Today’s Presenters

Linda W Braun
Learning Consultant, The LEO Group

Juan Rubio
Digital Media and Learning Program Manager, Seattle Public Library (WA)

Dianne Connery
Director, Pottsboro Public Library (TX)
AI and Libraries: Enhancing Services and Engaging Communities

WebJunction
August 9, 2023
What We’ll Cover

Introductions
What is AI Anyway
Examples for Libraries and Communities
Equity and Ethics Considerations for AI
What’s Next for You
What excites you about AI

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

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.

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 😊

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

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? 😎
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

What Do You Love About Equity Work QotD

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.

https://jamboard.google.com/d/1y5hfJY0keoPwwTpYDohA7KkxBhLtSYHW8vMYD_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
Here is the color palette generated with more muted colors for general landscapes:

1. Muted Forest Green: #709775
2. Muted Desert Sand: #D3C1A5
3. Muted Mountain Stone: #A68F79
4. Muted Ocean Blue: #83A6D3
5. Muted Sunset Orange: #F4A261

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

By Juan Rubio for ChatGPT with colors plugin
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 soft yellow illuminating the toad, the light is soft but the toad stands out.  

Midjourney - Juan Rubio
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 Libraries**

I. Introduction

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 AI 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 AI Anyway

Definition

**AI (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 AI does not have to confine itself to methods that are biologically observable [emphasis added]." (McCarthy, n.d.)

[https://guides.lib.uw.edu/hsl/ai](https://guides.lib.uw.edu/hsl/ai)
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)
The human visual system is one of the wonders of the world. Consider the following sequence of handwritten digits:

```
504192
```
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

Learning path activities

1. Introduction to Generative AI
   - Course: 1 day
   - Introductory
   This is an introductory level microlearning course aimed at explaining what Generative AI is, how it is used, and how it differs from traditional machine learning methods. It also covers Google Tools to help you develop your own Gen AI...

2. Introduction to Large Language Models
   - Course: 1 day
   - Introductory
   This is an introductory level microlearning course that explores what large language models (LLM) are, the use cases where they can be utilized, and how you can use prompt tuning to enhance LLM performance. It also covers Google tools to...

3. Introduction to Responsible AI
   - Course: 1 day
   - Introductory
   This is an introductory-level microlearning course aimed at explaining what responsible AI is, why it's important, and how Google implements responsible AI in their products. It also introduces Google's 7 AI principles.
Hi, Juan

Choose your learning path, build your skills, and validate your knowledge. All in one place.

Create an account today and start learning Generative AI through our new free-of-cost learning path! This 10 course learning path will teach you the fundamentals of Generative AI from Google Cloud experts.

To access to our full catalog of Google Cloud authored content, visit the subscription page to purchase a Google Cloud Skills Boost monthly subscription ($29/month) or Innovators Plus annual subscription ($299/year), subject to eligibility limitations.

Generative AI learning path: https://www.cloudskillsboost.google/journeys/118
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.
AI for Libraries

Discuss Tech Hub/EDA

Thu, Jul 13, 2023 • 1:01 PM  •  24:14  •  Owner: Dianne Connery

SUMMARY KEYWORDS
library, tech hubs, community, digital inclusion, working, love, idea, connected, create, building, malin, philanthropist, broadband, big, organization, reach, good, homeless population, grant, environmental steward

SPEAKERS
Speaker 1 (55%), Speaker 2 (43%)

3:16
span Hey good afternoon. There. Nice

3:20
to meet you.

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)
AI for Libraries

Staff facing
- Administrative tasks
- Grant writing
- Proposals
- Data analysis
- Collection management
- Developing policies

Public facing
- Program planning
- Marketing
- Translation
- Chatbots
Artificial Intelligence: Say Hello to Your New Assistant
Exploring the Benefits and Applications of AI for the General Public

Potential of AI
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
  AI can help detect fraud, automate financial processes, and provide more personalized financial advice.

- Transportation
  AI can improve traffic management, reduce accidents, and enable autonomous vehicles.

- Entertainment
  AI 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 decision-making.

- 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.
AI for Communities

- Creativity
- Brainstorming
- Productivity
- Better communication
- Computer programming
- Finance - stock market
- Travel planning
- Information gathering/education
Poll: What Type of AI Tools Have You Used

Take our poll to let us know what type of AI 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

Here is the word cloud generated from the text about ethics and AI:
Considerations of AI Equity

Here is the word cloud generated from the text about equity, equality, and AI:
Ethical Frameworks

In what ways can AI ethical frameworks be unsuccessful

While ethical frameworks for AI 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 AI.

4. **Insufficient Engagement with Affected Communities**: Ethical frameworks can fall short if they do not adequately engage with the communities that are affected by AI 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 AI.

6. **Lack of Adaptability**: The field of AI 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 AI, they are not sufficient on their own. They need to be combined with technical measures, regulatory oversight, and ongoing critical reflection.

AI 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 AI systems or are affected by them. This includes ensuring that AI systems are fair, transparent, and respect users' privacy.

2. **Developers and Engineers**: Ethical frameworks provide guidance for AI 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 AI aim to ensure that AI 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 AI.

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
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
Thanks for your engagement! Feel free to contact us.

Linda W. Braun
lbraun@leonline.com

Juan Rubio
rubiojuan@gmail.com

Dianne Connery
library@cityofpottsboro.com