

New Technological Frontiers for Libraries



28th National Convention on Knowledge, Library and Information Networking (NACLIN 2025), Dec. 3-5, 2025, Pune

Nabi Hasan, PhD, PDF, FNEB, FSLA

Head Librarian, Central Library
Indian Institute of Technology Delhi

<https://web.iitd.ac.in/~hasan> hasan@library.iitd.ac.in



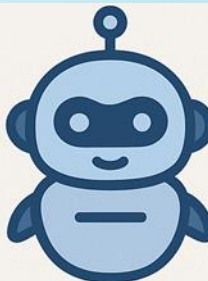
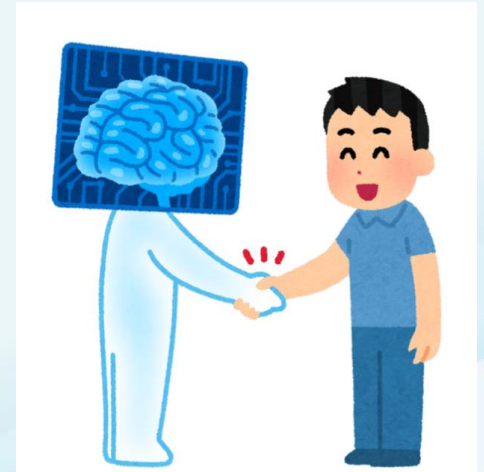
Why This Topic Matters at NACLIN



- **NACLIN has been India's leading platform for knowledge networking and library innovation for decades.**
- **As libraries shift to AI-driven, data-rich, hybrid ecosystems, NACLIN's focus on interoperability, digital transformation, and resource sharing is more important than ever.**
- **Technology is not replacing libraries, it is strengthening the vision NACLIN champions: connected, intelligent, and inclusive knowledge systems.**
- **Indian libraries now need a nationally aligned roadmap, and NACLIN is the ideal forum to guide this collective direction.**
- **This session supports NACLIN's mission by showing how AI, automation, and smart systems can enhance visibility, efficiency, and high-impact services across all types of libraries.**

Presentation Outline

- **Background & Need for Digital Transformation**
- **Emerging Technologies Reshaping Libraries**
- **AI, Automation & Data-Driven Innovations**
- **Implementation Strategies & Tech Roadmap**
- **Smart Library Models: Indian & Global Cases**
- **Competencies for the Future-Ready Librarian**
- **Future Vision, Key Insights & Q&A**



Tech Landscape for Libraries

- AI, LLMs, ML, Data Analytics
- IoT-powered smart spaces
- XR - AR/VR learning labs
- Expert systems, robotics and Drones
- Cybersecurity & digital disaster management
- Assistive & inclusive technologies
- Discovery systems & linked data
- Open access & OSS ecosystems
- RDM & Research Integrity frameworks



Technology is not replacing libraries: It is redefining their mission.



Drivers of Transformation

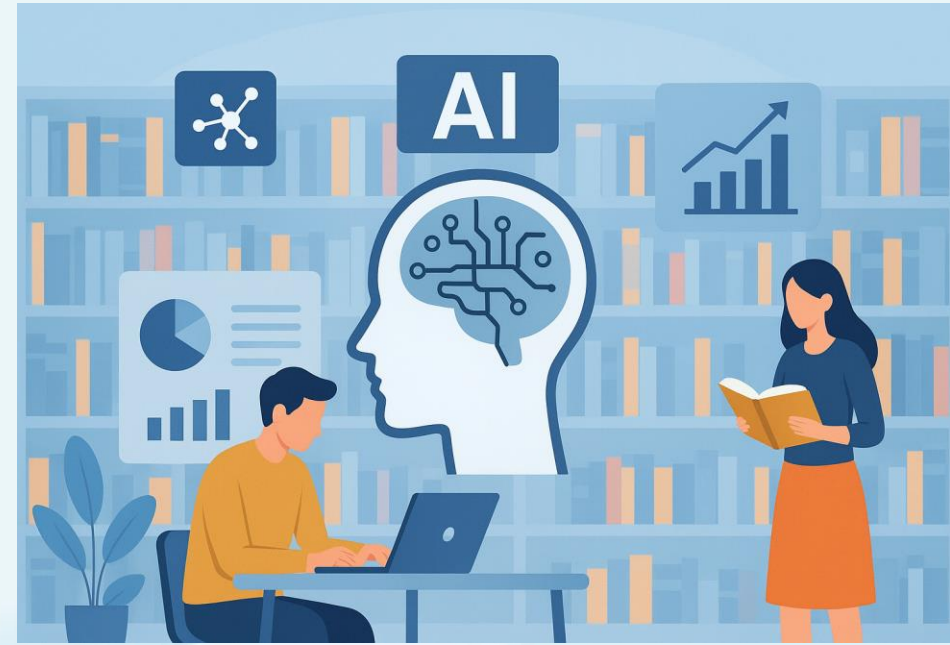
- Massive growth in digital & research data
- Generative AI reshaping research & learning
- User demand for real-time, personalized support
- Focus on inclusivity, accessibility, and lifelong learning
- Shift toward hybrid physical-digital knowledge spaces



How does a Library become a Smart Library?

A smart library blends:

- **Data-driven services**
 - **Inclusive digital innovation**
 - **Artificial Intelligence**
 - **Automation & robotics**
- **Its aims to support learning, research & community empowerment through personalized, adaptive, and intelligent services.**



Disaster Preparedness & Cybersecurity

- Libraries are increasingly leveraging technology to enhance their disaster preparedness, and Cyber Security for safeguarding digital collections.

Key Technologies for Disaster Preparedness

- Cloud Storage
- Digital Assets Management System (DAMS)
- Backup Protocols
- Monitoring and Alert Systems
- Automated Disaster Recovery Plans

Cyber Security Best Practices

- Protect digital repositories & user privacy
- Mitigate phishing, malware & ransomware threats
- Implement MFA, encryption & secure access controls
- Conduct cybersecurity training for staff & users
- Regular data backups & security audits
- Libraries as digital guardians



E-Prints, IRs and Digital Archives



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

arXiv.org

Sherpa Romeo



ChemRxiv[®]

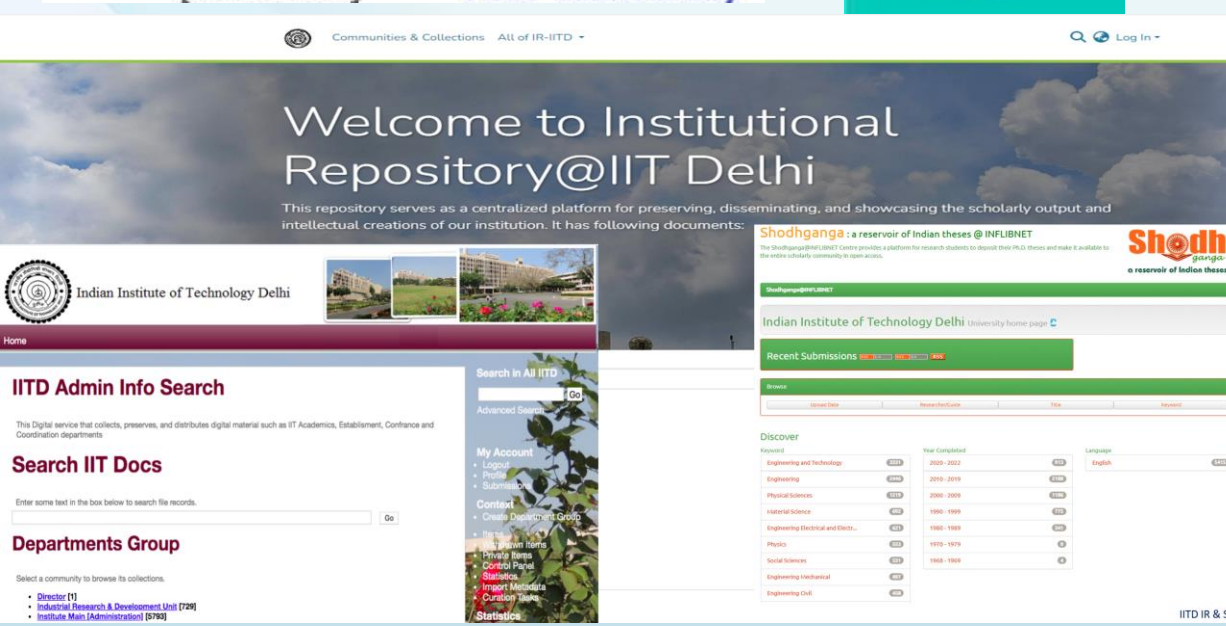
e-LiS
[2003-2018] 15th Anniversary
e-prints in library & information science

R^G

HAL SHS
human and social sciences

Organic eprints

RePEc
ACADEMIA



Welcome to Institutional Repository@IIT Delhi

This repository serves as a centralized platform for preserving, disseminating, and showcasing the scholarly output and intellectual creations of our institution. It has following documents:

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Shodhganga: a reservoir of Indian theses @ INFLIBNET

Indian Institute of Technology Delhi University home page

Recent Submissions

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Engineering	2020 - 2022	English
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Engineering Electrical and Electronic	2020 - 2022	English
Physics	2020 - 2022	English
Social Sciences	2020 - 2022	English
Engineering Medical	2020 - 2022	English
Engineering Civil	2020 - 2022	English

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- Statistics
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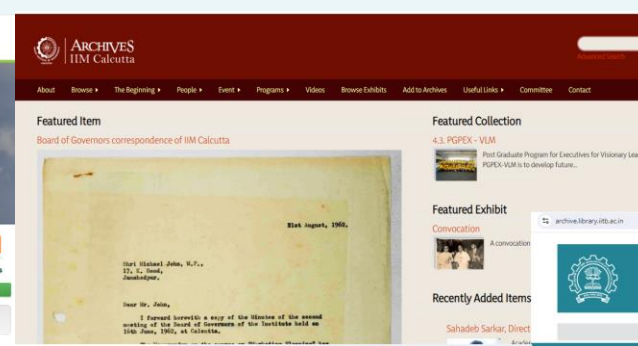
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Enter some text in the box below to search file records.

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Select a community to browse its collections.

