

# AI-the role and opportunity for libraries

## Internet Librarian

### London October 2019

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*My contribution today should be treated as “food-for-thought”*

*My bias is to the UK and Higher Education*

I can't cover everything..so I want to focus on three broad themes that I think are especially **relevant to**  
*libraries*

## Data, Curation & Ethics

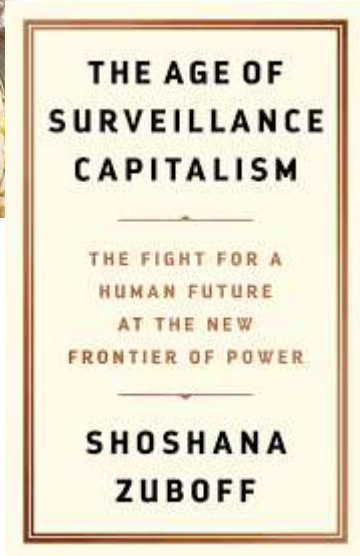
With sub themes around AI in regard to: -

- Collections
- Research
- Teaching and learning - student success
- Student wellbeing

# How do you feel about AI? - the optimistic view



Human beings and artificial intelligence will work together to create a **brave new world**... This will be a world where people are freed to use their natural creative abilities and their amplified intelligence without concern for the drudgery of mundane, repetitive and quite frankly boring tasks. **This is the true mission of artificial intelligence**



This power to **shape behaviour for others' profit** or power is entirely self-authorising. It has no foundation in democratic or moral legitimacy, as **it usurps decision rights and erodes the processes of individual autonomy** that are essential to the function of a democratic society. The message here is simple: Once I was mine. Now I am theirs.

**The  
Guardian**

**'The goal is to automate us': welcome to the age of surveillance capitalism**

The goal is to automate us': welcome to the age of surveillance capitalism. John Naughton. The Observer Technology 20 June 2019

<https://www.theguardian.com/technology/2019/jan/20/shoshana-zuboff-age-of-surveillance-capitalism-google-facebook>



**Dr. Donna Lanclos** @DonnaLanclos · Sep 3

And folks who think this is far off from what some US institutions are doing in terms of card swipes and other attempts to capture attention and attendance I think you are mistaken



**Karim B Boughida** @kboughida · Sep 3

IN THE LIBRARY TOO... Chinese university tests facial recognition system to monitor attendance and students' attention to lectures  
[newsweek.com/nanjing-china-...](https://www.newsweek.com/nanjing-china-...)



2



13



39



**Dr. Donna Lanclos**

@DonnaLanclos

surveillance is not care. Attention is not the same thing as engagement. Stop giving your money (and your students' data) to companies who are selling a product, fund the human labor of education.

11:12 PM · Sep 3, 2019 · [Twitter Web Client](#)

# Higher Education – a diversity of views

Nearly all agree that AI will be a very big issue for higher education. **..most of the university leaders among the respondents express an intention to develop strategies** where they do not already have one.



Universities will use AI to select the best candidates for degree courses,

Universities today cannot compete against the Googles of the world because they do not have that data.

“There is a lot of work going on in AI by way of tech ..but what a lot of people are trying to look into is the ethical tone of it all,” ..it’s really difficult to do any humanities- and social sciences-based work on it because grants are not tailored towards it.”

Respondents are reasonably confident that AI will be able to provide student feedback at least as well as humans can, with student assessment another area where AI could play a big role.

<https://www.timeshighereducation.com/features/microsoft-survey-ai>

# What problems can/will AI address?

Powerful as it is, one of the problems is that **artificial intelligence is not aimed at the worthiest of the worlds problems.** Today if you look at the very successful AI applications at scale they are in the field of making people click more ads

AI and bots can create fairer world. Rob Mackinley -interview with Kriti Sharma. Information Professional; March 2019







Imagine walking into a grocery store, toward the produce aisle, but then getting a ping on your phone that the cookies you bought last week are on sale. You put them to your cart, put your phone away and

