

AI: strengths and opportunities for libraries, librarians, and users

AI (Artificial Intelligence) is transforming the landscape of libraries, offering new possibilities for both librarians and users. With AI, libraries can enhance search capabilities, provide personalised recommendations, and streamline administrative tasks.



by **Teresa Pombo**

Teacher Librarian, Ministry of Education, Portugal



Who am I?

I work as a teacher librarian in a basic and secondary school just across the river. I'm also a portuguese language teacher.

I've a Masters Degree in Educational Technologies

I'm a teacher trainer since 2009.

Between 2010 and 2023 I worked within two teams of the portuguese Ministry of Education (Educational Technologies and National Reading Plan).

Disclaimer

I do believe that when used with a great dose of common sense and critical thinking AI is a wonderful tool.

AI: is there a short, quick and accurate definition?

From [one of my readings](#), from my experience... several definitions... many abstract and open-ended.

- computer language models of logical reasoning algorithms
- task automation and machine learning
- language processing
- evolution of data analytics techniques
- parasitic of some aspects of human intelligence (but quicker)

about the positive
title of this
workshop...

Benefits of AI for libraries

Efficient Resource Management: AI can automate mundane tasks, allowing librarians to focus on more strategic activities.

Personalized Services: AI enables tailored recommendations and services, enhancing user experience.

Improved Accessibility: AI tools can assist in making resources more accessible to diverse user groups.

Short introduction: what's AI and how is it present on our daily lives.

AI and libraries: main areas of. Questions and shared experiences.

Practical work in small teams: problem-solving with artificial intelligence.

More questions... (I hope...)

Program for the next 60 minutes...

But first, sharing my notes as a starting point... + 1st question

The screenshot shows a Raindrop bookmarks interface. On the left is a sidebar with a search bar, a folder named 'AI and libraries: food for thought' (containing 9 items), and various filters like 'Notes', 'Articles', 'Documents', 'Links', 'Without tags', and 'Tags (8)'. The main area displays a grid of six bookmark cards. Each card features a thumbnail image, a title, a hashtag, and the source website and date.

Thumbnail	Title	Hashtag	Source	Date
	AI in academic libraries: the future of higher education?	#academic libraries	blog.pressreader.com	Mar 9
	How Can AI Be Used in Libraries? - The Digital Librarian	#academic libraries	the-digital-librarian.com	Mar 9
	5 Ways Artificial Intelligence Impacts Libraries AJE	#impacts	aje.com	Mar 9
	Libraries can fight AI misinformation with media literacy education	#misinformation #media literacy	blog.pressreader.com	Mar 9
	The Library of the Future: AI in Public Libraries	#public libraries	linkedin.com	Mar 9
	Artificial Intelligence: Food for Thought	#AI produced	bookologymagazine.com	Mar 8



In the 21st century, does every librarian have to be a technology specialist?

Google Era and AI: differences?



Search

Access

Organise

Information



Search

Access

Organise

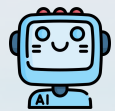
+

Generate new data

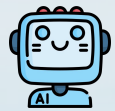
Real time data

Information

Main areas of libraries work that can benefit from AI...



Reference and research assistance



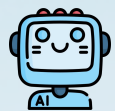
Customer service



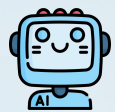
Collection development



Information literacy instruction



Digital services and technology integration



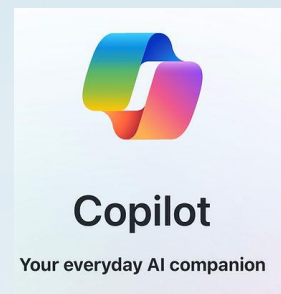
Cataloguing and metadata management

Putting people first...

Enhancing user experience with AI

Personalized Recommendations

AI can analyze user preferences to provide personalized book recommendations and other information, enhancing the user's discovery experience.



Virtual Assistants

AI-powered virtual assistants can answer user queries, provide information, and improve overall user engagement.




Interactive Learning Tools

AI can create interactive learning experiences, tailor-made to individual user needs, enhancing educational resources.



Already curious?

Let's participate on a debate with AI:



#Grade 9

Debate: Public Libraries Necessity

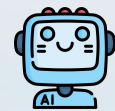
Students participate in a structured debate on the necessity...

by Prachi Sharma

[Try Now](#)

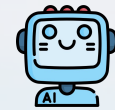


AI-powered Recommendation Systems



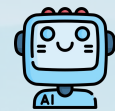
Personalized Recommendations

AI helps in delivering tailored content recommendations based on user preferences and behaviour.



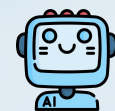
Improved Discoverability

Enhances the discovery of relevant resources and materials for users, ensuring a more engaging library experience.



