# **Today's Presenters**



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# **Al and Libraries:**

# **Enhancing Services and Engaging Communities**

WebJunction August 9, 2023

### What We'll Cover

**Introductions** 

What is Al Anyway

**Examples for Libraries and Communities** 

**Equity and Ethics Considerations for Al** 

What's Next for You

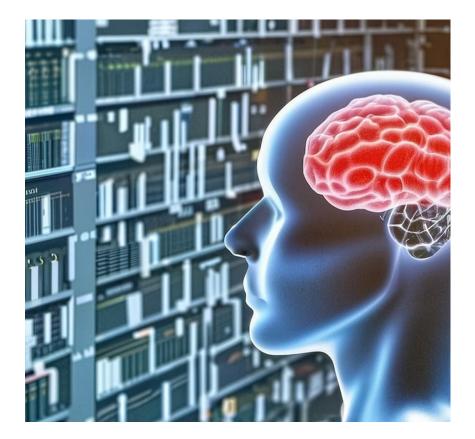


Image generated with Google Labs AI for slides

# What excites you about Al

Add one word to the word cloud that describes what excites you about Al



Image AI generated by L Braun using Midjourney. Prompt: Image of people of color excited by a new idea in the style of MAD magazine midjourney.com

# **Linda's Journey**

have you tried chatgpt already?

That sounds like a good way to spend the day after Christmas. I haven't tried chat GPT yet it's been on my list and I just haven't done it. I think I have to today now.

Did you try it?

yes, and it is wild, i feel it would change everything. i asked it to write a discharge plan for one of mark's patients, an essay for a Hemingway story, and a sermon for Xmas based on John 1:1-11 I can't stop using it. I feel it would change how we think about knowledge and assessment . I want to create a program with teen around it

Everything I hear and read is that it's going to change the world. Do you have an idea of what you would work on with teens? The Chat GPT design challenge?

# **Linda's Journey**

#### Library Staff ChatGPT Ethics Training

#### User

Write a description for a series of trainings for library staff on the ethics and opportunities of using ChatGPT

#### ChatGPT

The series of trainings for library staff on the ethics and opportunities of using ChatGPT is designed to provide library staff with a comprehensive understanding of the ethical considerations and potential benefits of using ChatGPT in their work.

The training will cover topics such as the responsible use of ChatGPT, including issues related to privacy and confidentiality, as well as the potential for ChatGPT to enhance the efficiency and effectiveness of library services.

Participants will also have the opportunity to learn about best practices for using ChatGPT in different library settings, such as reference services, reader's advisory, and information literacy instruction.

Throughout the training, participants will have the opportunity to engage in hands-on exercises and case studies to help them apply their learning to real-world situations.

By the end of the training, library staff will have a solid foundation in the ethical use of ChatGPT and be well-equipped to leverage its capabilities to improve the services they offer to their patrons.

#### User

What are the ethics of using ChatGPT for writing articles, blog posts, etc.

#### ChatGPT

There are several ethical considerations to keep in mind when using ChatGPT or other language model technologies for writing articles, blog posts, or other written materials.

One key consideration is the issue of attribution and credit. If you are using ChatGPT or another language model to generate content, it is important to be transparent about this and to give credit to the technology as the source of the content. This could involve using a disclaimer or adding a footnote indicating that the content was generated using ChatGPT or a similar tool.

Another ethical consideration is the issue of plagiarism. Even though ChatGPT or other language models may generate original content, it is still important to ensure that you are not accidentally copying or reproducing someone else's work. You should always check your content for plagiarism and properly cite any sources that you have used.

Finally, it is important to be mindful of the potential for language model technologies to perpetuate harmful biases or stereotypes. It is important to carefully review and edit the content generated by ChatGPT or other language models to ensure that it is respectful and inclusive.

# **Linda's Journey**





When thinking about equity work, there is a lot that you might think about in terms of what you love and what brings you joy in doing this work. Focusing on those aspects of building equity-based teen services helps to remind everyone involved, even when the work is challenging and difficult, all of the positives that are also a part of what's taking place.

