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# AI Challenges in the current environment

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# WS #110 AI Innovation: Responsible Development & Ethical Imperatives

- **Organiser:**
- CAST UN Consultative Committee on Information Technology (CCIT)
- Internet Society of China(ISC)
- **Date:** IGF 2025 Day 3, 26 June  Time: 14:45-15:45 (local time)
- **Venue:** Workshop Room 1, Hall C, NOVA Spektrum
- **Moderator:** Dai Wei, Deputy Secretary-General of Internet Society of China & Deputy Director of China IGF

IGF 2025 NORWAY

23–27 June 2025

# AI Challenges in the current environment

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# Challenges in the current environment

**AI integration in academic libraries offers many benefits, but it also presents several challenges:**

**Ethical Concerns**: Issues like privacy, data security, and algorithmic bias is significant. Libraries handle vast amounts of sensitive user data, making it crucial to navigate these ethical dilemmas responsibly.

**Technical Challenges**: Integrating AI with existing systems can be a complex process. Issues such as interoperability, data quality, and a lack of technical expertise can hinder seamless adoption.

# Challenges in the current environment

**Financial Constraints**:

- ❑ Implementing and maintaining AI technologies can be costly
- ❑ Many libraries struggle with limited budgets, making it difficult to invest in advanced AI solutions

**Job Displacement Fears**:

Concerns exist among library staff about AI potentially replacing human jobs. This fear can create resistance to adopting new technologies

# Challenges in the current environment

**Content Digitization**:
Digitisation processes can limit the effectiveness of AI. Ensuring high-quality digital content is essential for AI to function optimally

**User Adaptation**:
Users may be hesitant or slow to adapt to AI-driven services. Educating and training users on how to effectively use these new tools is necessary

.

# Challenges in the current environment

**Interference with traditional teaching and learning:**
AI's integration into education can both complement and challenge traditional teaching and learning methods

**Data at risk/fragility of access:**
AI systems in libraries often handle large volumes of sensitive data, including user information and research materials. Ensuring this data is protected from breaches and unauthorized access is crucial. Libraries must implement robust data protection strategies, such as encryption, anonymization, and access control measures

# Constant uncertainty

The integration of AI in academic libraries indeed brings about a level of **constant uncertainty**. Here are some key aspects of this challenge:

**Data Quality and Reliability:**
AI systems rely heavily on high-quality data. Inconsistent or biased data can lead to unreliable outcomes, making it challenging to maintain the accuracy and reliability of AI-driven services

**Technological Dependence:**
AI systems require robust digital infrastructure. Any disruptions, such as technical failures or cyber-attacks, can compromise access to library resources and services

**Evolving Technologies:** AI technologies are rapidly evolving. Keeping up with these changes requires continuous updates and adaptations, which can be resource-intensive and create uncertainty about the longevity and stability of current systems

**Ethical and Privacy Concerns:** The use of AI in libraries raises ethical issues, such as data privacy and algorithmic bias. Ensuring that AI systems are transparent and fair is an ongoing challenge

.

**User Adaptation:**
Users may be hesitant to adopt AI-driven services due to a lack of understanding or trust. Educating users and building their confidence in these technologies is essential but can be difficult

**Regulatory and Policy Changes:**
As AI technologies develop, so do the regulations and policies governing their use. Libraries must stay informed and compliant with these changes, which can add to the uncertainty

# AI benefits in the current environment

**Personalised Learning:**

- By analysing user behaviour and preferences, AI can provide personalized recommendations for books, articles, and other resources.

- This tailored approach enhances the learning experience for students and researchers

**Automation of Repetitive Tasks:**

- AI can automate routine tasks such as catalouging, indexing, and inventory management

- This allows librarians to focus on more complex and intellectually demanding activities

**Improved Data Management and Analysis:**
AI tools can help manage and analyse large datasets, making it easier to derive meaningful insights and support research activities

**24/7 Support:**
AI-powered chatbots and virtual assistants can provide round-the-clock support to users, answering queries and assisting with library services at any time

# AI offers numerous benefits to academic libraries, enhancing their services and operations in several key ways:

**Enhanced Search and Discovery:**

- AI-driven algorithms can analyse vast datasets quickly, improving the accuracy and efficiency of search results.

- This helps researchers and students find relevant information faster

**Enhanced Accessibility:**
AI can improve accessibility for users with disabilities by providing features like text-to-speech, speech-to-text, and other assistive technologies

**Resource Planning and Collection Development:**
Predictive analytics can help libraries plan their resources and develop collections that better meet the needs of their users

These benefits highlight the transformative potential of AI in academic libraries, making them more efficient, user-friendly, and capable of supporting advanced research and learning

# Library repositories can indeed act as agents for generative AI, offering a range of benefits and functionalities:

**Content Generation**: Generative AI can create new content based on existing library resources. This includes generating summaries, translations, and even new research articles by analysing and synthesizing information from the repository

**Enhanced Search and Discovery**: AI agents can improve the search and discovery process by understanding user queries better and providing more relevant results. They can also suggest related materials that users might find useful

.

**Automated Metadata Creation**: AI can automatically generate metadata for new and existing resources, making it easier to organize and retrieve information. This reduces the manual effort required for catalouging

**Personalized Recommendations**: By analysing user behaviour and preferences, AI agents can offer personalized recommendations for books, articles, and other resources, enhancing the user experience

**Interactive Learning Tools**: AI agents can create interactive learning tools and resources, such as quizzes and tutorials, based on the content in the library repository

**Data Analysis & Insights**: AI can analyse large datasets within the library repository to uncover trends, patterns, and insights that can inform future collection development and research directions



These capabilities highlight the transformative potential of AI in enhancing the functionality and accessibility of library repositories!

However greater focus should be on

- Citizen-centric AI
- Economic impact
- Innovation – vibrant AI startup ecosystem
- Productivity
- Competitiveness
- Data governance
- Skills development
- All the above are about the ***regulatory frameworks*** of AI in higher education

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