

# Media Literacy Education for Adult Audiences: Decoding Algorithms

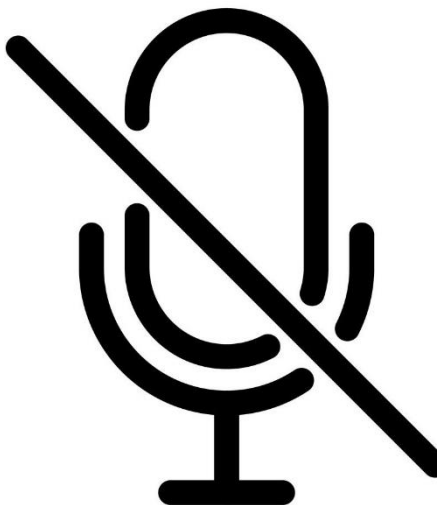
Fiona O'Connor, Senior Services Specialist  
in Digital Literacy Initiatives

# Announcements

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- Today's webinar is a presentation of ALA's Public Programs Office and is the third session of five in our *Media Literacy Education for Adult Audiences: Architecture of the Internet* webinar series.
- This project was made possible by the Institute of Museum and Library Services grant number LG-13-19-0089-19.
- Please visit [ProgrammingLibrarian.org](http://ProgrammingLibrarian.org) for program ideas and more free webinars.





Only the presenter has **microphone** access. Enable captions by clicking on “Show captions”.



Use the **Q&A** to ask questions of the presenter or ALA staff. (This includes technical questions.)



Use the **CHAT** to talk with your peers.

# One-on-one virtual conversations

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- Email Joanna Laursen Brucker at [joannalb@knology.org](mailto:joannalb@knology.org) if you are interested in participating!



# Today's Presenter:

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**Fiona O'Connor,  
She/Her**

Senior Services  
Specialist in Digital  
Literacy Initiatives

Toronto Public Library



# Media Literacy Education for Adult Audiences: Decoding Algorithms

Fiona O'Connor

Senior Services Specialist, Digital Literacy Initiatives

Toronto Public Library

# Agenda

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- Understanding what algorithms are and recognizing examples in daily life
- Identifying bias in algorithms and how it impacts the delivery of information
- Discussing strategies in educating adult patrons about the role and implications of algorithms
- Questions and discussion

# Section 1: Understanding Algorithms: A Quick Overview



# AI in Everyday Life

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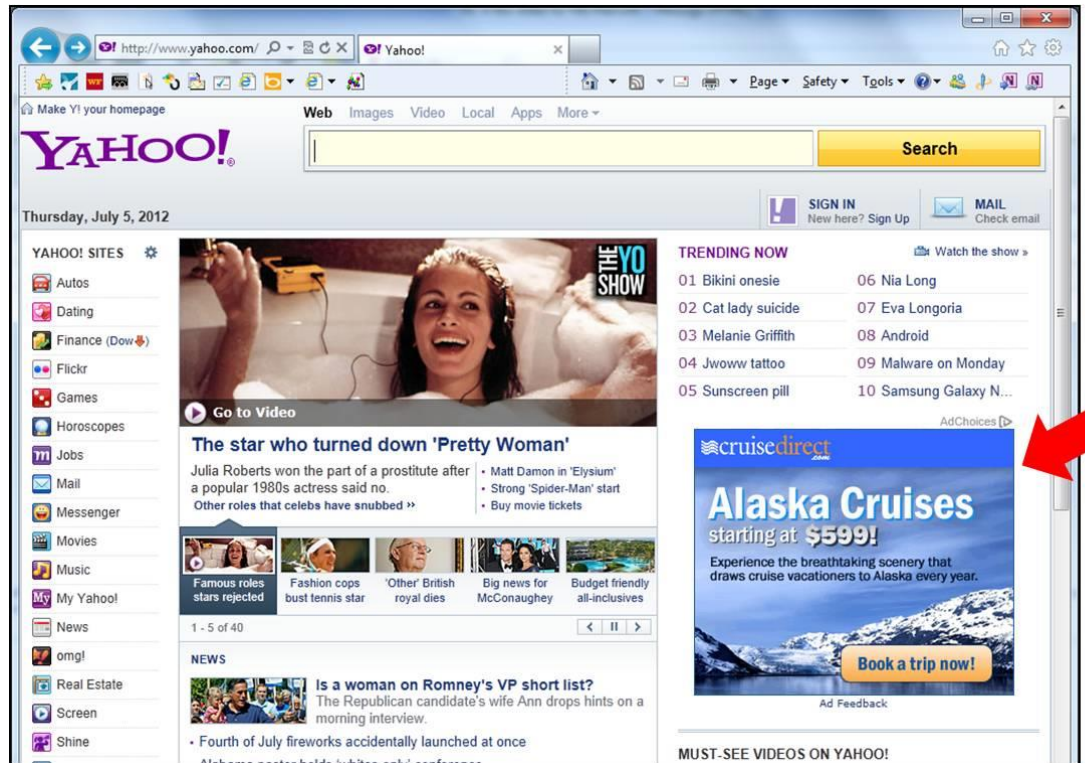
Why does Alexa respond so well to the questions I ask?