Use this Jamboard to write down all of the aspects of equity work that bring joy and that participants love about the work.

 $\label{lem:https://jamboard.google.com/d/1y5hfpJY9okeoPwwTpYDohA7KkxBhtLsYHW8vMD_aF8c/edit?usp=sharing$ 



# Dianne's Journey

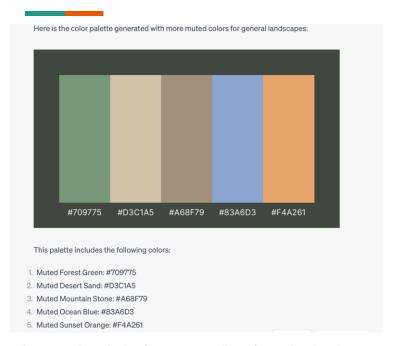


Image AI generated by D Connery using Midjourney. Prompt: excited kids playing on computer in library.



With permission: Created by Awais Khan: Credited Zain Khan and Superhuman

# Juan's Journey



Prompt: A website for an art gallery featuring landscapes from the Pacific Northwest of the USA

By Juan Rubio for ChatGPT with colors plugin

### Figma.com





newsletter





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# Juan's journey





a watercolor painting of a toad during a rainy day, the toad faces forward in a close up, there are big green leaves and the tone of the painting is vibrant with some softs yellow illuminating the toad, the light is soft but the toad stands out --v 5 --s 50 **Midjourney - Juan Rubio** 

# Juan's Journey





Create an outline for a webinar to introduce rural libraries to Artificial intelligence and how uses of virtual assistances and chat bots such as chatgpt can help design programs, create community and assist staff with reference tasks or other services at libraries in US rural areas. The webinar will also include experiences from an administrator from a prominent rural library, an expert in library services, and a technologist.



Webinar Outline: Introduction to Artificial Intelligence and Virtual Assistants in Rural





I. Introduction

Libraries

- A. Opening remarks and welcome
- B. Overview of the webinar's purpose and goals
- II. Understanding Artificial Intelligence and Virtual Assistants
- A. Definition and explanation of artificial intelligence (AI)
- B. Introduction to virtual assistants and chatbots
- C. Key features and capabilities of Al in library settings
- III. Benefits of AI in Rural Libraries
- A. Enhancing library programs and services
- B. Improving community engagement and outreach
- C. Assisting library staff with reference tasks and administrative duties
- D. Increasing accessibility for patrons in remote areas



# What is Al Anyway

#### Definition

Al (Artificial Intelligence) "is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but Al does not have to confine itself to methods that are biologically observable [emphasis added]." (McCarthy, n.d.)

https://guides.lib.uw.edu/hsl/ai



Image AI generated by J Rubio using Midjourney. Prompt: Representation of AI interacting with people in the style of MAD Magazine

# **Library Context**

Imagine a tool that could help you sort books, suggest the perfect book for a reader, or even answer questions about library hours and services. That tool is programmed to learn from the books it sorts, the preferences of the readers it interacts with, and the questions it answers. Over time, it gets better and better at these tasks.

# Not just fetch and display data but learn from it

ML (Machine Learning) is "algorithms that give computers the ability to learn from data, and then make predictions and decisions." Examples include automatically detecting spam emails, suggesting videos to watch after finishing one, etc. (CrashCourse, 2017)



Image AI generated by J Rubio using Midjourney. Prompt: a woman with her back to the camera is pulling a book from a bookshelf, another woman facing the camera holds a book in her hands and reads from it in the style of MAD magazine

The human visual system is one of the wonders of the world. Consider the following sequence of handwritten digits:

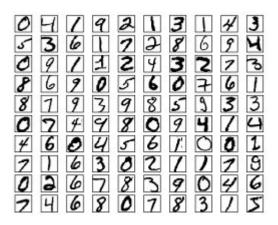


# Pattern recognition

The difficulty of visual pattern recognition becomes apparent if you attempt to write a computer program to recognize digits like those above. What seems easy when we do it ourselves suddenly becomes extremely difficult. Simple intuitions about how we recognize shapes - "a 9 has a loop at the top, and a vertical stroke in the bottom right" - turn out to be not so simple to express algorithmically.