**keep shopping”**

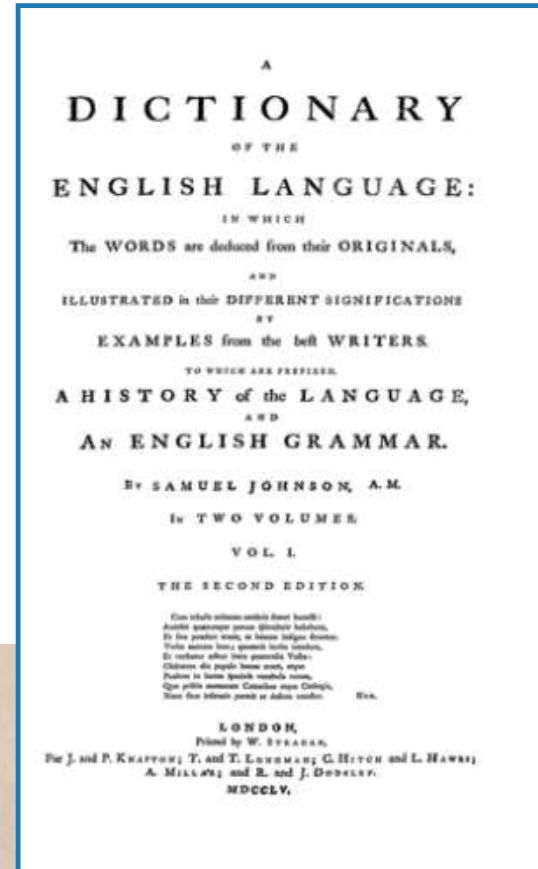


# What *is* AI?

# Discussion about AI seems to be everywhere



## What is intelligence? - Samuel Johnson 1755



INTELLIGENCE. }  
INTELLIGENCY. }  
Commerce of information;

# What is AI?

# The AI bucket consists of:

- Big data
- Analytics
- Machine learning
- Natural language processing
- Data visualisation
- Decision logic

Cox, A.M. Pinfield, S. and Rutter, S. (2018) The intelligent library: Thought leaders' views on the likely impact of artificial intelligence on academic libraries. *Library Hi Tech*. ISSN 0737-8831  
<https://doi.org/10.1108/LHT-08-2018-0105>

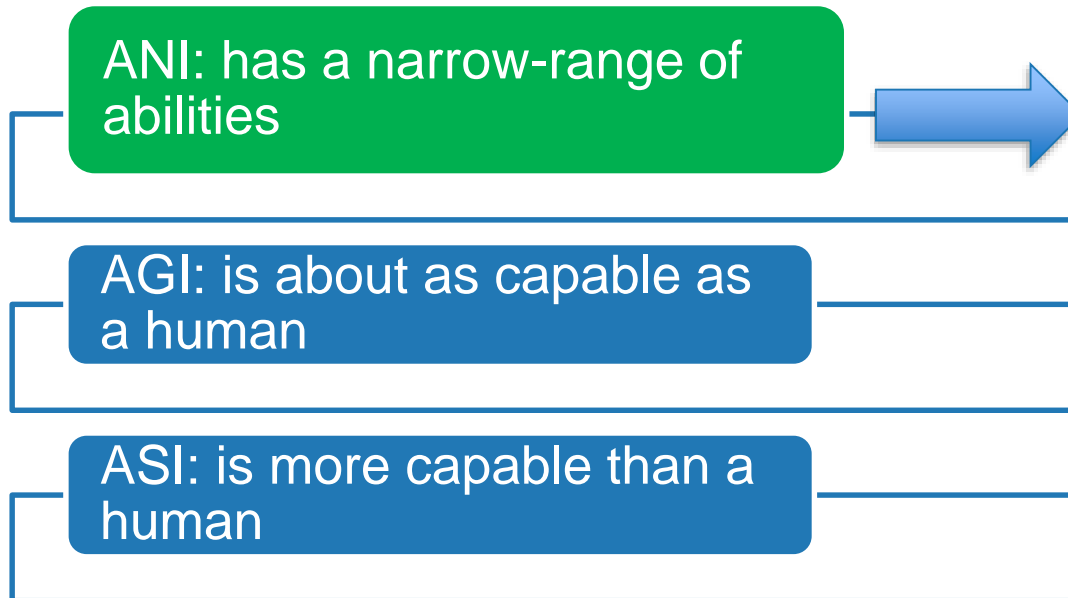


AI in the UK: ready, willing and able? HOUSE OF LORDS Select Committee on Artificial Intelligence  
Report of Session 2017–19 HL Paper 100 16 April 2018

# Types of AI: Narrow (ANI), General (AGI), and Super (ASI)

There are several types of Artificial intelligence: ANI, AGI, and ASI.  
**For now, AGI and ASI are Sci-Fi**  
**all existing AI is ANI**

The 3 types of AI: Narrow (ANI), General (AGI), and Super (ASI). Thomas J Ackermann. 1-Apr-2019.  
<https://www.bgp4.com/2019/04/01/the-3-types-of-ai-narrow-ani-general-agi-and-super-asi/>



AI, or machine learning, refers to **a broad set of algorithms that can solve a specific set of problems**, if trained properly.