- Director [1]
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- Institute Main [Administration] [8793]



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About Browse The Beginning People Event Programs Videos Browse Exhibits Add to Archives Useful Links Committee Contact

Featured Item

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4.3. PGPEX - VJM

Post Graduate Program for Executives for Visionary Leadership

PGPEX-VJM is to develop future...

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Convocation

Recently Added Items

Sahadeb Sarkar, Director



nationalarchives.nic.in/national-archives-of-India-library

राष्ट्रीय अभिलेखागार
National Archives of India

संयममेव जयते



Archives IIT Bombay

Home About Publications Archives

Featured Item

(J.-R.) MR. ANAND MAHINDRA, CHAIRMAN & MANAGING DIRECTOR, MAHINDRA & MAHINDRA LIMITED, CHIEF GUEST MR. KAILASH SATYARTHI, NOBEL PEACE PRIZE LAUREATE AND PROF. DEWANG KHAKHAR, DIRECTOR, IIT BOMBAY ON THE DAIIS DURING CONVOCATION 2015

Featured Collection

INSTITUTE CONVOCATION

Recently Added Items

INSTITUTE LECTURE ON SYMMETRY BREAKING AND COLLECTIVE EFFECTS IN BIOLOGICAL PHYSICS BY PROF. DANIEL RIVELINE, IGBMC, UNIVERSITY OF STRASBOURG, CNRS, INSERM, ON AUGUST 21, 2024

Institute Lecture on Symmetry breaking and collective effects in biological physics by Prof. Daniel Riveline, IGBMC, University of Strasbourg, CNRS...

Cloud Computing in Libraries



Inclusivity, Diversity & Digital Literacy



INDIA'S LARGEST ONLINE LIBRARY FOR BLIND & PRINT DISABLED

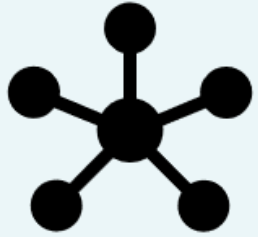
Department of Empowerment of Persons with Disabilities
Ministry of Social Justice & Empowerment



Discovery, Federated & Linked Data Searches

- Link library metadata to global knowledge networks for enhanced discovery
- Next-generation search platforms integrating multiple resources
- AI-powered discovery layers for enhanced retrieval and recommendation
- Real-time access to open access repositories, databases, and digital assets
- Examples include: EBSCO Discovery Service (EDS), Primo, Summon, and WorldCat Discovery (OCLC), as well as open-source options like Blacklight and VuFind.

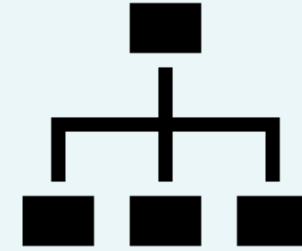
Research Data Management (RDM)



Allows easy
access
& sharing



Enhances
visibility of
research data



Helps in data management of
an individual
researcher/institute



Value for
reuse



Avoid duplication
of research work



Funding agencies'
mandatory requirement

scite

Publish or Perish

IRINS

euroCRIS

SciVal

Incites

Pure

Clarivate

Converis

Converis

The essential tool for modern research management.

Symplectic

Symplectic

The Elements Platform

KOHA with ERM and API

The screenshot displays the Koha library management system interface. The main dashboard features a grid of icons for various functions: Circulation, Cataloging, Patrons, Serials, Advanced search, Acquisitions, Item search, Reports, Lists, Tools, Authorities, and E-resource management. A sidebar on the left contains a 'More' dropdown menu with options like Lists, Cataloging, Acquisitions, Authorities, Serials, E-resource management (highlighted), Reports, Suggestions, Tools, Administration, and About Koha. The top navigation bar includes links for Circulation, Patrons, Search, and More, along with a search bar and a shopping cart icon. The bottom section shows a 'Circulation' sidebar with options like Check out, Check in, Renew, Set library, and Fast cataloging. The main content area displays a 'Welcome to Koha' message and a 'What's Next?' section with links to documentation, wiki, discussions, and bug reports. The bottom right corner features the Koha logo and a green banner with the text 'Suggestions pending approval: Indian Institute of Technology Delhi - Central Library: 3 Patrons requesting modifications: 3'.

10.17.7.83:8080/cgi-bin/koha/mainpage.pl

17196 Indian Institute of Technology Delhi - Central Library

Check out

Enter patron name

Check out Check in Renew Search patrons Search catalog

News

Welcome to Koha

Welcome to Koha. Koha is a library management system initially developed in New Zealand by Katipo Library. It was first deployed in January of 2000. Koha is currently maintained by a team of technology staff from around the world.

Posted on 29/10/2007 Edit New

What's Next?

Now that you've installed Koha, here are some suggestions:

- Read Koha Documentation
- Read/Write to the Koha Wiki
- Read and Contribute to Discussions
- Report Koha Bugs

Circulation

Check out

Check in

Renew

Set library

Fast cataloging

Offline circulation

Upload offline circulation file (.koc)

Pending offline circulation actions

Get desktop application

Get Firefox add-on

Cataloging

Serials

Acquisitions

Reports

Tools

Koha administration

About Koha

E-resource management

Agreements

Licenses

eHoldings

Agreement search

Enter search keywords

E-resource management

Cataloging search

Check out Check in Renew

Stage records for import

Manage staged records

Batch editing

Batch item modification

Batch item deletion

Tools

Label creator

Barcode image generator

Suggestions pending approval: Indian Institute of Technology Delhi - Central Library: 3 Patrons requesting modifications: 3

koha

ERM @ IIT Delhi Library



Central Library, Indian Institute of Technology Delhi केंद्रीय पुस्तकालय, भारतीय प्रौद्योगिकी संस्थान दिल्ली Electronic Resources Mangement System

Section

Electronic Resources Division

Newly added resources

E-Resources User Guidelines

Academic Tools

Grammarly@edu

Turnitin

ChemDraw Professional

Standards

ASTM

BIS

IEC

ISO Standards



Resources



Licensing



Organizations



Usage Statistics



Management

E-Resources

Off-Campus Access of E-Resources

A to Z List of Archive

A to Z List of E-Journals

A to Z List of eBooks

Bibliographic Database

CORAL

E-Resources in Central Library



onos.gov.in

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अभियान
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জয় অনুসন্ধান
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SEARCH Journal Articles

Search Journal Articles based on Keyword, Subject

SUMMARY Statistics

Member Institutions	Fulltext Downloads-2024	Institute Publications-2024
6,500+	1,38,26,334	1,52,740

SEARCH & BROWSE Journals

Browse A-Z Journal Titles	Browse Broad Subject Categories
13,000+	27

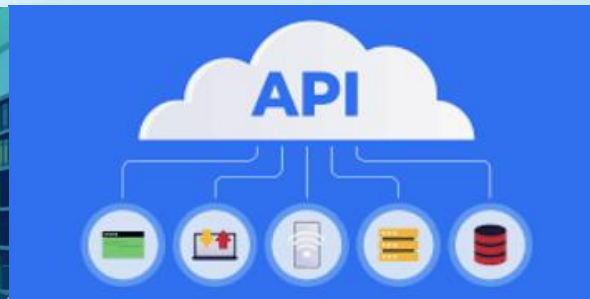
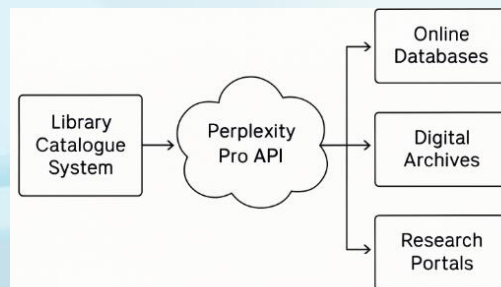
Library Services Platforms (LSP)

- **Library Services Platforms (LSPs)** are comprehensive systems designed to streamline library operations by integrating various functions such as cataloging, circulation, acquisitions, discovery, IR, e-resources, etc. into a single platform.
- These platforms offer libraries the flexibility to manage both print and electronic resources efficiently while enhancing user experiences and optimizing workflows.
- Examples Alma, Ebsco FOLIO, OCLC WorldShare Management Services (WMS), SirsiDynix Symphony, Innovative Interfaces Sierra, KOHA, etc.



API Technology Integration in Libraries

- **API integrates library catalogues and other external resources programmatically, making it a versatile tool for resource integration and automation.**
- **API allows developers to integrate various open-source language models and services into their projects.**
- **Through the API, it is possible to connect external databases or data sources, including library catalogues, IRs or other resources, to build customized applications or services.**
- **AI supports connectors to various file apps and databases, enabling broad integration**



Big Data & Data Mining

- Libraries can use big data and Data Mining to create a personalized user experience by offering content and resources based on each individual wish.
- Data mining is a crucial process, enabling the extraction of meaningful patterns and insights from large datasets.
- Predict user behaviour and make decisions to cope with their needs.
- Perform smart delivery of information for the user.
- Relevant books' acquisitions.



