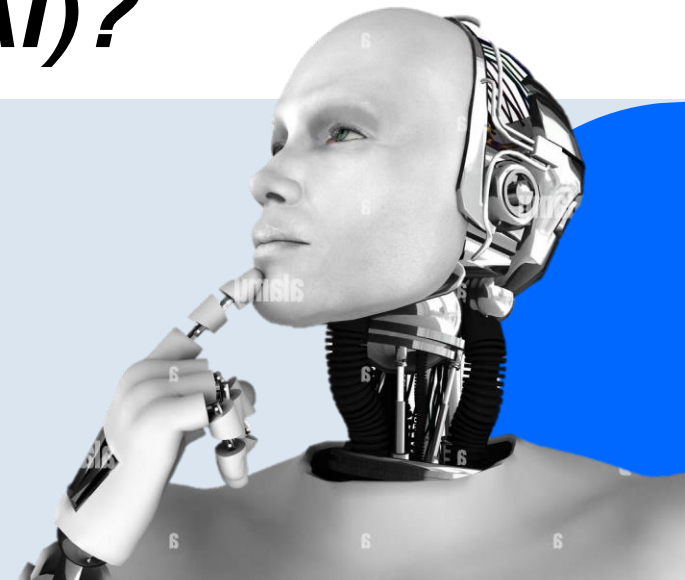




Are the libraries in Macedonia prepared for the application of artificial intelligence (AI)?

M.Sc. Elizabeta Trpcheska Petrushevska



Some of the Library's Missions

- Utilization and promotion of the use of **information** and **communication technologies**.
- Providing **easy** and **global access** to information, its retrieval and preservation, as well as the rapid transfer of **knowledge**.

Some of the Librarian's Roles

- Enabling each individual to access a wide and diverse range of **data**, **ideas**, and **opinions**.
- Replacing traditional catalog cards with **electronic catalogs** and providing readers with access to **electronic books**.



Challenges Faced by Librarians

- Digital transformation of libraries is not without its difficulties, as some libraries lack the **resources** to implement and maintain digital services.
- Issue of **digital divide**, because many libraries do not have **digital technologies** or **librarians** may not have the skills to use them.

Positive Changes in Macedonian Libraries

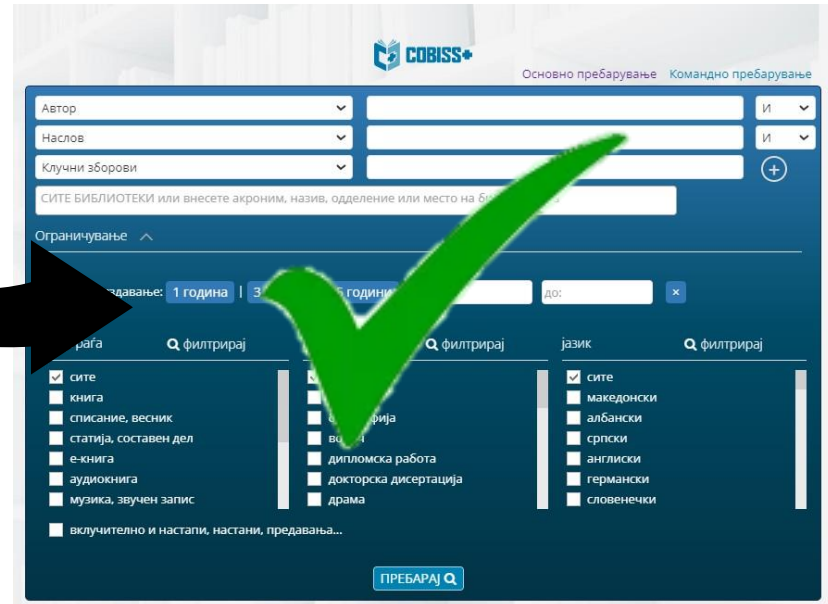
But despite the challenges that libraries in Macedonia faced, during the last decade of the previous century and the first decade of this century, **libraries in Macedonia** began the process of **automating library operations**.