The success of artificial intelligence depends on data, Nick Ismail  
Information Age [blog] 23 April 2018  
<https://www.information-age.com/success-artificial-intelligence-data-123471607/>

# The importance of data



# The importance of data to machine learning

Contrary to the assumptions of 60 years ago, we don't need to precisely describe a feature of intelligence for a *machine* to *simulate* it

*“The unreasonable effectiveness of data”...**simple statistical tricks, combined with vast amounts of data**, have delivered the kind of behaviour that had eluded its [AI's] best theoreticians for decades*



Artificial Intelligence: Hope or hype. Nello Cristianini. In *New Scientist Collection*. 17 more things you need to understand. October 2019. p 120 -123



# It's why Google Translate works



Contrary to the assumptions of 60 years ago, we don't need to precisely describe a feature of intelligence for a *machine* to *simulate* it

I modsætning til antagelserne for 60 år siden, behøver vi ikke præcist at beskrive en funktion af intelligens for en maskine for at simulere den

**AI works best when large amounts of rich, big data are available.** The more facets the data covers, the faster the algorithms can learn and fine-tune their predictive analyses. According to industry predictions, in 2018, AI's greatest limitation — high quality data — will become more evident. **Successful machine learning depends on large and broad data sets.**

In the next wave of AI empowerment, the algorithms are commoditised, but **whoever owns the data is king.**

The success of artificial intelligence depends on data, Nick Ismail Information Age [blog] 23 April 2018 <https://www.information-age.com/success-artificial-intelligence-data-123471607/>

‘Whoever acquires and controls the data will have hegemony in the future

Indian Prime Minister Narendra Modi  
World economic forum . January 2018



<https://www.analyticsindiamag.com/modi-wef-davos-data-control-real-wealth/>

# The journey from management information to AI

**Adopting AI ...is a journey**, not a silver bullet that will solve problems in an instant.

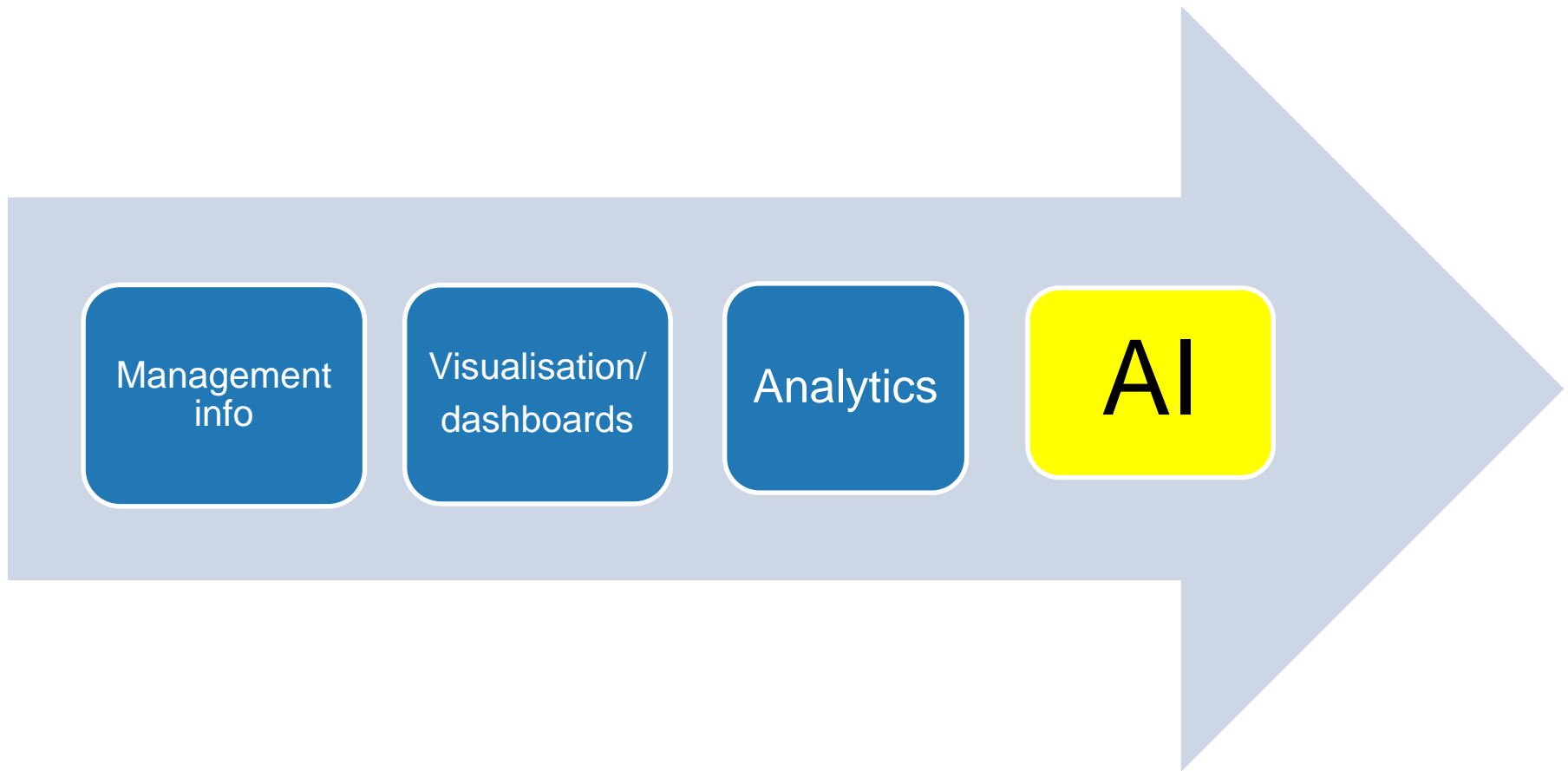
**It begins with gathering data** into simple visualizations and statistical processes that allow you to better understand your data and get your processes under control.