Real-time Monitoring of Library Spaces

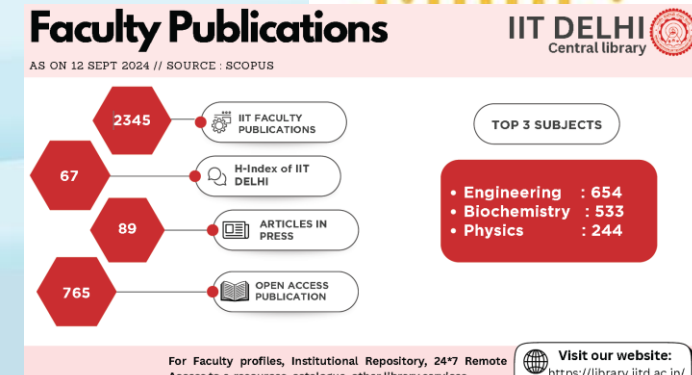
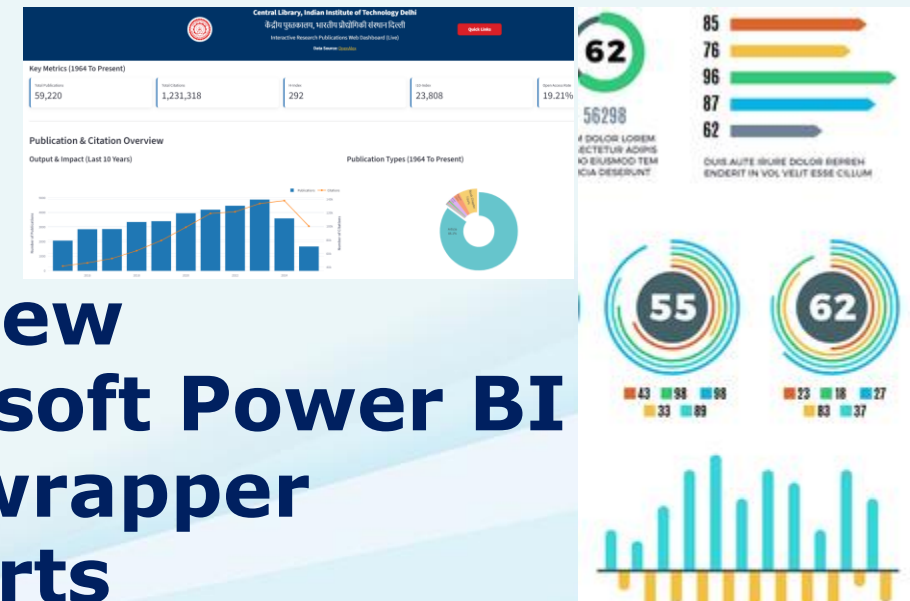


Data Analytics & Visualization

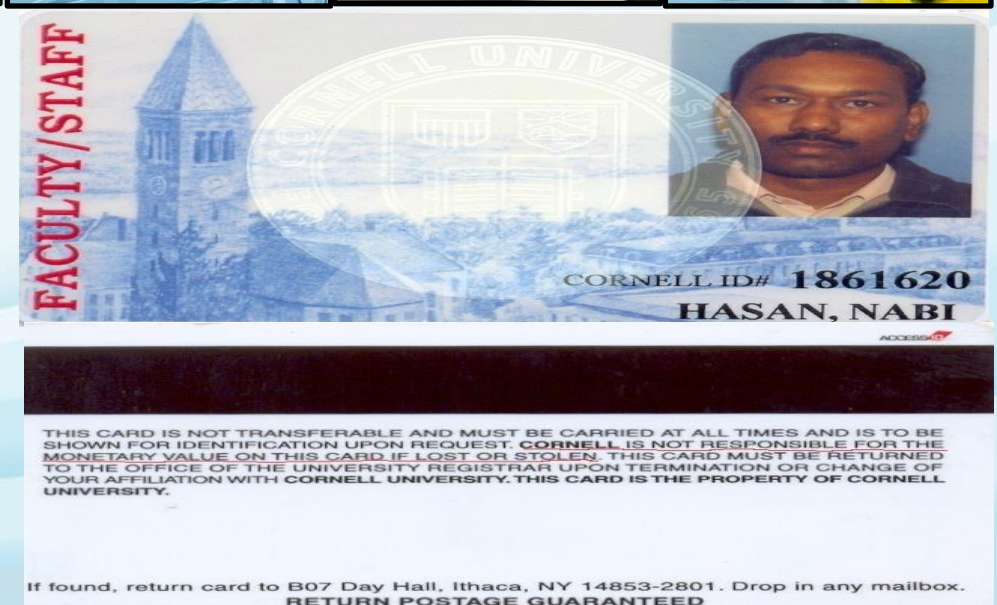
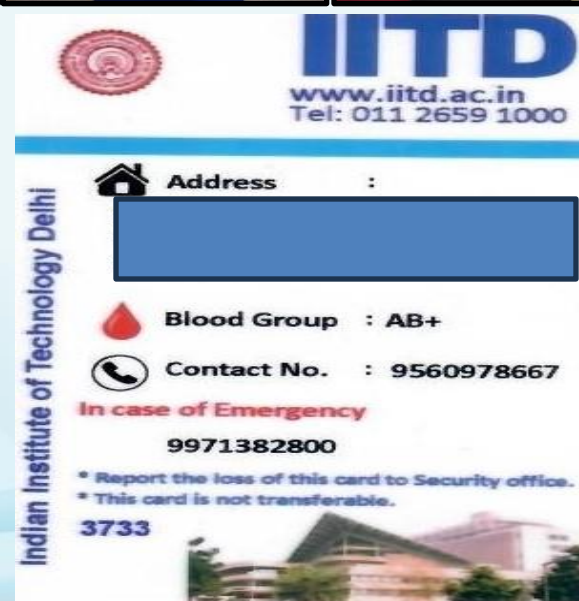
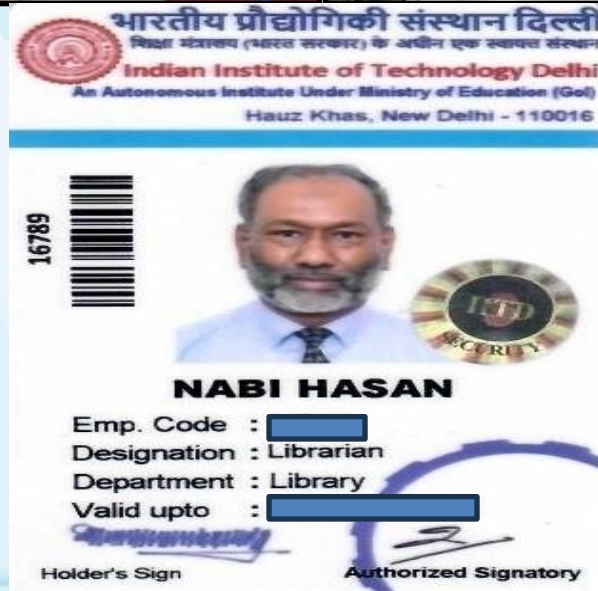
Data Visualization is basically putting the analyzed data in the form of visuals, i.e. - graphs, images. These visualizations make it easy for humans to understand the analyzed trends.

- CitNetExplorer
- Gephi
- Sci2
- VOSviewer
- Local Citation Network
- Citation Gecko
- FusionCharts
- Tableau

- D3
- Qlikview
- Microsoft Power BI
- Datawrapper
- E Charts
- Plotly
- Sisense
- HighCharts



RFID Technology in Libraries



Blockchain Technology



- Build an enhanced metadata system for libraries.
- Connect networks of libraries as an Inter-Planetary File System (IPFS) to validate the credentials of a given copy of any website.
- Support document borrowing service & inter-library loan service.
- Facilitate the indexing and sharing of community resources in a shared network.
- Secured intellectual property (controlling how many times a user can access, share, or copy).