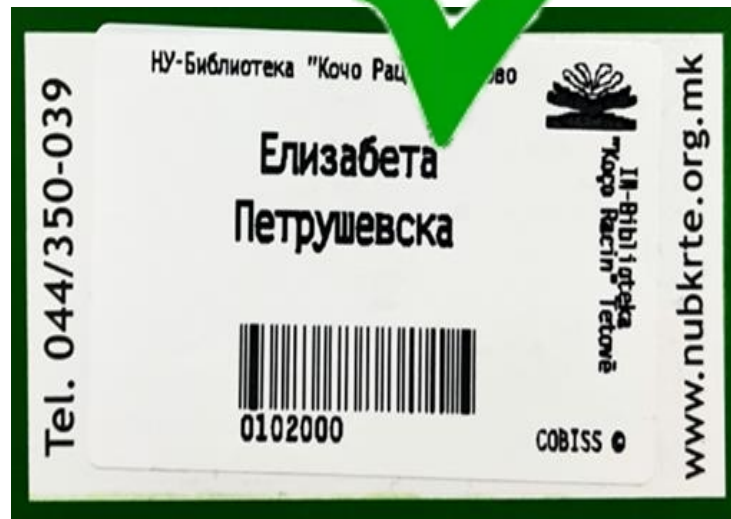
Positive Changes in Macedonian Libraries



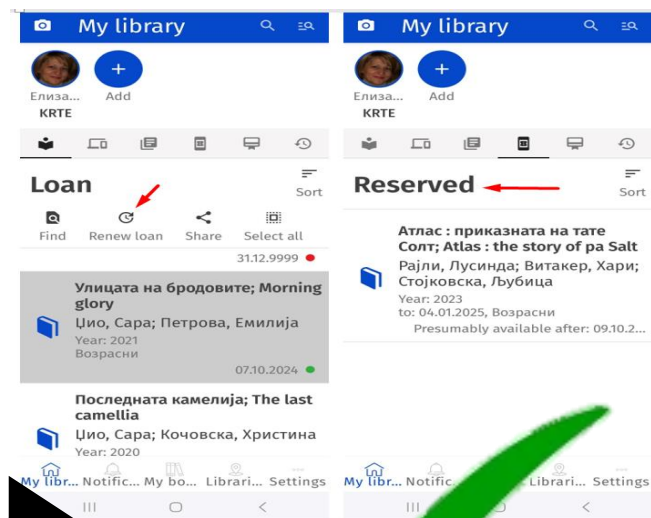
Positive Changes in Macedonian Libraries



Positive Changes in Macedonian Libraries



Positive Changes in Macedonian Libraries



My COBISS profile (My libra)



AI in our libraries

- AI **can be** trained to recognize different types of materials like books, journals and can help in **classification** of digital resources.
- The library processes that are based on data entry, as well as the tasks or procedures that are repetitive, **can be** fully automated, such as **cataloguing** and **subject indexing**. On the other side, traditional cataloguing is a process that follows certain standards and requires a deep understanding of complex cataloguing rules.
- AI **can be** used to **create video presentations** for showcasing various activities, projects, and events organized by libraries.



AI in our libraries

- AI **can** assist in **managing library collections** by analyzing usage data and recommending new materials that would be relevant to users. It **can** also **identify** rarely used materials that can be reorganized or removed. This not only optimizes the collection but also ensures that resources align better with user needs and interests.
- AI **can not** manage **loans** and **returns**. Only part of libraries are using COBISS/Loan, and only part of them utilize all the capabilities of COBISS/Loan. We do not even have book vending machines.
- AI systems **can** scan **barcodes** or **RFID tags** to keep real-time data about book location and AI-powered robots **can** physically assist in placing books on shelves but this is not possible **in many Macedonian libraries (since they don't have proper space and conditions)**.

ChatGPT

Translation

Search optimization

Image analysis



ChatGPT

Translation

Search optimization

Image analysis

ChatGPT can be used to translate resources into different languages, making them accessible to a wider range of users and help librarians to serve users who speaks in different languages.