From there, you'll progress through increasingly advanced analytical capabilities, **until you achieve that utopian goal .....**

Data Is The Foundation For Artificial Intelligence And Machine Learning, By Willem Sundblad Forbes [magazine]  
18 October 2018

<https://www.forbes.com/sites/willemsundbladeurope/2018/10/18/data-is-the-foundation-for-artificial-intelligence-and-machine-learning/#6750b0a151b4>

Understanding what we do  changing people's *behaviour*



## Out-of-the-Box Reports

Report	Description
<b>Acquisitions (based on Funds Expenditures SA)</b>	
Detailed Expenditures	Displays fund, title, and price information for items.
Expenditure Per Acquisition Method	Displays annual expenditures per acquisition method.
Expenditure Per Acquisition Method - Annual Trend	Displays a line chart of annual expenditures per acquisition method.
Expenditure Per Acquisition Method - Top 10	Displays a bar chart of the top 10 expenditures per acquisition method.
Expenditure Per Classifications	Displays annual expenditure per classification.
Expenditure Per Classifications - Top 10	Displays a bar chart of the top 10 annual expenditures per classification.
Expenditure Per Fund Ledger Code	Displays annual expenditures per fund ledger code.
Expenditure Per Fund Ledger Code - Top 10	Displays a bar chart of the top 10 expenditures per fund ledger code.

[https://knowledge.exlibrisgroup.com/Alma/Product\\_Documentation/010Alma\\_Online\\_Help\\_\(English\)/080Analytics/060Out-of-the-Box-Reports](https://knowledge.exlibrisgroup.com/Alma/Product_Documentation/010Alma_Online_Help_(English)/080Analytics/060Out-of-the-Box-Reports)

# Bringing library related data together –dashboards/visualisation

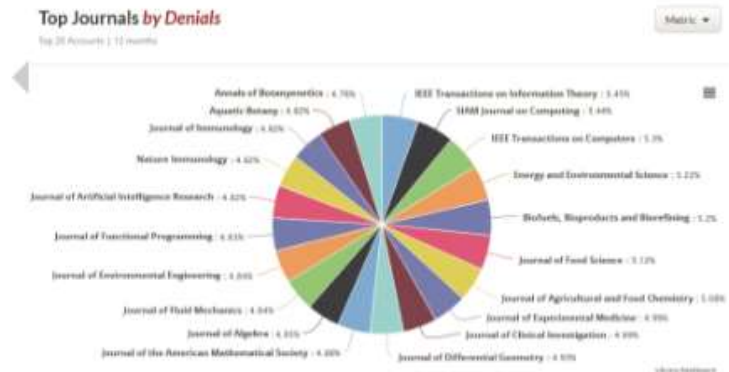


FOR LIBRARIES FOR PUBLISHERS FOR BOTH WHY REDLINK? COMPANY

## MAKE MORE DATA-DRIVEN DECISIONS

Integrate and organize data from dozens of sources covering journals, databases, eBooks, and bundles, all in one place so you and your staff can make more informed spending and collection decisions.