Blockchain Technology and Its Application in Libraries



Nabi Hasan, Ph.D., PGD

Librarian & Head, Central Library

Indian Institute of Technology Delhi

<http://www.iitd.ac.in/~nhasan>

nhasan@library.iitd.ac.in

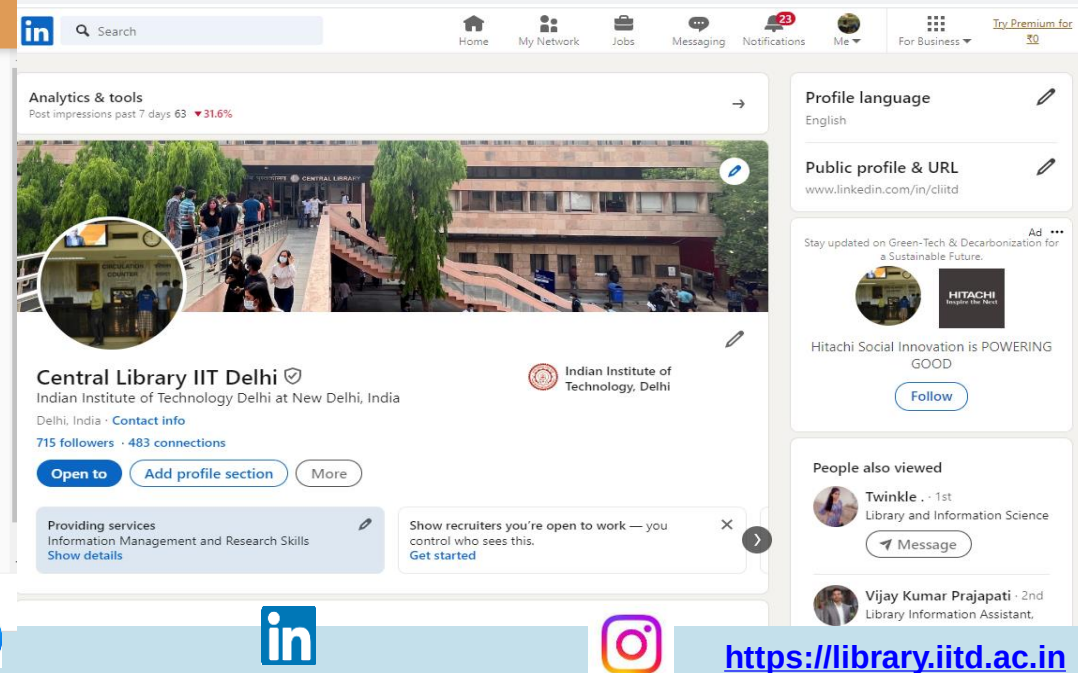
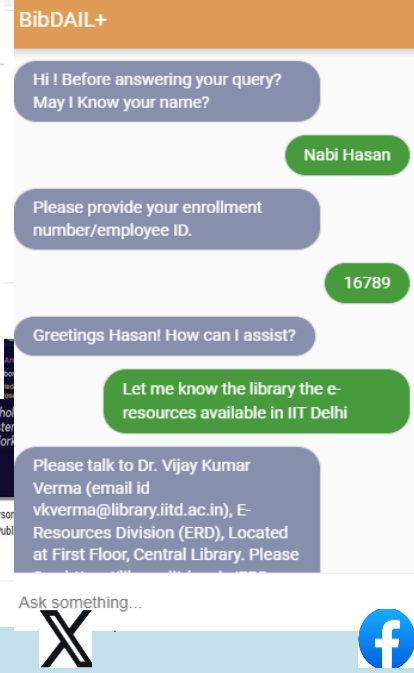
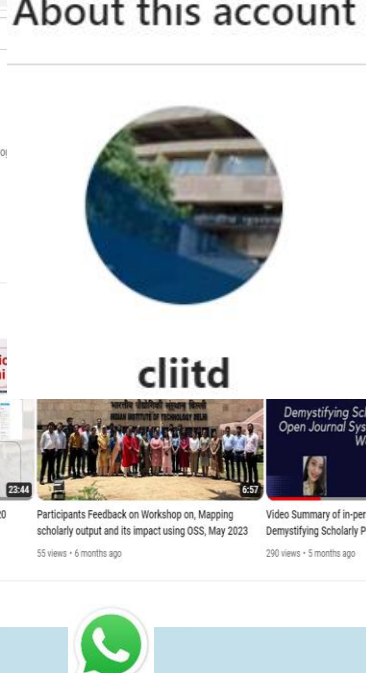
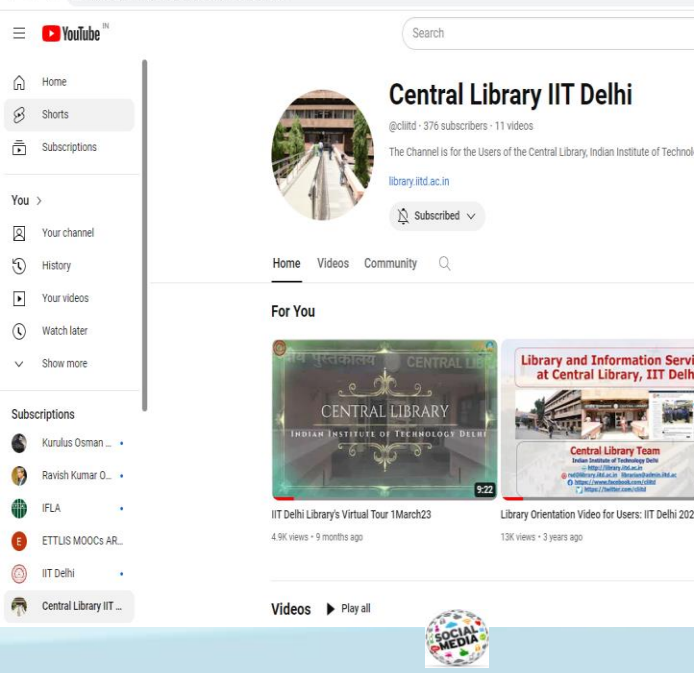
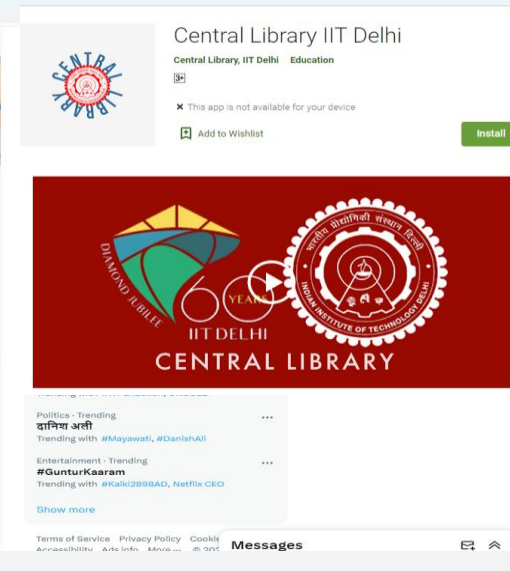
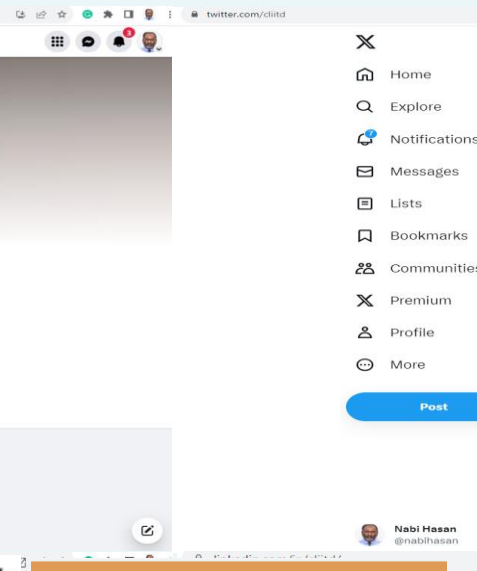
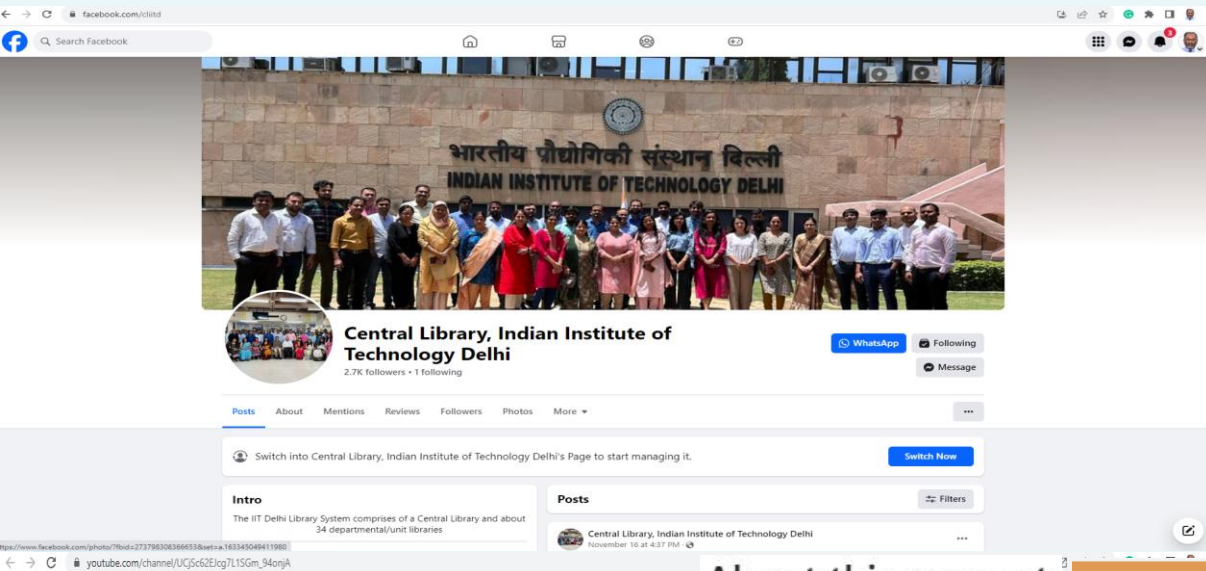
(Ex-University Librarian, - Aligarh Muslim University)

Coordinator - National Resource Centre in Library and Information Sciences (ARPIT-40003), Govt. of India

Google Images/ARPIT

<https://www.emerald.com/insight/content/doi/10.1108/LHTN-02-2023-0020/full/html>

Social Media & Apps in Libraries



Pathfinders (Subject Bibliographies)

<https://library.iitd.ac.in/Pathfinder>

library.iitd.ac.in/Pathfinder

Google Proxy Login IITD Webmail LIBSYS7 MF IDP BRA Internal@IITD OBR Koha_24 Nextcloud

Central Library, Indian Institute of Technology Delhi
केंद्रीय पुस्तकालय, भारतीय प्रौद्योगिकी संस्थान दिल्ली

Home

Pathfinder

A pathfinder is a bibliography on the author, subject, and known person community. It lists the various resources available in the Central Library and such pathfinder(s) compiled are given below which are being updated time to time.

- Aerodynamics NEW
- Air Pollution NEW
- Biophysics NEW
- Cancer Research NEW
- Climate Change NEW
- C++ NEW
- Cryptography NEW
- Corporate
- Cyber Security NEW
- Data Mining
- DR. B. R. Ambedkar NEW
- Econometrics
- Electrodynamics NEW
- Electric Vehicles NEW
- Entrepreneurship
- Game Theory
- Harivansh Rai Bachchan NEW
- Hindi
- IITD Faculty and Staff Authored Books NEW
- Leadership NEW
- Machine Learning NEW
- Mathematics

List of Books on Entrepreneurship (Available in the Central Library)

How to recommend a book?

You may recommend the books by filling out recommendation forms available on the website (<https://library.iitd.ac.in/book-recommendation>) or through the online recommendation system (<https://library.iitd.ac.in/ojrs> or <https://internal.iitd.ac.in/library/>) or using your Kerberos id and password.

Compiled by,
Collection Development Division, Central Library
Indian Institute of Technology Delhi
Ph: 2659 6622/6096 | email: cdd@library.iitd.ac.in



subjectsplus



LibGuides

Digital Signages in Libraries

The Transformed Libraries may utilize digital signages for gangways, bay guides and shelf guides. There are many digital signage solutions available in the market – both open source and commercial – that have the features and functionality for building a robust digital signage system with Kiosks