*Wiki, Samuel, Echo Dot, 2021, Wikimedia Commons.  
commons.m.wikimedia.org/wiki/File:Echo\_Dot\_%283rd\_Gen%29\_01.jpg (November 1, 2022).*

# AI in Everyday Life

Why did an online advertisement show me exactly the product I was thinking of buying?



Advnblog, 2012. Advantage Networks.

<https://advnblog.wordpress.com/2012/08/16/brands-network-providers-and-customers-all-win-with-targeted-advertising/> (November 1, 2022).

# AI in Everyday Life

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How does AI make recommendations for us?



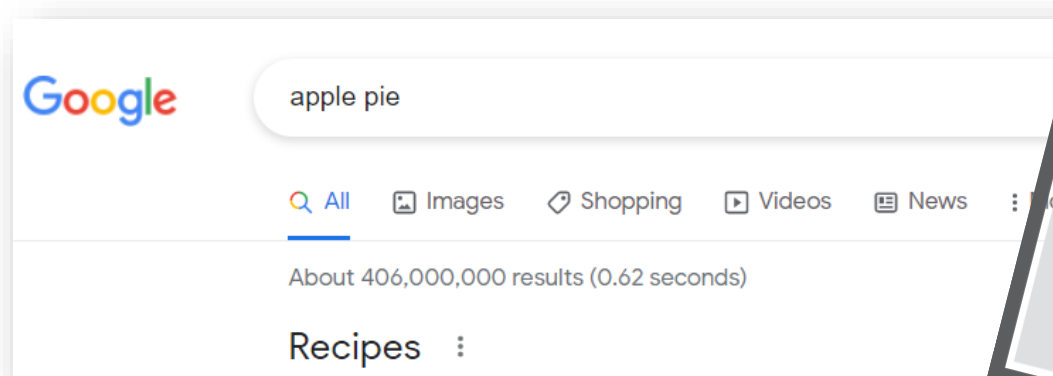
Akrom, Ljung, *Tiktok Logo Render*, 2023. Deviant Art.  
<https://www.deviantart.com/ijungakrom/art/Tiktok-Logo-Render-957728358> (April 2023).

# Understanding Algorithms

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What is an Algorithm?

It is a set of instructions with a given end result.



# Understanding Algorithms

Google created algorithms that weighted links based on clicks.

Every click strengthens the artificial neural network, making the Google network more accurate.



Enter a search  
in your  
favourite  
browser



Click on the  
result that  
you think is  
best



Each time it is  
clicked, the  
algorithm  
becomes  
stronger and  
more accurate



# Understanding Algorithms

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KenStock, Apple Red Fruit, Pixabay, 2020.



## Did you know

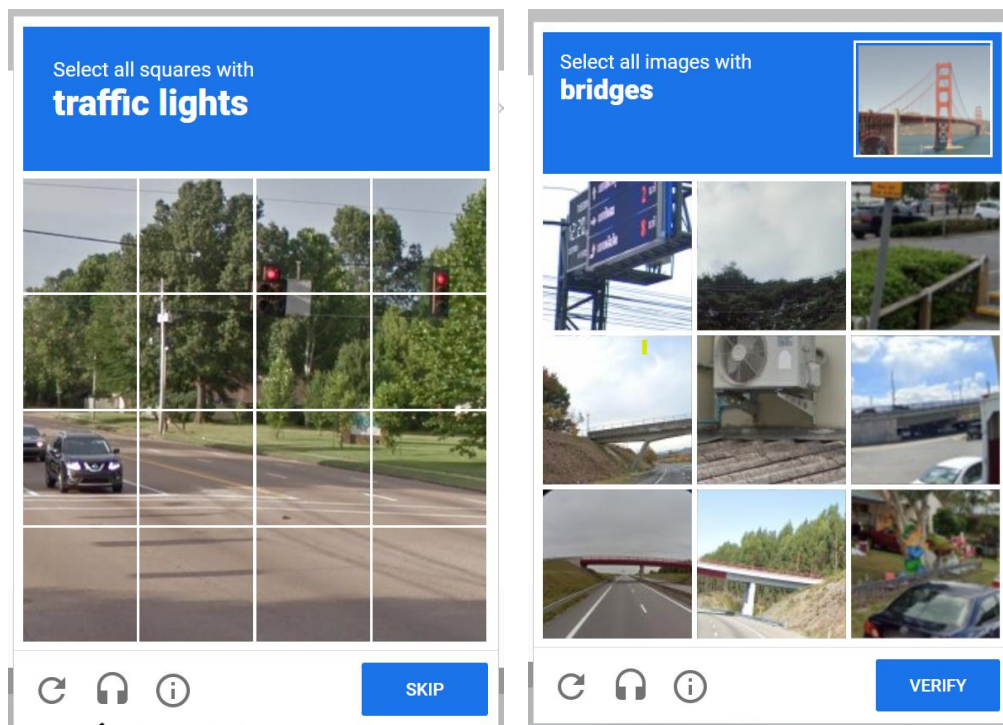
When google developed a machine learning process for smart reply suggestion in Google Gmail, it gathered over 200,000,000 million samples!!