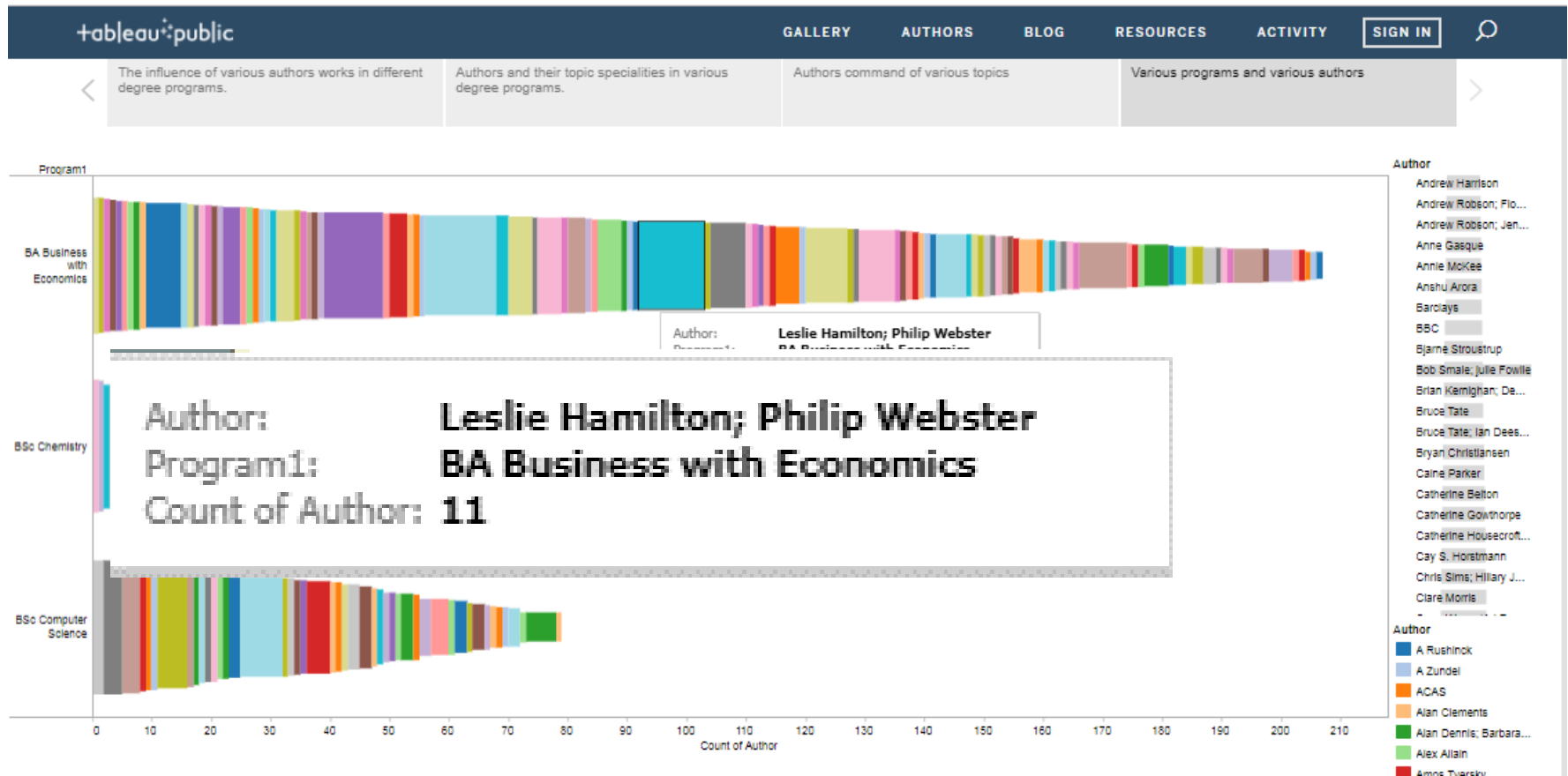
*"... helps us to efficiently allocate resources to meet user needs and demands."* – **Scott Anderson,**  
Millersville University