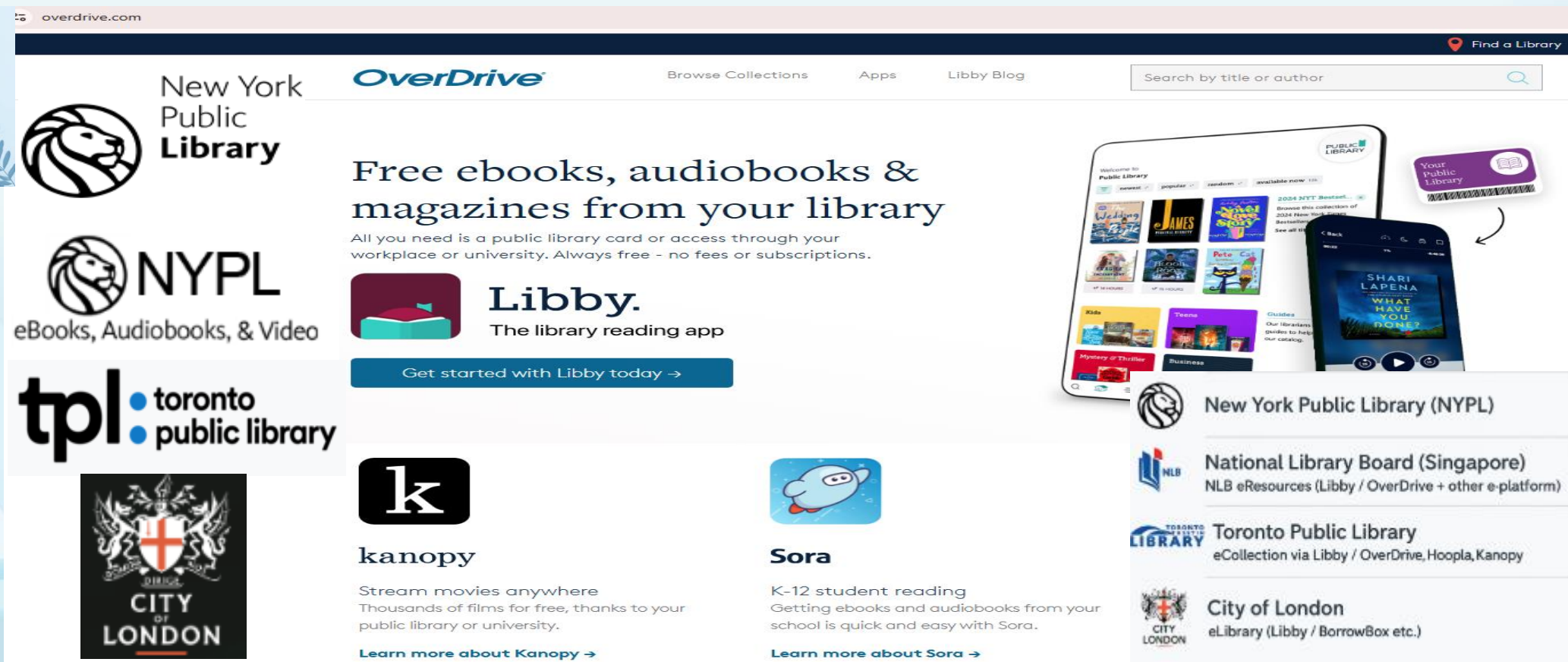


Lab & Makerspaces



Virtual Book Issue/Return Systems

- New York Public Library (NYPL): eCollection via Libby/OverDrive
- National Library Singapore: Libby/OverDrive+other e-platforms
- Toronto Public Library: eCollection via Libby/OverDrive, Hoopla, Kanopy
- City of London Public Library: Libby/BorrowBox, etc.



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New York Public Library

OverDrive

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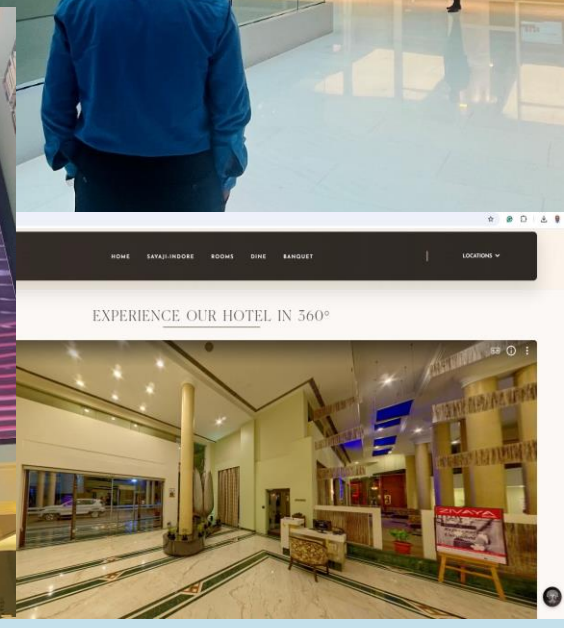
New York Public Library (NYPL)

National Library Board (Singapore)
NLB eResources (Libby / OverDrive + other e-platform)

Toronto Public Library
eCollection via Libby / OverDrive, Hoopla, Kanopy

City of London
eLibrary (Libby / BorrowBox etc.)

Augmented Reality (AR)



Virtual Reality (VR)



Extended Reality (XR)

- XR combines AR, VR, and Mixed Reality (MR) to create immersive digital experiences for library users and staff.
- Virtual library tours and book exhibitions for remote or onsite engagement.
- AR overlays to enhance wayfinding, anatomy learning, or interactive floor maps.
- VR environments for immersive research, learning sessions, or exploring special collections.
- MR to blend physical and digital resources in collaborative maker spaces.



Gaming in Libraries

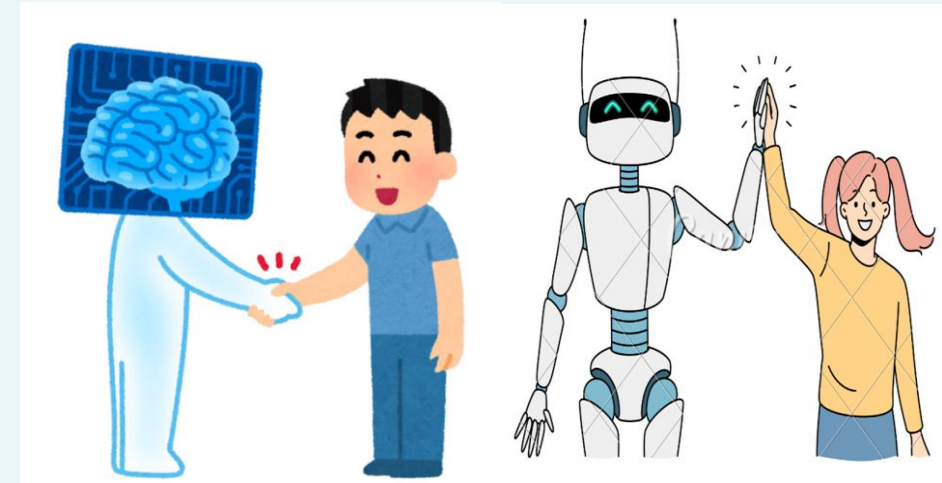
- Gaming in libraries refers to the integration of video games into library services as a means to engage diverse audiences, promote literacy, foster social interaction, and provide recreational and educational opportunities.
- Wayfinding and exploring the collections.



AI in Libraries

AI offers several advantages to libraries, enhancing their efficiency, user services, and overall effectiveness.

- **Improved Search and Discovery**
- **Automation of Routine Tasks**
- **Enhanced User Experience**
- **Personalized Services**
- **Efficient Resource Allocation**
- **Content Enrichment**
- **Accessibility**
- **Data-Driven Decision Making**
- **Enhanced Preservation**
- **Multilingual Support**
- **Improved Security**
- **Cost Savings**
- **Scalability**



Expert Systems & Robotics in Libraries

Expert systems and robotics, integrated with the AI play significant role in enhancing library operations and services.

Expert Systems

- These are AI-based systems designed to mimic human decision-making processes in specialized areas.
- In libraries, expert systems can assist in cataloguing, recommending resources, answering inquiries, and providing specialized knowledge.
- They can also help create customized reading lists or research guides based on user preferences.

Robotics

- Robotics in libraries often involve automated systems for sorting and shelving books.
- Robots equipped with RFID technology can efficiently organize and shelve returned books, freeing up staff time for more complex tasks.