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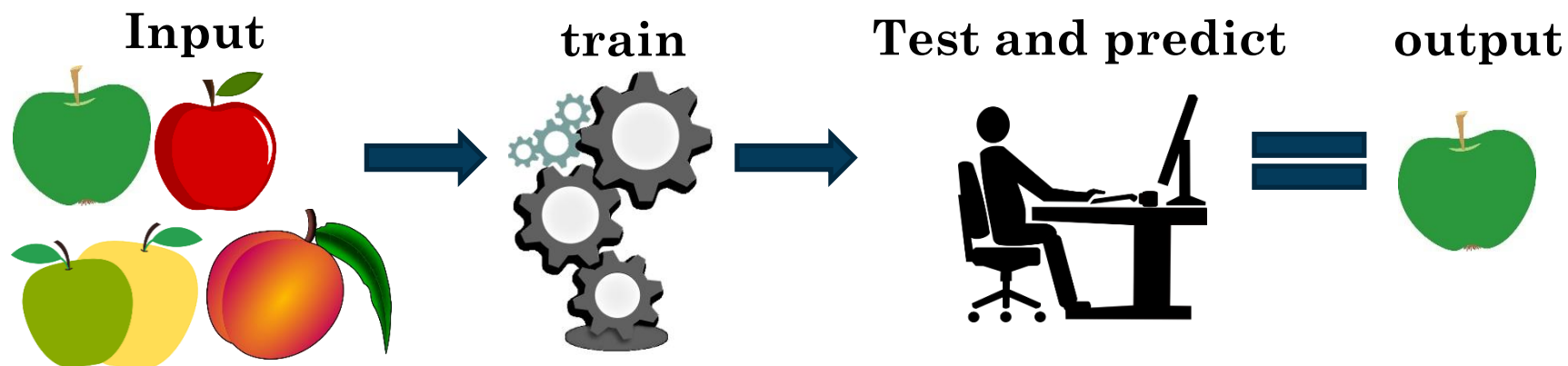
# Understanding Algorithms



**Did you know**  
Verifying images helps AI learn?

# Understanding Algorithms

## How machine learning works



MostafaEITurkey36, Pixabay. 2020.

Curry, Stephanie, Pixabay. 2018

PagDev, office-work-workplace-chair-symbol. Pixabay. 2020.

Clker-Free-Vector-Images, apple-school-green-fall-food, Pixabay. 2024.

# Understanding Algorithms: Biases

Data Sets

Machine Learning

Algorithms

**Biases**

Gender Biases

Age Discrimination

Racial Biases

# Understanding Algorithms: Facial Recognition

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MacKenzie, Mike, Facial Recognition, Flickr, 2018.  
<https://www.flickr.com/photos/mikemacmarketing/30188201497> (November 8, 2024).