### How do machines learn?

Neural networks approach the problem in a different way. The idea is to take a large number of handwritten digits, known as training examples, and then develop a system which can learn from those training examples.



# What are Intelligent Computer Programs?

LLMs (Large Language Models) "can generate natural language texts from large amounts of data. Large language models use deep neural networks, such as transformers, to learn from billions or trillions of words, and to produce texts on any topic or domain. Large language models can also perform various natural language tasks, such as classification, summarization, translation, generation, and dialogue." (Maeda & Chaki, 2023)

**Transformers:** a language model architecture introduced with the paper "Attention is All You Need" by Vaswani et al. in 2017.



Image AI generated by J. Rubio using Midjourney. Prompt: a dmv official with a young woman passing a driver's test in the style of MAD magazine

# AI - an extensive and complex field of study

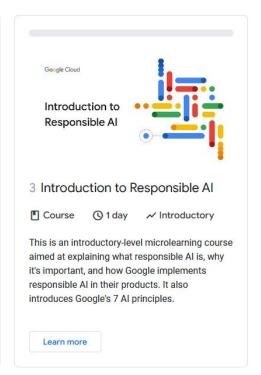
Google Cloud Skills Boost

### Google Cloud Skills Boost

#### Learning path activities







# **Google Cloud Skills Boost**

ai.google

Google Cloud Skills Boost

# Hi, Juan

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Generative AI learning path: <a href="https://www.cloudskillsboost.google/journeys/118">https://www.cloudskillsboost.google/journeys/118</a>

# What Was Surprising to You

In chat, tell us what surprised you during today's session!



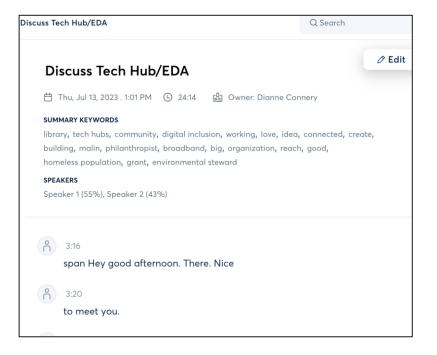
Image AI generated by L Braun using
Midjourney. Prompt: group of people of color
looking surprised in the style of MAD magazine

## **Productivity**

Libraries are a good place to talk about this because we've prioritized information for the public good for a long time. The public value is our guiding principle.



Image AI generated by D Connery using Midjourney. Prompt: Whimsical librarian using a computer in MAD Magazine style



# Otter.ai

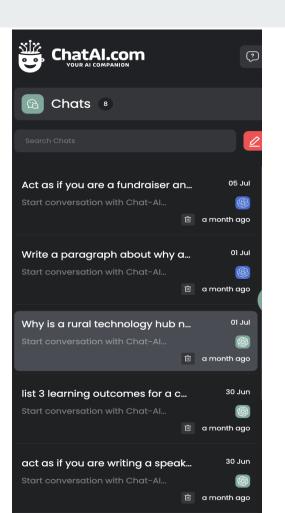
### **Discuss Tech Hub/EDA** Thu, Jul 13 • 10:55am © 24:14 SUMMARY • Start of the interview. (3:16) • What do I need to do my job better? (5:13) • The power of the library. (7:06) • Fast forward to tech hubs application. (9:23) • Let me know if there's a way we can help. (11:06) • Community Wellness. (12:29) • How do we do more to help the community? (14:11) Rural Innovation Lab overview. (16:22) • What's missing along the continuum of education? (18:30) • Dianne's network of peers. (20:41)