<https://redlink.com/library-dashboard/>

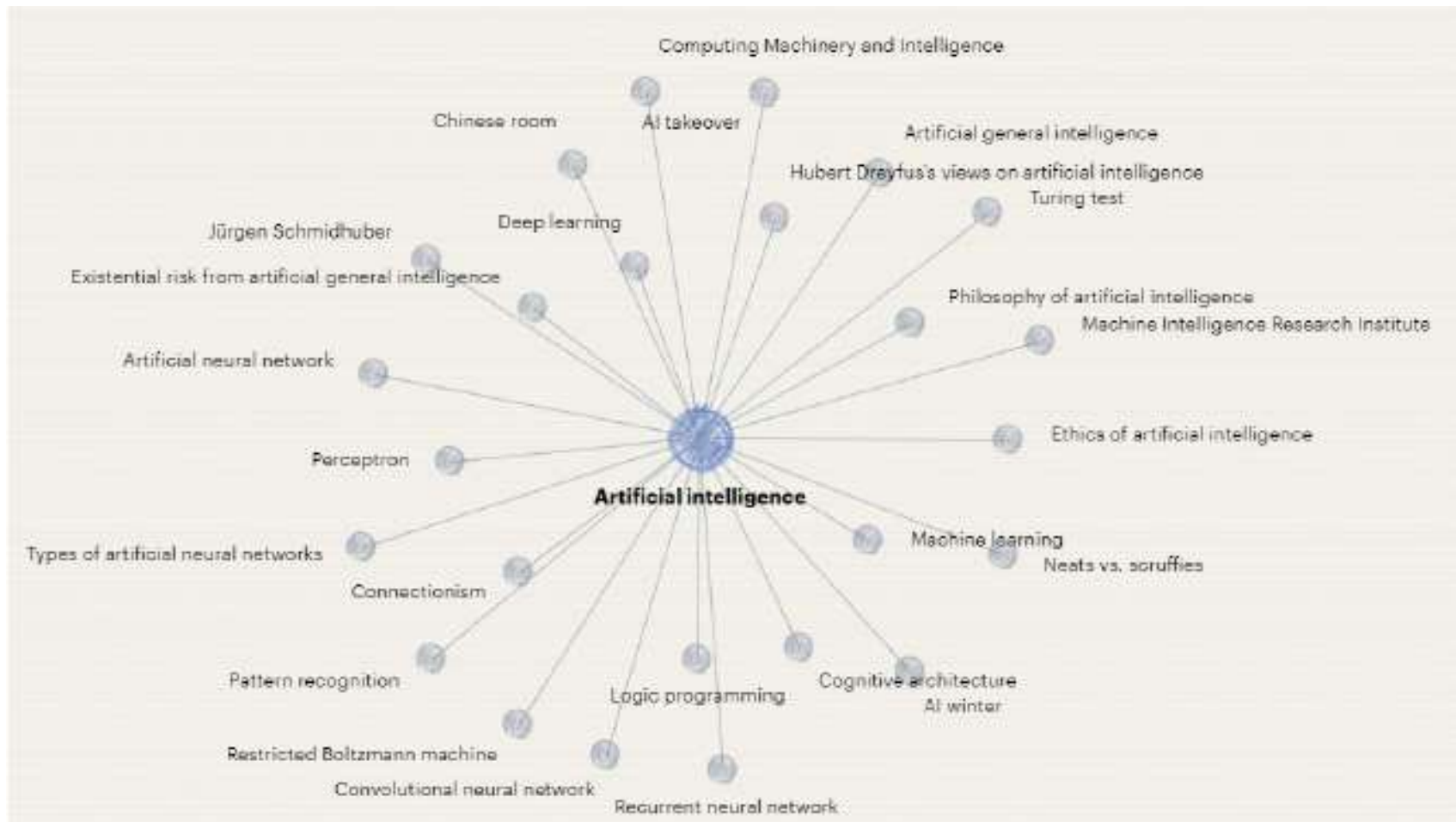


## Various programmes and various authors



<https://public.tableau.com/profile/kushwanth#!/vizhome/JISCdata1/Story1>

# Deriving and linking concepts via machine learning (AI)



<https://www.yewno.com/>

# Where do libraries and related services fit?

“the library has an integral role in the university’s mission of research and teaching, not just a supporting one.”

UK Scholarly Reading and the Value of Library Resources: library may have a correlation to the overall strength Summary Results of the Study Conducted Spring 2011. Carol Tenopir and Rachel Volentine. Jisc Collections. February 2012

**Innovation** has moved from a consideration to **a necessity**.



<http://www.libraryinnovation.org/article/view/420/625>

## A New Home for AI: The Library



Jan 17, 2018

The University of Rhode Island is taking a very different approach with **its new AI lab**, which may be the first in the U.S. to be located in a university library.

The University of Rhode Island is taking a very different approach with its new **AI lab, which may be the first in the U.S. to be located in a university library**. For URI, the library location is key, as officials hope that by putting the lab in a shared central place, they can bring awareness of AI to a wider swath of the university's faculty and student body.

A New Home for AI: The Library University of Rhode Island plans to use its library to broaden the reach of artificial intelligence. By Lindsay McKenzie 17 January 2018. <https://www.insidehighered.com/news/2018/01/17/rhode-island-hopes-putting-artificial-intelligence-lab-library-will-expand-ais-reach>

# Collections



“Libraries want to make **data-driven decisions** about the management of their digital and print **book collections** but the data that is currently available does not allow them to do this with confidence”

<http://www.slideshare.net/JISC/building-trust-in-a-national-monograph-knowledgebase-sc-digifest-2016>

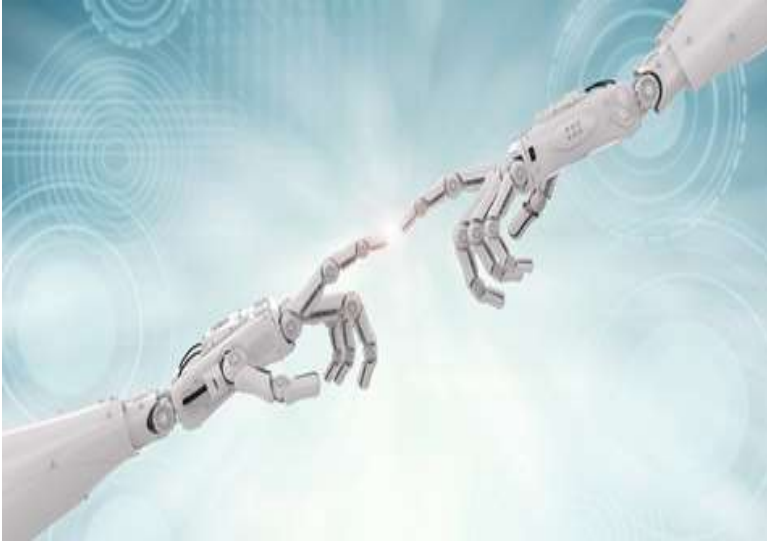


**Usage data on their own...give libraries and publishers very little insight into how content is being used** or how much it is being looked at.