Enhanced User Engagement

By suggesting content that aligns with user interests, AI systems increase user interaction and satisfaction.



Content Diversity

AI algorithms promote diversity by recommending a wide range of materials from different genres and themes.

AI for Information Retrieval and Search



Advanced Search

Utilize AI to enable advanced search functionalities for more precise queries and results.



Database Organisation

AI technology can assist in organising and structuring databases for efficient retrieval.



Optimized Algorithms

Implement AI-driven algorithms to enhance the accuracy and speed of search processes.

AI for Data Analysis and Decision-Making

Insightful Data Analysis

AI enables in-depth analysis of library data, uncovering valuable insights for informed decision-making.

Optimizing Resource Allocation

AI assists in allocating resources efficiently based on data-driven recommendations and predictions.

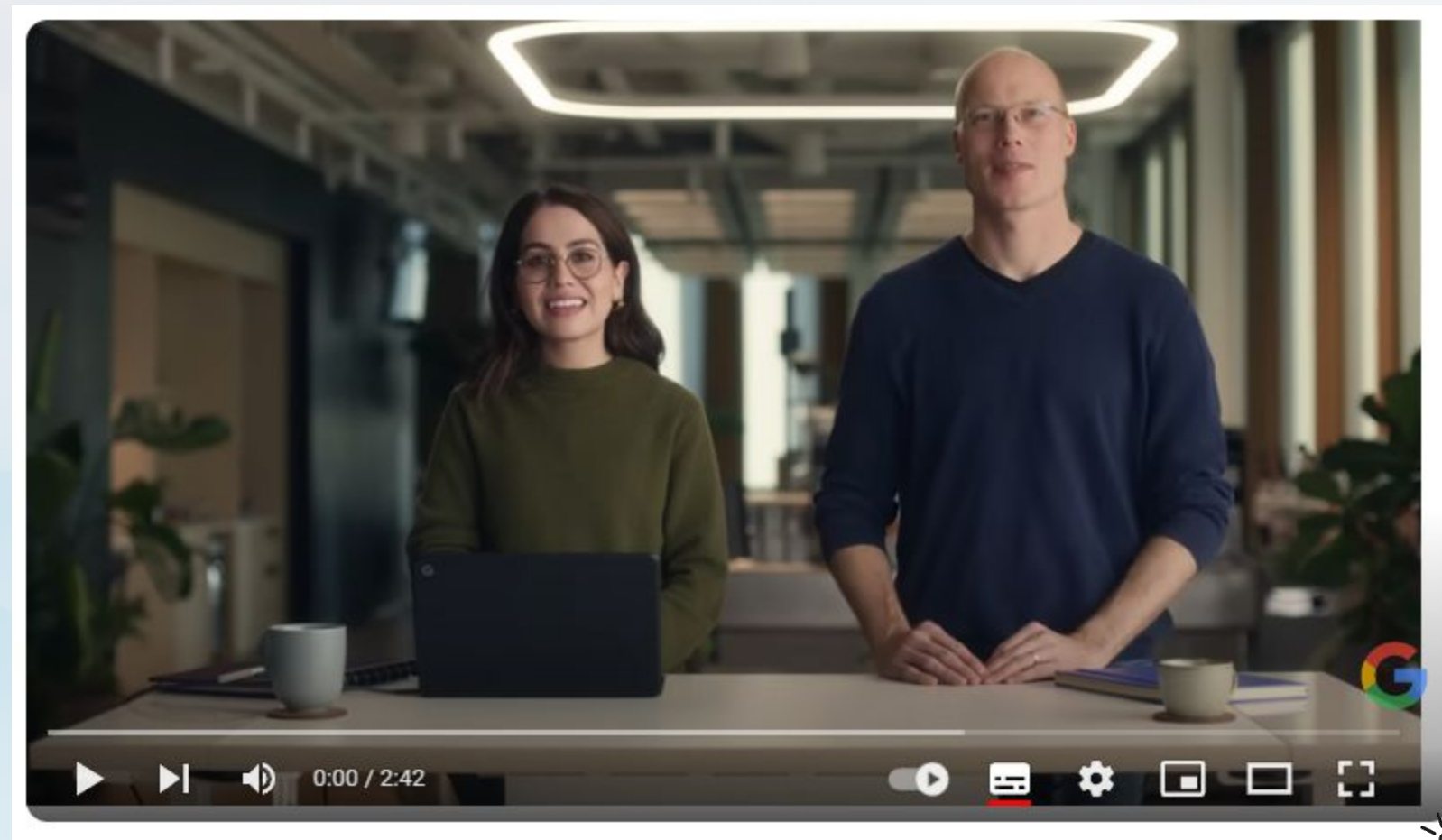
Decision Support Systems

AI empowers libraries with tools for structured decision-making processes, enhancing operational efficiency.