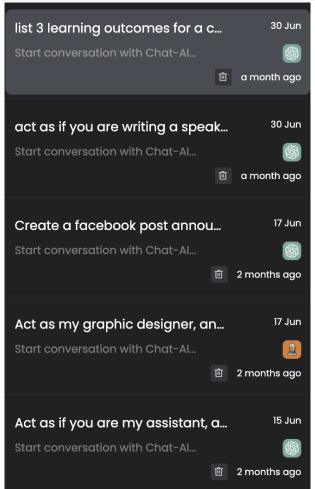
### Staff facing

Administrative tasks
Grant writing
Proposals
Data analysis
Collection management
Developing policies

#### Public facing

Program planning Marketing Translation Chatbots





#### decktopus.com



#### Potential of Al

To discuss the future possibilities of artificial intelligence in various fields

#### Healthcare

AI can assist in faster and more accurate diagnosis, treatment planning, and drug development.

#### Finance

Al can help detect fraud, automate financial processes, and provide more personalized financial advice.

#### Transportation

Al can improve traffic management, reduce accidents, and enable autonomous vehicles.

#### Entertainment

Al can enhance gaming experiences, personalize content recommendations, and create more immersive virtual reality environments.

#### Challenges and Risks

AI can have negative impacts on employment, privacy, and security. There are also concerns about bias and accountability in AI decisionmaking.

#### ▲ Ethics of AI

There is a need for ethical guidelines and responsible AI development to ensure that AI is used for the benefit of society and does not cause harm.

#### Conclusion

AI has enormous potential to transform various industries and improve our lives. However, it is important to address the challenges and risks associated with AI and ensure that it is developed and used ethically.

### **Al for Communities**

Creativity

**Brainstorming** 

**Productivity** 

Better communication

Computer programming

Finance - stock market

Travel planning

Information gathering/education

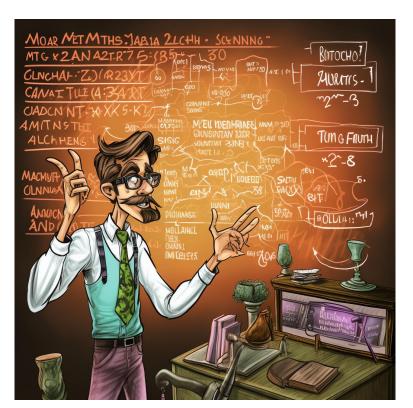


Image AI generated by D Connery using Midjourney. Prompt: teacher explaining advanced math concept in MAD Magazine style.

# Poll: What Type of AI Tools Have You Used

Take our poll to let us know what type of Al tools you have used. Feel free to also add in the chat how you use those tools.

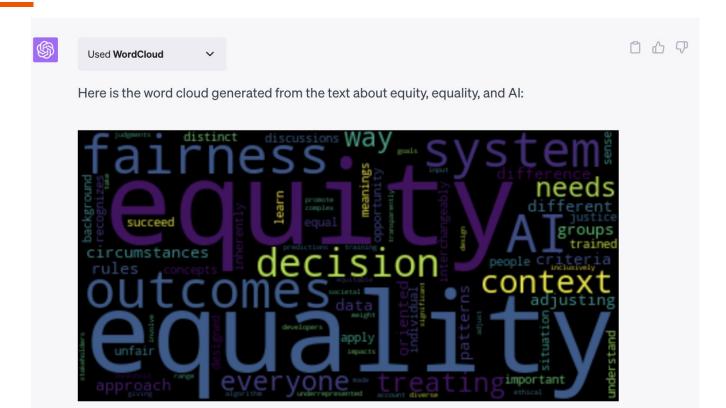


Image AI generated by L Braun using Midjourney. Prompt: MAD magazine style image of someone painting

### **Considerations of AI Ethics**



# **Considerations of AI Equity**



### **Ethical Frameworks**



In what ways can AI ethical frameworks be unsuccessful



While ethical frameworks for Al are crucial, they can sometimes fall short in several ways. Here are some potential pitfalls:

1. Vagueness: Ethical principles can often be quite abstract and open to interpretation. This can make it difficult to apply them in concrete situations. For example, principles like "fairness" or "beneficence" can mean different things in different contexts.