**Did you know facial recognition on your phone operates using an algorithm?**

# Section 2: Approaches to Decoding and Understanding Algorithms



# Strategies

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**tpl:vital to  
toronto**

building success, resilience  
and well-being for our city

Toronto Public Library  
strategic plan 2020-2024

[tpl.ca](http://tpl.ca)

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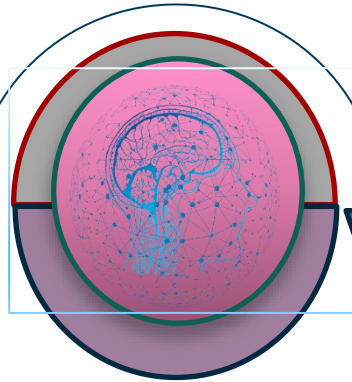


# Strategies: Program Development

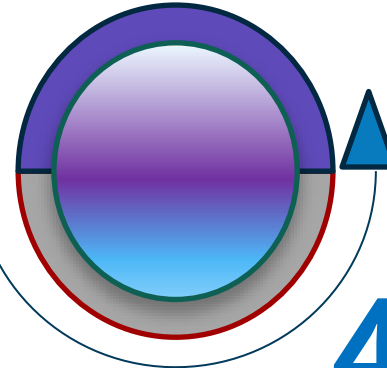
- 1** **Data Privacy**  
How to stay safe online.



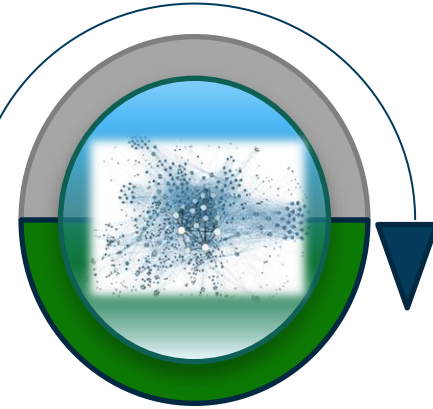
- 2** **Artificial Intelligence**  
Introductory level on how it operates and interacts in our day to day.



- 3** **Misinformation and Disinformation**  
An intro how to combat it effectively.



- 4** **Data Visualization and Storytelling**  
An introductory program exploring the importance of data visualization.



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# Strategies: Program Development

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*Edar, Diary-ipad-Workspace. Pixabay. 2015*

## **Staff training for programs**

- Learning Objectives
- Background information
- A run through of the program
- Role of the facilitator
- Program promotion and reporting
- Further resources
- Q & A

# Strategies: Resources



The screenshot shows the Toronto Public Library (TPL) website. The header includes the TPL logo, navigation links for 'Sign In', 'Your Account', and 'Contact Us', a search bar with the text 'Search books, movies, branches, programs & more', and a 'Search' button. Below the header is a secondary navigation bar with links for 'Books, DVDs & Music', 'eResources & Research', 'Programs', 'Locations', 'Using the Library', 'Teens', and 'Kids'. The main content area features a breadcrumb trail: 'Home > Using the Library > Computer & Digital Services'. The title of the page is 'How to be a Digital Citizen'. Below the title is a photograph of a young man in a white polo shirt working on a small electronic device. The text below the image discusses digital safety and provides information about library programs.

Home > Using the Library > Computer & Digital Services

## How to be a Digital Citizen



How can you navigate safely in this fast-changing digital world?

Every day, the Internet, digital media, and artificial intelligence are becoming more common. Understanding digital privacy and safety, being aware of AI's influence in our lives and thinking critically about information are important skills in today's digital world.

Our programs and resources are here to help you understand, access, use and engage with media and technology.

(Toronto Public Library, 2024)

# Strategies: Resources

The screenshot shows the Toronto Public Library (TPL) website. At the top, there is a navigation bar with the TPL logo, links for 'Sign In', 'Your Account', and 'Contact Us', and a search bar containing the text 'Search books, movies, branches, programs & more'. Below the navigation bar is a menu with categories: 'Books, DVDs & Music', 'eResources & Research', 'Programs', 'Locations', 'Using the Library', and 'Teens'. The main content area is titled 'Home' and features a large heading: 'What is Misinformation and Disinformation?'. Under this heading, there are four links: 'How to spot misinformation, disinformation and malinformation', 'Misinformation, disinformation, malinformation and social media', 'Fact checking websites', and 'Library resources'. To the right of these links is a section titled 'Other Resources' with a list of links: 'Detect DeepFakes', 'Evaluating Information - Applying the CRAAP Test (PDF)', 'Fake News', 'Fake News Primer: What is it? How to spot it. How to stop it', 'How Do I Spot Misinformation?', 'How to Identify Fake News in 10 Steps (PDF)', and 'How to identify misinformation, disinformation, and...'. Below the links is a video player showing a YouTube video titled 'What is fake news - explained | CBC Kids News'. The video thumbnail features a man in a suit and a green alien character, with the text 'BREAKING NEWS THE PM HAS A PET ALIEN!' overlaid. The video player includes a play button, a 'Copy link' icon, and a 'Watch on YouTube' button.

