2)

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**Responsible AI literacy** aims to equip individuals with the knowledge, skills, and practices to **leverage** AI systems to maximize collective benefits while recognizing and mitigate harms. Ultimately, responsible AI literacy is about cultivating agency and clarity about the **purpose, limits, and consequences of AI tools**, while explicitly rejecting anthropomorphism and myths of machine sentience.



# Responsible AI Literacy Principles



Adapted from Belmont Report

Responsible Consumer of AI	Responsible Producer of AI
<ul style="list-style-type: none"><li>● Digital citizenship, accessibility minded, understanding of power dynamics</li></ul>	<ul style="list-style-type: none"><li>● Empathy-driven, accessibility minded, and thoughtful about the global community</li></ul>
<ul style="list-style-type: none"><li>● Learning and Cognition</li></ul>	<ul style="list-style-type: none"><li>● Learning Outcomes and Discernment</li></ul>
<ul style="list-style-type: none"><li>● Water and Energy Consumption</li></ul>	<ul style="list-style-type: none"><li>● Environmental Impact</li></ul>
<ul style="list-style-type: none"><li>● Data Privacy</li></ul>	<ul style="list-style-type: none"><li>● Data Utilization (collection, storage, cleaning, and usage)</li></ul>
<ul style="list-style-type: none"><li>● Right to refuse</li></ul>	<ul style="list-style-type: none"><li>● Easy opt-out options</li></ul>

# Responsible AI Literacy Competencies

Algorithmic Awareness

Data Fluency

Empathy Driven

Environmental Impacts

Human-Centered Agency

Dynamics of Power





# Responsible AI and Tech Justice: A Guide for K12 Education

Full version ([PDF](#))

Executive Summary ([PDF](#))





**Questions?**





**Thank you for attending!!!**

**Email us: [csequity@kaporcenter.org](mailto:csequity@kaporcenter.org)**



**@kaporcenter**