AI/ML Semantic Apps in Daily Life



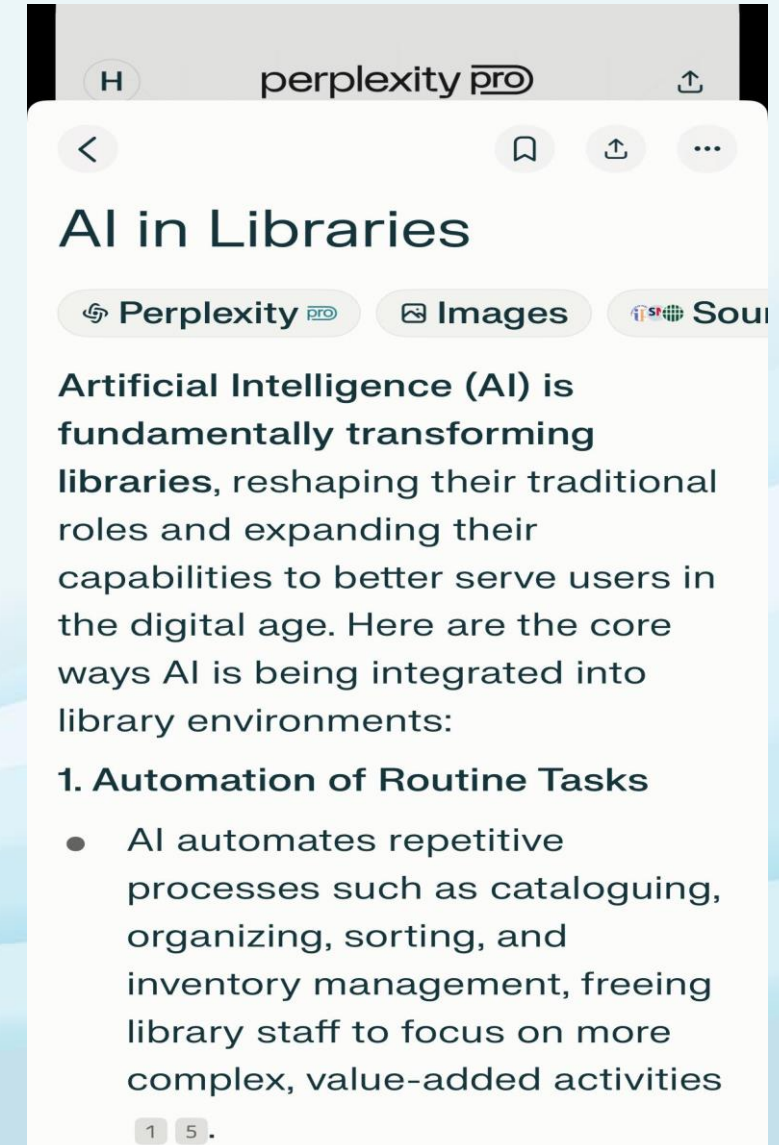
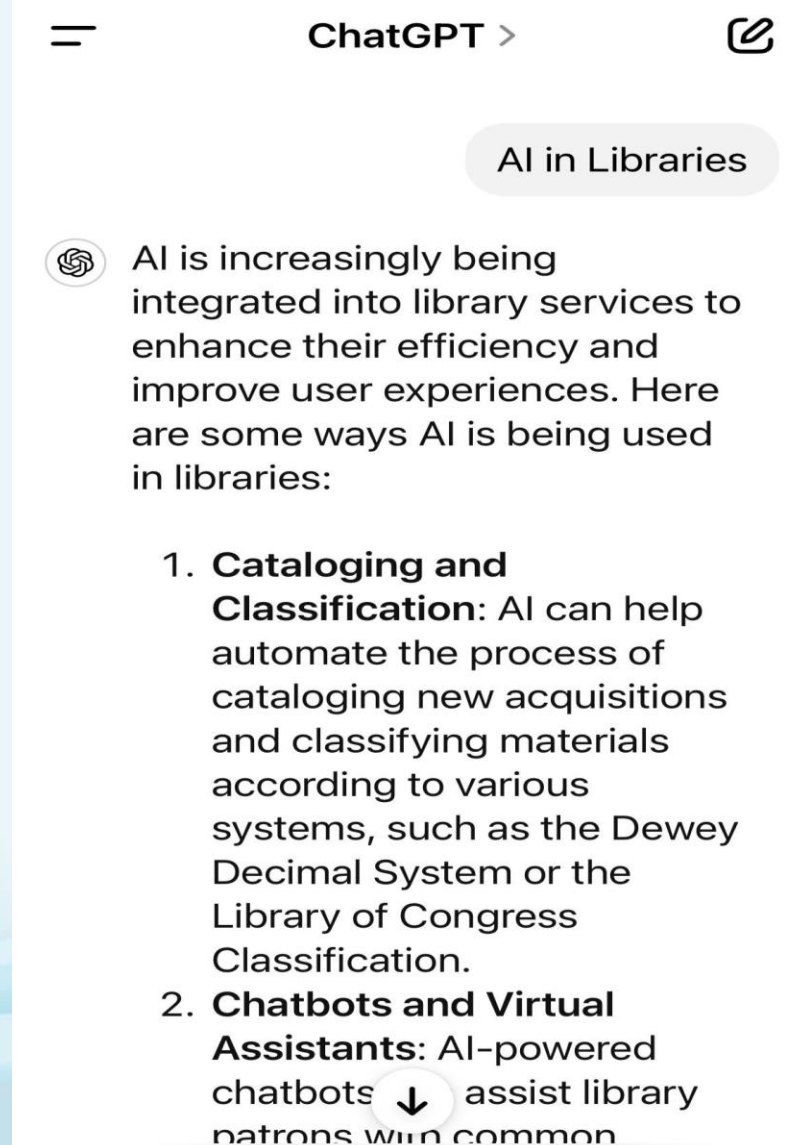
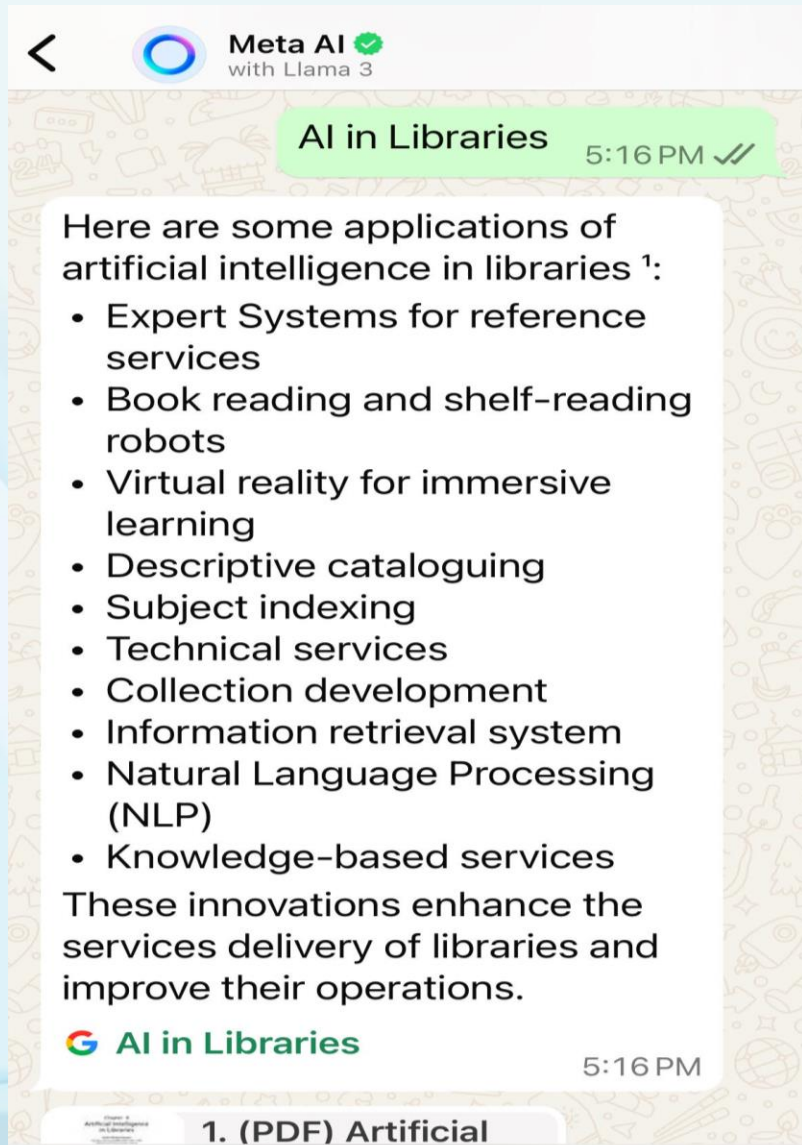
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Google



Mobile-Based AI Applications



DELNET: Innovative Library Services

Interlibrary Loan and Document Delivery Services

Access to Union Catalogues and Databases

DELPLUS Library Automation Software

DELNET Consortium for E-journals & E-books

DrillBit - Plagiarism Detection Software

Reference Services

Training Programmes/Workshops/Lectures/ Webinars

COnCour Portal

GRIP (Global Research & Innovation Portal)[®]

Access to Full-Text E-journals

NACLIN 2025

New Discovery Portal Login



Networking Libraries,
Sharing and Spreading Knowledge



Institution: Indian Institute of Technology (IM No.: IM-2)

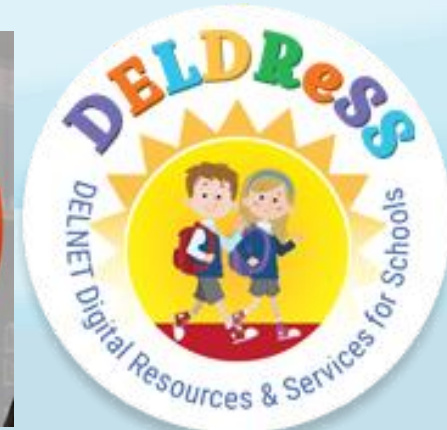
[Click here to continue](#)

Access Millions of Networked Library Resources through DELNET

- 4,20,00,000+ Books available for loan
- 1,13,000+ list of Journals
- 15,000+ Full-text E-journals
- 1,55,000+ Thesis/Dissertations

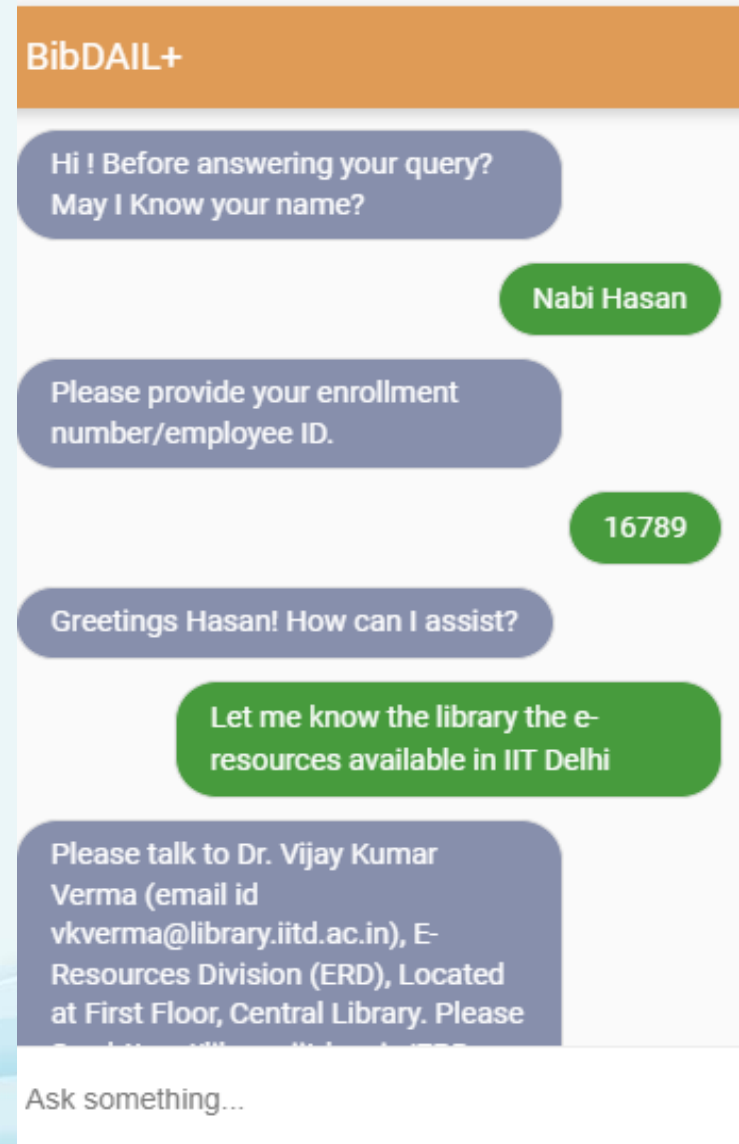
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[Membership Form](#)
Feedback: sangskau2003@yahoo.co.in