Strategic Planning Assistance

AI aids in strategic planning by processing complex data to identify trends and future needs.

But... how does it work?



Google Gemini:
insights on scientific literature

Challenges and considerations in implementing AI in libraries

1

Data Privacy

Securing and protecting user data from unauthorized access or breaches.

2

Algorithm Bias

Avoiding bias in AI algorithms that may impact the diversity and inclusivity of library services.

3

Infrastructure and Training

Investing in infrastructure and providing adequate training for library staff to effectively implement AI technologies.



Ethical Implications of AI in Libraries

Librarians must navigate ethical challenges related to privacy and data security.

Ensuring fairness and transparency in AI algorithms is crucial for user trust.

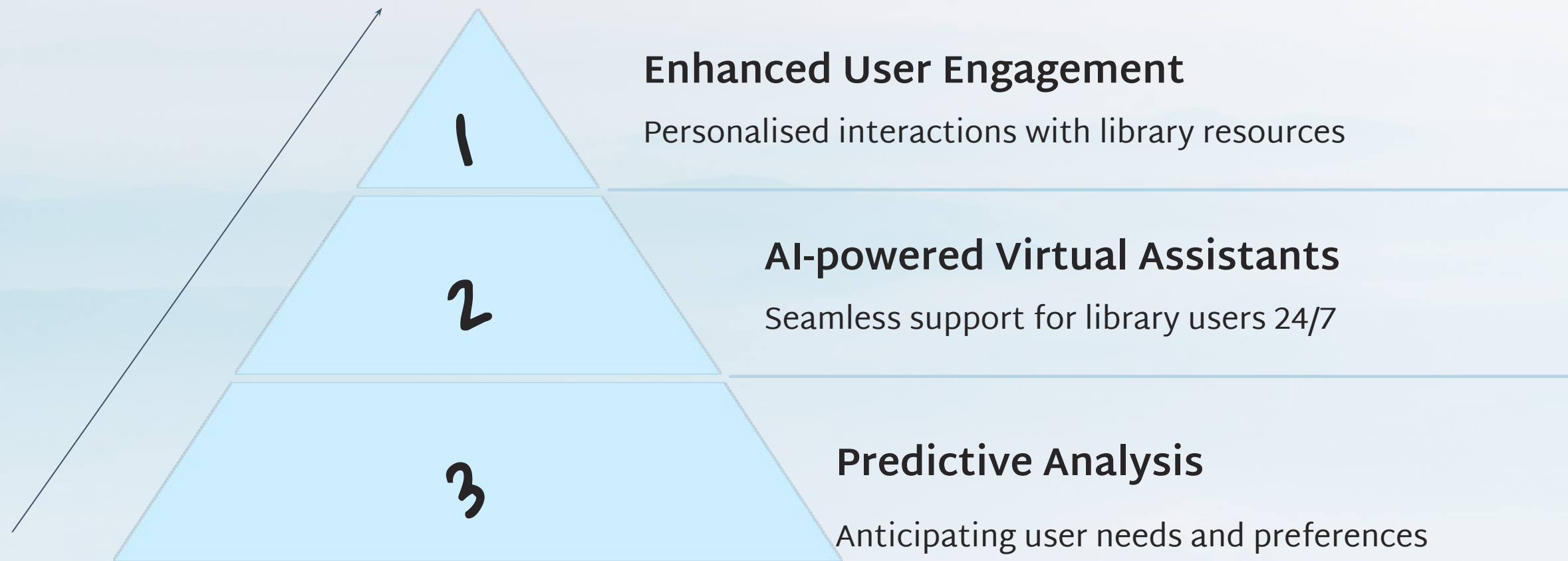
Collaboration with diverse stakeholders is essential for ethical AI implementation in libraries.

Constant monitoring and evaluation are necessary to address ethical dilemmas proactively.

New tools

Old concerns

Future opportunities and trends in AI for libraries



Some practical activities at libraries



Makerspace Projects

Facilitate creative makerspace activities for hands-on DIY projects and technology exploration.



Coding Workshops

Organize interactive coding workshops with diverse participants to foster collaboration.

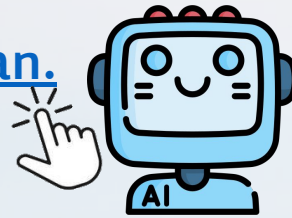


Virtual Reality Learning

Offer virtual reality learning sessions to provide an immersive and cutting-edge educational experience.

Actual examples of AI integration on libraries

[Meet Hugh, the Robot librarian.](#)



British Library robots look after old newspapers with new tech



British Library National newspaper building and robots

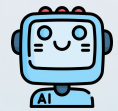
Please, ask the library cat.