Toronto Public Library, 2024)



# Strategies: Resources

## AI chatbots tip sheet

### What are AI chatbots?

Chatbots are computer programs that mimic human-like conversation using computer-generated text or speech. They can be used for personal, school, work and business tasks that include:

- Finding information
- Writing content – e.g. reports, e-mails, meal plans
- Providing customer service
- Increasing productivity – e.g. brainstorming ideas, summarizing a document

### How do they work?

AI chatbots use **algorithms** to understand users' questions (called **prompts**) and provide responses.

They use **natural language processing** to understand questions and use **large language models** to create text or speech responses that resemble human conversation.

AI chatbots use **machine learning** to improve themselves. The more they interact with humans, the better they become at responding to prompts.

### Common AI chatbots

- **ChatGPT** – Paid and free versions
- **Microsoft Copilot** – Paid and free version
- **Perplexity.ai** – Free AI search engine

### How to Use AI chatbots

- Enter text or use speech (the **prompt**).
  - e.g. "Tell me about what there is to do in Toronto?"

Toronto Public Library, 2024)

# Strategies: Collaboration



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Toronto Public Library, 2022



# Strategies: Digital Expo

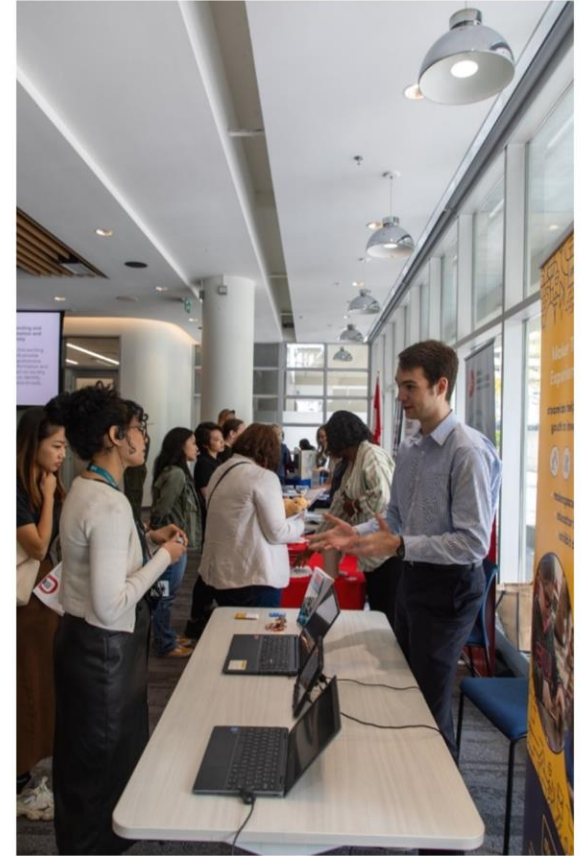
The importance of knowing and staying safe in today's ever-changing digital world.



Toronto Public Library, 2023

# Strategies: Digital Expo

“Championing Truth in the Digital Era,” spotlighting misinformation and disinformation in emerging technologies.



Toronto Public Library, 2024



# Strategies: Partnerships



Toronto Public Library, 2023



Toronto Public Library, 2024

# Strategies: Innovator in Residence

IIR is an 8 Week residency comprised of programs, workshops and consultations



Toronto Public Library, 2022

# Strategies

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Toronto Public Library, 2022



# Strategies: Lunch & Learn talks



Macrina, A. (2024, October 8). *Toronto Public Library Lunch & Learn with Library Freedom Project* [Invited Talk].



# Sustainability



# Questions?

Email: [Foconnor@tpl.ca](mailto:Foconnor@tpl.ca)

LinkedIn:

<https://www.linkedin.com/in/fiona-o-connor-7a384011>

# Please join us for the rest of the series!

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A promotional card for a webinar series. The background is a close-up of a person's hands typing on a laptop keyboard. Overlaid on the image is a semi-transparent white box containing text. The title is in a large, white, serif font. Below the title, the organizing office and the date are listed in a smaller, white, sans-serif font.

## Media Literacy Education for Adult Audiences: Free Webinar Series

*ALA Public Programs Office*

Sep 16, 2024

What determines the information that shows up in online search results? Why do results vary from person to person when the same search terms are used? Why do vacation ads appear across different websites after searching for a travel agent? The answers to these questions point to a set of structures that affect the information we all see and find online.

Join us for the Media Literacy Education for Adult Audiences: Architecture of the Internet webinar series, a five-part series that will focus on shedding light on the often-overlooked aspects of the internet that

<https://bit.ly/media-lit-series>

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