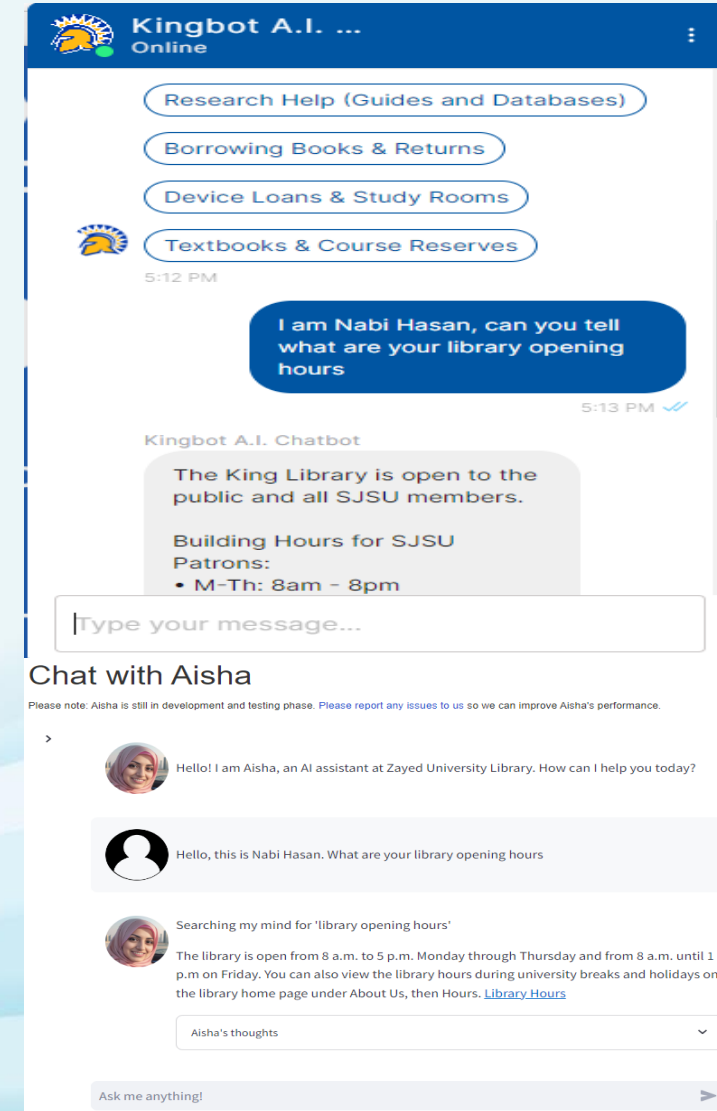


IITD Library Chatbot – BibDAIL+

- In-House implementation.
- Embedded with the library catalogue (OPAC) - KOHA.
- Help with basic research queries, and provide information about library services, policies and resources.
- Maturing...

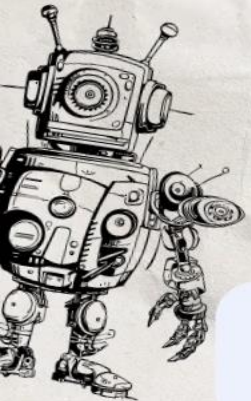


<https://library.iitd.ac.in/staff-images/staff/bibdail+.png>



AI Chatbots at San Jose State University (Kingbot) and Zayed University (Aisha)

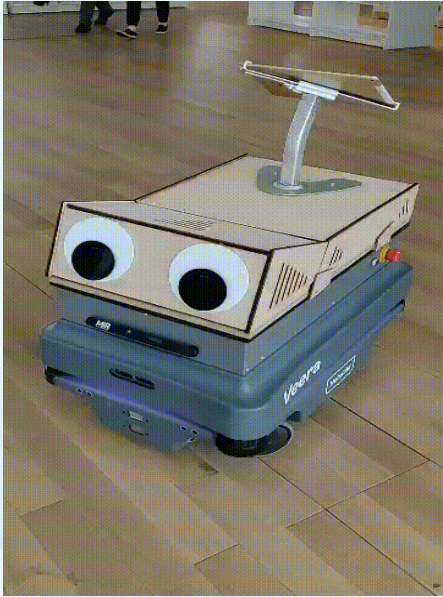
Robo Experiments at IITD, Nov. 28, 2025



Robotics in Finland (Oodi Library)

Googly Eyes and an Emotion Matrix at Helsinki's Central Library, Oodi, Finland

- Googly eyes recall classic animation and comic book characters.
- The eyes follow the rule of exaggeration.
- Used to emphasize the robot's expressions (looking around to indicate boredom when there's a lack of missions), and its actions (looking in the direction it starts moving toward).



Automatic returns @Finland



- The Library has an automatic returns system
- Users set their books on a conveyor belt, which brings the books to the basement, where they get sorted into boxes, which are picked up by a mobile MiR200 robot, which brings the books to the 3rd floor.
- On the 3rd floor, the library staff place the books back on the shelves.



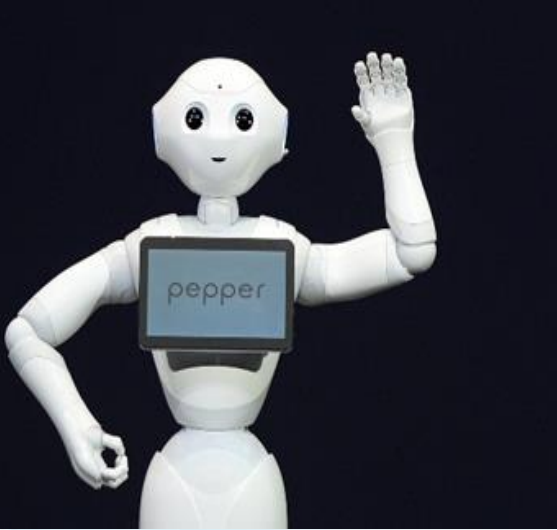
Temi – NTU Singapore

Library: Nanyang Technological University, Singapore

Controlled: By Voice, like SIRI using the TEMI App



Robotic Chat Tools (Pepper, AnSan)



Library: The Yamanaka Public

Robot: Pepper

Usage: for displaying user guidance

Library: The Library of Konan Univ.

Robot: AnSan

Usage: For the reference services



Robbie & Bobbie – Temasek Polytechnic

Library: The Temasek Polytechnic Library

Usage: Scan over 32000 pages per day, can deliver materials such as newspapers, magazines, and brochures, as well as welcome



Libby Robot – South Africa

- Libby has been 'employed' by the University of Pretoria, South Africa.
- 60+ sensors giving human-like awareness.
- 360-degree spot rotation and navigation.
- A 3D camera which can read gestures and pose animated motion arms.
- Voice localization.
- Facial recognition.



MBRL Dubai Smart Systems



Mohd Bin Rashid Library



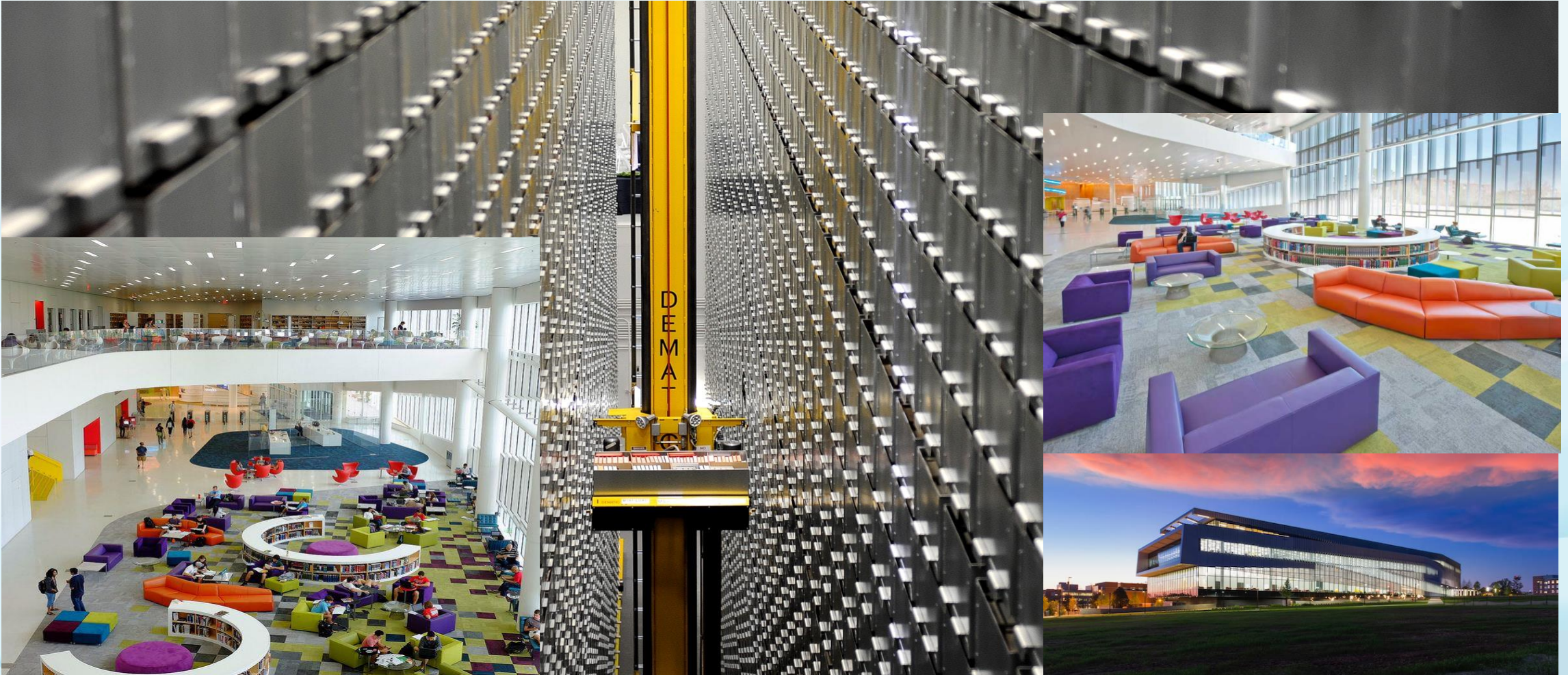
AGORA – Japan

- **Agora is a future-generation library with an AI research platform, Japan.**
- **An interactive AI robot functions as an experienced super tutor by advising and encouraging learners.**
- **Various sensors in Agora acquire students' conversation and behaviour, and then the big data is utilized to evolve Agora's AI.**



BookBot – NCSU

BookBot is a retrieval system for books stored in warehouse-style bins



Generative AI (GenAI) in Research

What would you like to learn more about?
Influence of seismology on civil engineering designs

Influence of seismology on civil engineering designs

Summary

References

1

2

Show all references

Show concept map

Topic summaries
— created in seconds

Clarivate

Web of Science™

Search

Research Assistant

Nabi Hasan

New chat

Chat history

There are no chats in your history.