What can he do?

- hours, directions and phone number of libraries
- access to a list of new releases
- answer common questions
- provide library's email address

Benefits of AI integration on libraries



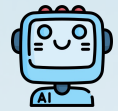
Releasing library staff from mundane tasks and allowing them to contribute in a more meaningful way to spread information and knowledge;



Being more adapted to inclusive specific needs;



Being able to help users to thrive in a digital society;

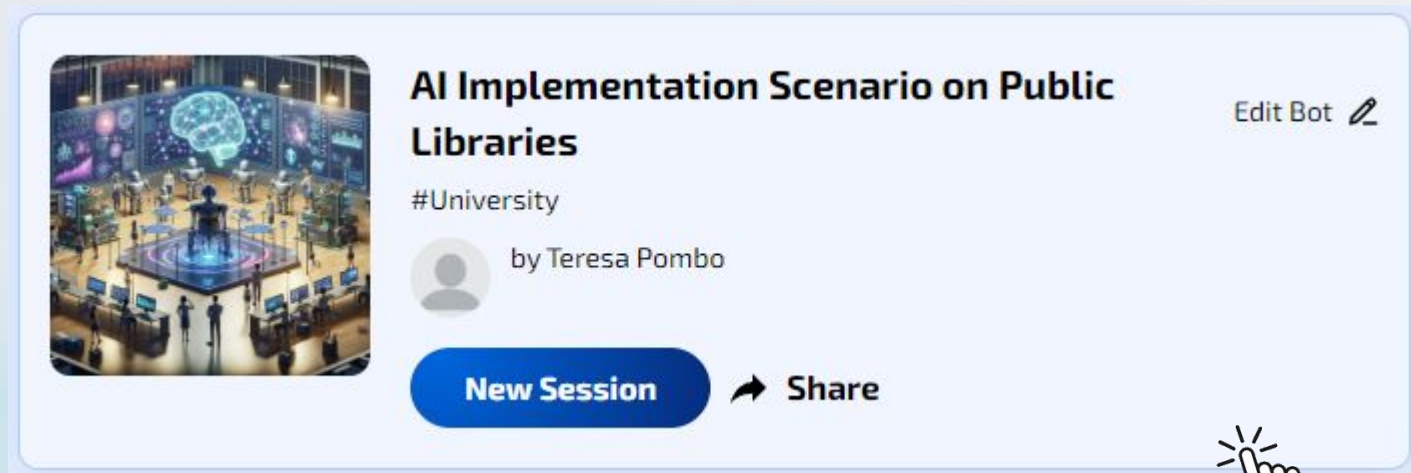


Supporting AI research at a better level, maintaining ethical standards;

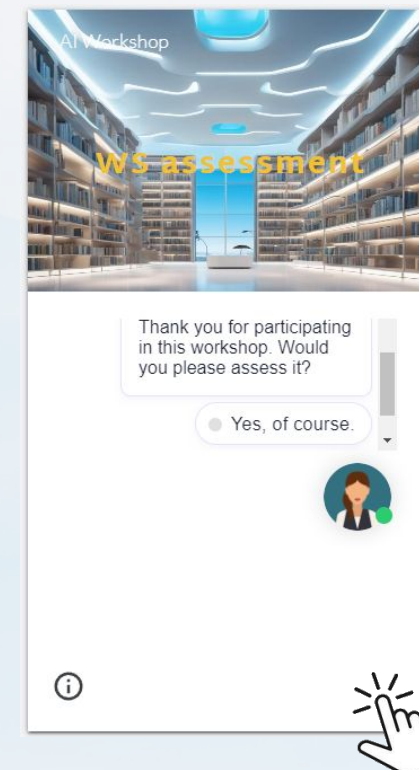


Giving answers in a more straightforward and systematised form.

Before practical work with AI:




My example on how to foster the debate about AI... using AI.



and using a chatbot to evaluate this workshop

Practical activity in small groups

- A** Identify an activity or “problem” to all the group (or at least that everybody is familiar with).
- B** Chose one or two AI tools (Chat GPT, Copilot, or a more specific one).
(visit [my collection](#)) 
- C** Discuss and apply two possible prompts to use when asking AI assistance.
- D** Modulate: discuss further changes to the prompt in order to get better results.
- E** Discuss the results: as expected? useful? needing further work?

References

All my references are already shared through Raindrop App at slide 6.

Presentation started with Gamma App.

Icons at Freepik.

Thank you!

This presentation is available at

https://bit.ly/AIws_EBLIDA2024



This document has been prepared to support a presentation,
so the information contained within it may be incomplete.

This document summarizes the author's opinion.

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