The most famous novel by Stale Popov is "Калеш Анѓа" (Kalesh Angja). Published in 1958, it is a historical novel set in the Ottoman period of Macedonia, based on a popular Macedonian folk tale. The story revolves around Angja, a brave and beautiful Macedonian woman, and her fight against the oppressive Ottoman regime, symbolizing the struggle for freedom and cultural identity. This novel is considered one of the great works of Macedonian literature.
translate in german



Der bekannteste Roman von Stale Popov ist „Калеш Анѓа“ (Kalesh Angja). Veröffentlicht im Jahr 1958, handelt es sich um einen historischen Roman, der in der osmanischen Zeit Mazedoniens spielt und auf einem beliebten mazedonischen Volksmärchen basiert. Die Geschichte dreht sich um Angja, eine mutige und schöne mazedonische Frau, und ihren Kampf gegen das unterdrückerische osmanische Regime, was den Kampf für Freiheit und kulturelle Identität symbolisiert. Dieser Roman wird als eines der großen Werke der mazedonischen Literatur angesehen.

ChatGPT

Translation

Search optimization

Image analysis

ChatGPT can be used to improve searches by understanding users' natural language, enabling more accurate results and finding relevant materials faster.

кажи ми на англиски јазик неколку македонски писатели



Here are several Macedonian writers:

1. **Blaze Koneski** – A distinguished poet, writer, and linguist who played a key role in the codification of the Macedonian language.
2. **Kocho Racin** – A revolutionary and poet, known for his famous poetry collection "*White Dawns*."
3. **Petre M. Andreevski** – A renowned poet and novelist, best known for his novel "*Pirey*."
4. **Venko Andonovski** – A contemporary novelist and playwright, well known for his novel "*The Navel of the World*."
5. **Luan Starova** – A writer and translator, famous for his works exploring the cultural history of the Balkans, such as "*The Time of the Goats*."

These authors have made a lasting impact on Macedonian literature and culture.



ChatGPT

Translation

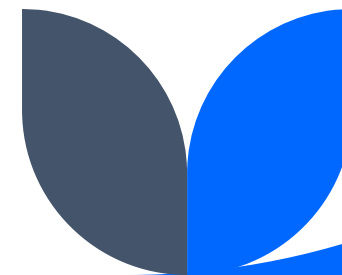
Search optimization

Image analysis

ChatGPT can give us information about some picture of book or some other picture.



На сликата е прикажана корицата на списанието „Библиотекарство“, објавено од Библиотекарското друштво на Македонија, том 27, броеви 1-2 од 2010 година.



AI for user services - Chatbots and virtual assistants



- Help users find the information they need more easily.
- Answer simple questions.
- Direct them to specific resources.
- Assist in orientation and navigation within the library.
- Help with searching the catalogs.
- Provide information about library services and events.



AI for user services - personalized recommendations

- AI **can** analyze library usage data and offer personalized book recommendations and other materials based on users' previous readings and interests
- Users **can** discover new resources that they might not have found on their own
- AI **can** suggest resources that users might find interesting or useful

Silvija likes to read books from Lisa Kleypas. Tell me more authors who write similar like her

AI for user services - personalized recommendations

Silvija likes to read books from Lisa Kleypas. Tell me more authors who write similar like her



If Silvija enjoys Lisa Kleypas, she might also love these authors who write in a similar style:

1. **Julia Quinn** – Famous for witty and charming Regency romances, like the *Bridgerton* series.
2. **Eloisa James** – Known for her elegant, humorous historical romances.
3. **Tessa Dare** – Writes lighthearted, romantic historicals with fun, strong heroines.
4. **Sarah MacLean** – Her Regency romances feature bold characters and emotional depth.
5. **Lorraine Heath** – Offers emotional, character-driven historical romances.

These authors share Lisa Kleypas' skill in crafting heartfelt, historical love stories.