Start a new chat by asking a question

Ask a research question

Choose a guided task:

Understand a topic

Literature review

QuillBot

A SMART AI WRITING TOOL

Scopus® AI

Trusted content. Powered by responsible AI.

ScienceDirect AI

Clarivate™

Web of Science Research Assistant

sciencedirect.com

Brought to you by: INDEST Consortium

ScienceDirect

Search for peer-reviewed journals

Find articles with these terms

WILEY

Help

Nabi Hasan

Indian Institute of Tec...

Grammarly: Your AI Writing Partner

Copyright Liability for AI

- In the U.S., the Copyright Office guidance states that works containing AI-generated content are not copyrightable without evidence that a human author contributed creatively.
- It is entirely possible that the resulting AI-generated work has taken and used elements from works that have copyright protection(s). That way, it may be a violation of copyright laws.
- The question of whether the output from generative AI systems infringes copyright is likely to turn on the traditional question of whether the AI-generated output is “substantially similar” to the underlying work.
- India has not yet issued official copyright guidance for AI-generated works; the legal position remains evolving.



IIT Delhi Gen AI Model Draft

|On the use of Generative AI at IIT Delhi

Sumeet Agarwal (EE), Chetan Arora (CSE), Suma Athreye (SPP),
 Anurag Goyal (ME), Pardeep Gupta (CSC), Anusha Jain (CH), Kedar
 Khare (OPC), Divya Nayar (MSE), Saurabh Rathore (CAS), Subodh
 Sharma (CSE), Alan Sinate (DR Acads), Rudrakshi Singhal (ME),
 Shuchi Sinha (DMS)

October 30, 2024

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3.1	For teachers, researchers & students	5
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Abstract

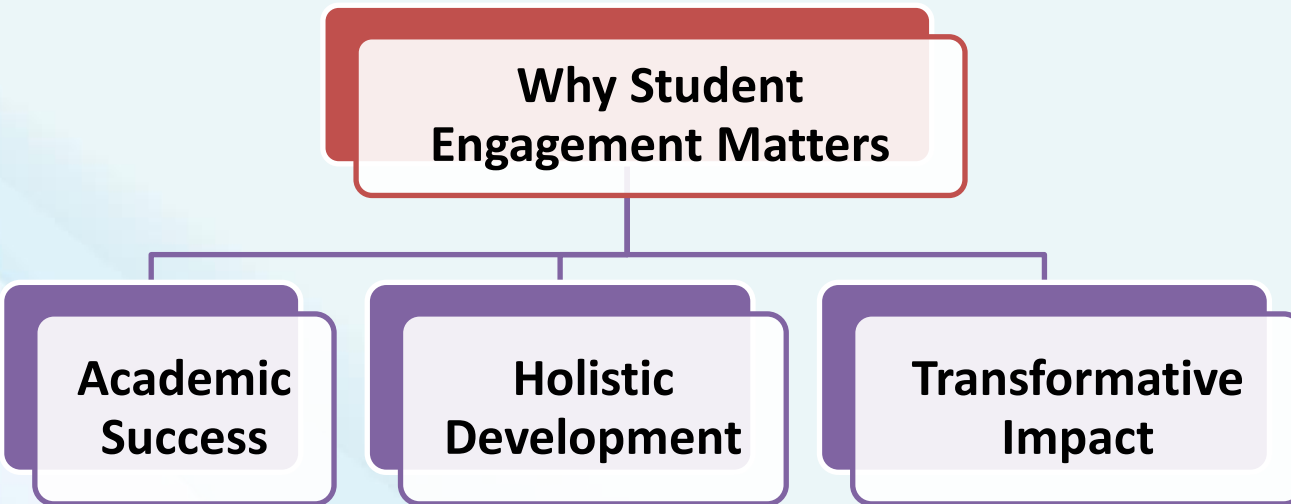
On April 9, 2024, the Director, Prof. Rangan Banerjee, established a committee tasked with developing preliminary guidelines for the fair use of AI tools in teaching, research and examinations in the short term. In the longer term, the committee was charged with: (a) providing clear guidance on generative AI (GenAI) tools and monitoring advancements in this field; (b) identifying necessary training and support infrastructure for the effective and fair use of GenAI tools; and (c) recommending a governance structure and AI policies aligned with the existing policy framework. The committee is pleased to present its report covering the short-term goals.

Drones / UAVs in Libraries

- **Book Delivery:** Overcome challenges like traffic, distance, and time constraints.
- **Stock Verification:** Equipped with Cameras can be used for efficient stock verification.
- **Library Tours:** Novel way to give virtual tours of library facilities, showcasing the different sections, resources, and services available.
- **Maker Space Support:** Libraries with maker spaces can utilize drones as a resource for hands-on learning, programming, and experimentation.
- **Aerial Photography and Videography:** Drones with high-quality cameras can be used to for aerial photographs and videos of library buildings, events, activities, etc.



Student Engagement in Libraries



- **Library spaces are a forum for student engagement with other students.**
- **Library space engages the users in interaction, reading, social & cultural activities, research activities, etc.**
- **Library as place: changes in learning patterns, collections, technology, and use.**

Future of Libraries with AI

- **Libraries of the future will be human-centered and AI-powered, enhancing discovery, personalization, and equity while upholding trust and academic integrity.**
- **AI will not replace libraries, but libraries that embrace AI responsibly and ethically will redefine the future of knowledge.**

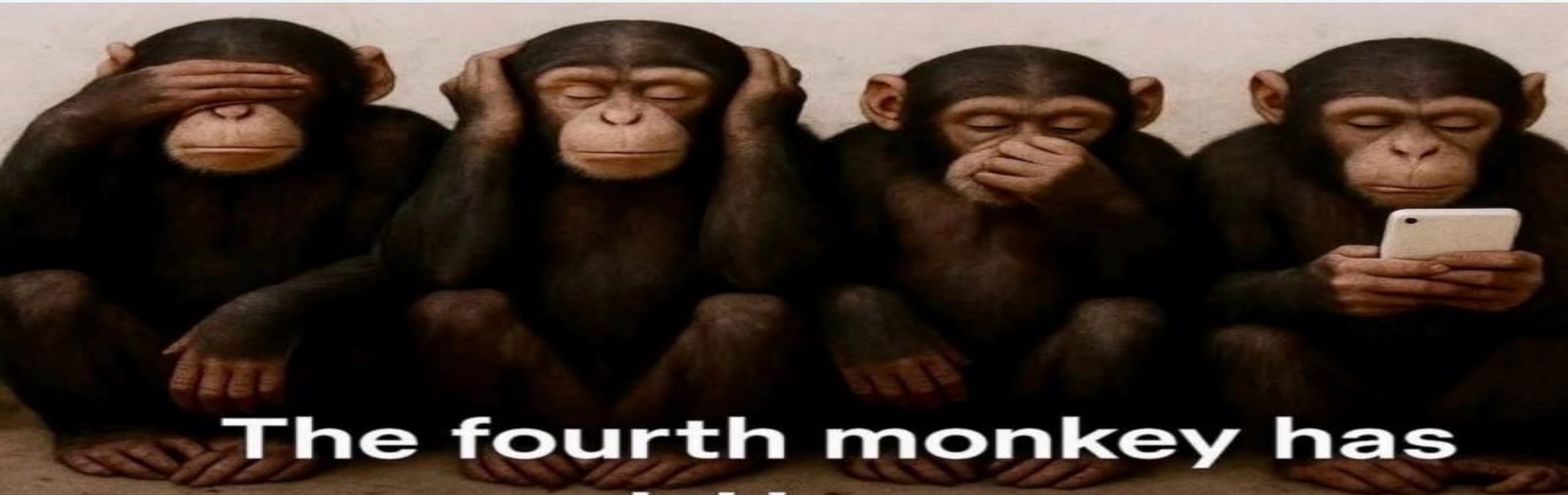


New Roles & New Competencies

- **AI Librarian**
- **Cloud Librarian**
- **Research Support Librarian/Research Assistant**
- **Librarian – Scholarly Communication**
- **User Engagement Specialist**
- **Information/Knowledge Manager**
- **Systems Librarian**
- **Web Manager**
- **Data Support Librarian**
- **Manager (Marketing/Library)**
- **Sustainability Librarian**
- **OER Librarian**
- **Ranking Specialist**
- **Data Visualization Librarian**
- **Citation Manager, etc.**



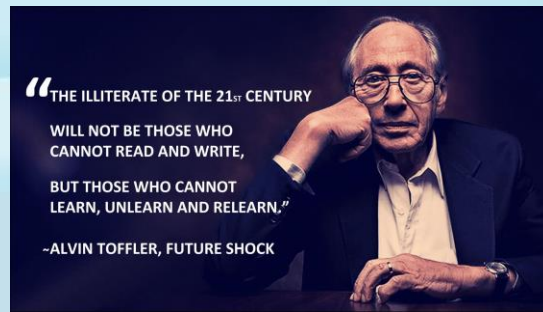
Gandhi's 4th Monkey (Ethics Reminder)



The fourth monkey has emerged. He sees no one, hears no one, and speaks to no one.

Summing Up

- **Transformation is best done step-by-step, not all at once.**
- **Technology is reshaping libraries, but Librarians remain at the centre of this transformation.**
- **AI enhances our capacity; it does not diminish our role.**
- **If we learn, unlearn, and relearn, as futurist Alvin Toffler says, we will lead the knowledge revolution.**
- **The Library of 2030: AI-enabled, User-centered, Data-driven, Ethical & inclusive, Hybrid & resilient.**



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- https://www.researchgate.net/publication/341725647_Flying_Books_Applications_of_Drones_in_Libraries
- <https://openjournals.uwaterloo.ca/index.php/acmla/article/view/1886/2126>

Disclaimer & Acknowledgements

- ❑ I thank NACLIN, DELNET, my IIT Delhi, and the global knowledge community for their generous open knowledge.
- ❑ This presentation used multiple open-source resources and AI-assisted tools.
- ❑ Thank You - Happy to take questions.

nabihasan@gmail.com

<https://web.iitd.ac.in/~hasan>

<https://www.youtube.com/user/nabihasan72>