In spite of the huge amount of data that are now available to libraries, it feels as if **little progress has been made in developing metrics that may give an indication of how resources are being used** and the extent to which library users value the resources provided. These perceived shortcomings in conventional usage data led Nottingham Trent University and Alexander Street to partner in piloting an in-depth view of **analytics, demonstrating user engagement and impact of use.**

Adey, H., & Eastman-Mullins, A. (2017). User engagement analytics case study: how customer behaviour can drive intelligent library decision making. *Insights*, 30(3), 138–147. DOI: <http://doi.org/10.1629/uksg.387>  
<https://insights.uksg.org/articles/10.1629/uksg.387/>

# Making collections available to AI tools



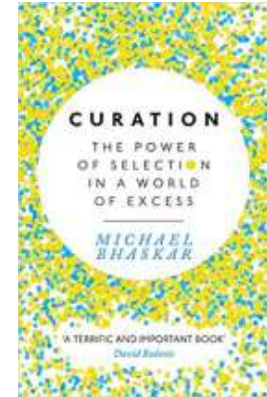
At MIT, Chris Bourg, director of libraries, is focusing on building a **technical infrastructure so its collections are accessible** by APIs and therefore can be used by machine-learning algorithms.

MIT Libraries is working with AI/ML researchers at the university to **analyze various library tasks and workflows that might be enhanced by AI**. As Bourg says, it is important for academic libraries to make their **collections accessible to AI tools like Alexa** so that when someone asks a voice assistant for information, reputable scholarly literature is available.

How libraries are starting to apply artificial intelligence in their work. By Loida Garcia-Febo. American Libraries 1 March 2019 <https://americanlibrariesmagazine.org/2019/03/01/exploring-ai/>

# Curation

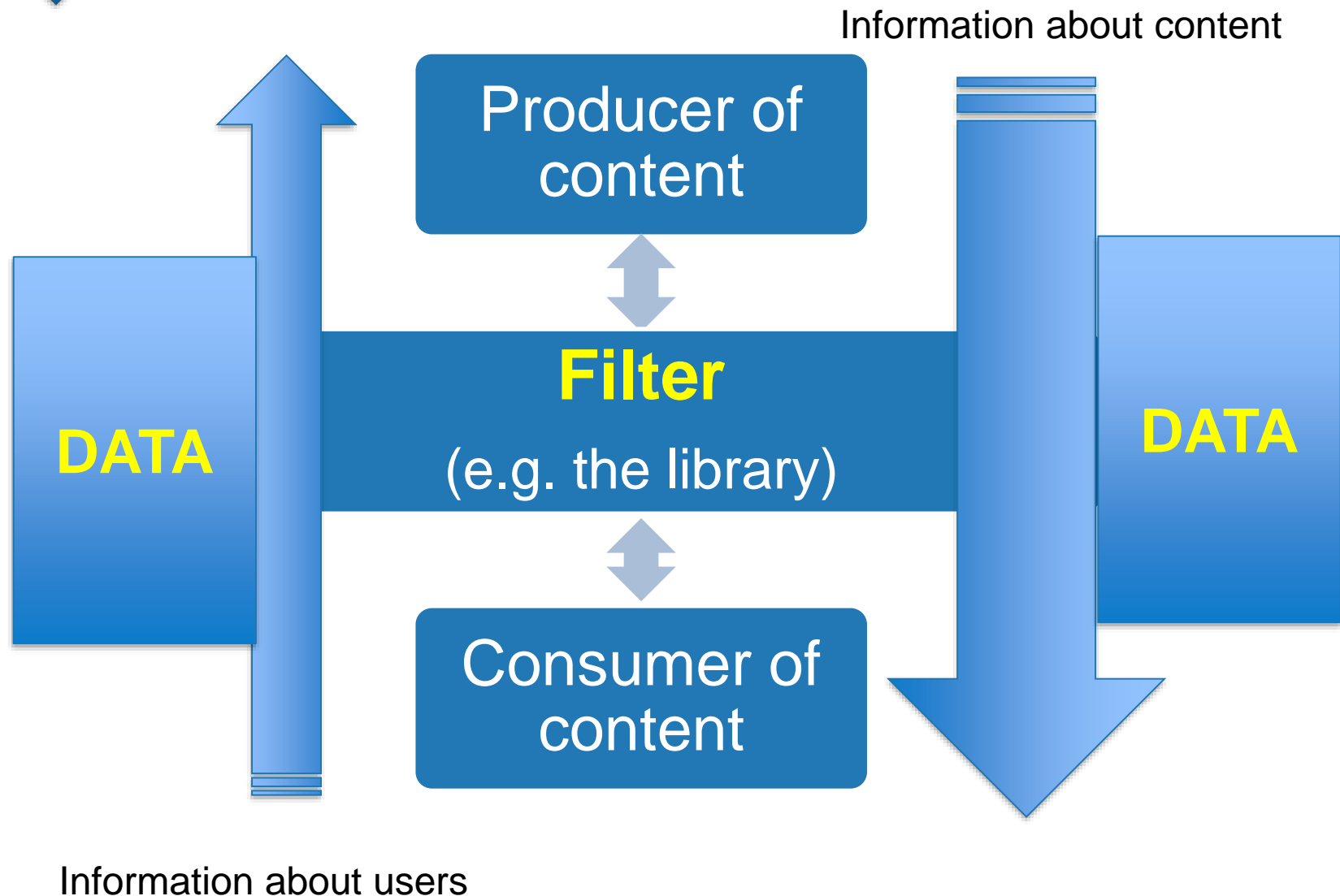
“[The] case goes something like this. We live among **unprecedented abundance**. The internet offers more writing than we could ever read, more music than we could ever listen to, and more news than we could ever keep up with”