AI for user services – vulnerable categories

- AI **can** be used to enhance **accessibility** in libraries
- AI systems **can** enable the conversion **of text to speech and vice versa**, which will help the visually or hearing impaired users as well as the people with reading challenges like dyslexia to access library materials

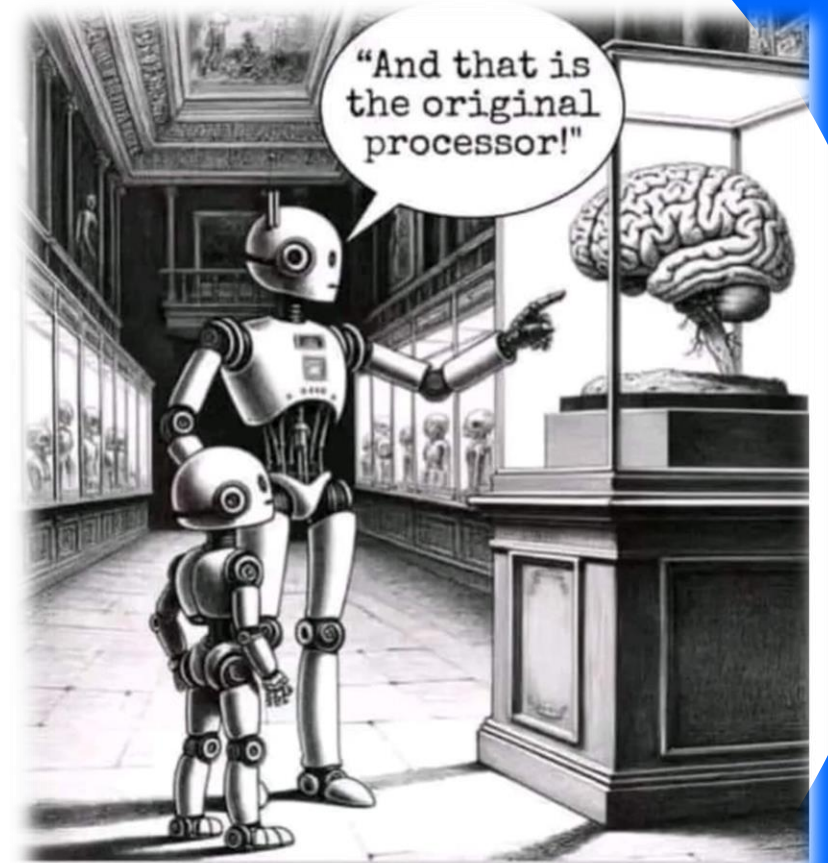
- ★ The **implementation of AI** in the work of public libraries is a **challenge** that we need to face. Many libraries **have already started** the process of digitizing library materials. The integration of AI technologies requires a certain level of **digital literacy**.
- ★ Some services and processes **cannot be fully replaced by AI** but they could be significantly enhanced if AI was integrated into them. Furthermore, some libraries **still lack the necessary resources** to effectively implement and sustain AI technologies.



Will AI in libraries distance librarians from users?

We must understand that the relationship, connection, and empathy that exist between the librarian and the user cannot be replaced by a computer. There should be no fear among librarians that artificial intelligence will take over their positions.

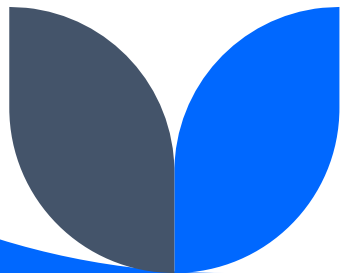
On the contrary, it will assist libraries and simplify some of the library processes and services, enabling librarians to enhance their services by allowing them more time to focus on more complex library processes and self-improvement.





A good librarian, through working with a user, can provide a much better tailored service, potentially using up time freed up by using AI.

– IFLA Library Policy and Advocacy Blog



Can you answer me in one sentence "Do you think that AI can completely replace a librarian?"

AI cannot completely replace a librarian, as human expertise, personalized service, and deep understanding of context are essential aspects of a librarian's role that AI cannot fully replicate.



Is this conversation helpful so far?

Message ChatGPT

ChatGPT can make mistakes. Check important info.



Thank you for your attention!



By Narakeet

*M.Sc. Elizabeta Trpcheska Petrushevsk
elizabeta_petrusevska@yahoo.com*