- 2. Lack of Enforcement: Ethical frameworks can be ineffective if they are not backed up by mechanisms for enforcement and accountability. Without these, there may be little incentive for AI developers and users to adhere to the principles.
- 3. Overemphasis on Individual Responsibility: Some ethical frameworks place too much emphasis on the responsibility of individual AI developers or users, without adequately addressing systemic issues. This can overlook the role of institutions, policies, and societal structures in shaping the ethical use of Al.
- 4. Insufficient Engagement with Affected Communities: Ethical frameworks can fall short if they do not adequately engage with the communities that are affected by Al systems. This can lead to a lack of understanding of these communities' needs, values, and perspectives, and can result in solutions that are not truly fair or beneficial.
- 5. Neglect of Power Dynamics: Ethical frameworks can be unsuccessful if they do not take into account power dynamics and inequalities. For example, they might not adequately address how AI can be used to reinforce existing power structures, or how marginalized groups might be disproportionately affected by Al.
- 6. Lack of Adaptability: The field of Al is rapidly evolving, and ethical frameworks can become outdated if they do not adapt to new developments. This can lead to gaps in ethical guidance.
- 7. Overreliance on Ethical Frameworks: Finally, ethical frameworks can be unsuccessful if they are seen as a panacea. While they are an important tool for guiding the ethical use of Al, they are not sufficient on their own. They need to be combined with technical measures, regulatory oversight, and ongoing critical reflection.



who benefits the most from AI ethical frameworks



Al ethical frameworks are designed to benefit a wide range of stakeholders. Here are some of the main beneficiaries:





- 1. Users: Ethical frameworks help protect the rights and interests of the people who use Al systems or are affected by them. This includes ensuring that Al systems are fair. transparent, and respect users' privacy.
- 2. **Developers and Engineers**: Ethical frameworks provide guidance for Al developers and engineers, helping them navigate complex ethical dilemmas and make decisions that align with societal values.
- 3. Companies: For businesses that develop or use AI, ethical frameworks can help mitigate risks, build trust with customers and users, and foster a culture of ethical decision-making.
- 4. Regulators and Policymakers: Ethical frameworks can inform the development of laws and regulations related to AI, helping ensure that these are grounded in widely accepted ethical principles.
- 5. Society at Large: Ethical frameworks for Al aim to ensure that Al is used in a way that benefits society as a whole. This includes promoting social good, avoiding harm, and addressing broader societal impacts of AI, such as job displacement and power imbalances.
- 6. Marginalized and Vulnerable Groups: Ethical frameworks can help ensure that the benefits of AI are distributed equitably and that AI does not exacerbate existing inequalities. This is particularly important for marginalized and vulnerable groups, who might otherwise be disproportionately affected by the negative impacts of Al.
- 7. Future Generations: Ethical frameworks can also benefit future generations by guiding the development of AI in a sustainable and responsible way, considering long-term impacts and potential risks.

In essence, ethical frameworks for AI are designed to benefit everyone involved in or affected by AI, from the individual user to society as a whole. However, the extent to which they actually do so depends on how well they are implemented and enforced.

# What's the Role of the Library

Be proactive and get involved

Be responsive not reactive

Bring vested partners and community members into the process of learning and building systems for and with AI

Bring curiosity, wonder, bravery, and courage to the work

Be innovative and explorative

Be an advocate



Image AI generated by L Braun using Midjourney. Prompt: MAD magazine style image showing groups of people of color brainstorming ideas together

### What's Next for You

In the chat let us know how you would like to move forward with your learning from today as you continue to consider AI in the library, the community, and more.



Image AI generated by L Braun using Midjourney. Prompt: people of color moving forward happily in the style of MAD magazine

# QUESTIONS



Image AI generated by L Braun using Midjourney. Prompt: group of people raising their hands to ask a question in the style of MAD magazine



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Thanks for your engagement! Feel free to contact us.