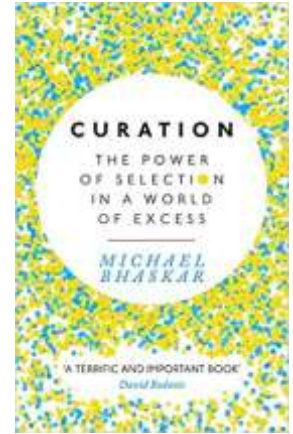
“The result of all this abundance is that there are now **massive ..opportunities in helping us filter**”

Reviewed by Asher Dresner (St Edmund Hall) <http://www.oxfordtoday.ox.ac.uk/culture/book-of-the-week/review-curation#>

# Data is key in driving the new generation of 'platforms'



**This isn't about searching;** we don't always know what we're looking for. It's about curation: 'selecting, refining and arranging to add value'



**Someone using their hard-won expertise to put in front of us only the good stuff**

Hmmm....who could that be?

Reviewed by Asher Dresner (St Edmund Hall) <http://www.oxfordtoday.ox.ac.uk/culture/book-of-the-week/review-curation#>

*‘selecting, refining and arranging to add value’*

At the moment this is done by manual curation - by academics



**Introduction to high energy physics**

Book - by Donald H. Perkins - 2000 - Background

☞ Relatively historical treatment by an outstanding physicist



**Introduction to high energy physics**

Book - by Donald H. Perkins - 2000



**Detectors for particle radiation**

Book - by K. Kleinknecht - 1998 - Recommended

☞ A great book, one of the standard detector texts; does not contain the most recent advances in solid state (



<https://rl.talis.com/3/bham/lists/DF40AAC3-9E75-A0EF-4EAB-263D34B092C8.html>

Manual curation is not without its problems.....

**Liberate our Library**



### **Diversifying Reading Lists**

Collaborating with teaching staff to **create decolonised and inclusive Reading Lists** to better represent the identities and experiences of our student body

<https://www.gold.ac.uk/library/about/liberate-our-library/>



How do learning designers find the right content and deliver it to learners in a personalized and prioritized way at the moment of need?

Up until now, this has been primarily a manual process. **With the assistance of emerging AI technology, the world of content curation has become a lot more manageable, scalable, and impactful.**



AI in Learning: Curation. David James Clarke IV. 29 July 29, 2019  
<https://www.linkedin.com/pulse/ai-learning-curation-david-james-clarke-iv/>

## The five steps of AI-powered content curation:



Step 1: Activate AI on Learning Paths

Step 2: **Scan a Library of Trusted Sources**

Step 3: Deliver Personalized (and Prioritized) Content to Learners

Step 4: Collect and Analyze Crowd-Sourced Usage Data

Step 5: **Prioritize Content via Machine Learning**

AI in Learning: Curation. David James Clarke IV. 29 July 29, 2019

<https://www.linkedin.com/pulse/ai-learning-curation-david-james-clarke-iv/>

The real magic in this new system happens when it delivers **personalized and prioritized content to each and every learner**



In Step 3, the system automatically curates specific resources for each learner according to the skills in their Learning Path. In real-time, curator bots personalize the resources using pre-assessment and profile data to find and deliver the videos, activities, articles, and blogs that fill each learner's skills gaps. **How do AI-powered curation systems determine the “best” content? As with most things, the answer is a four-letter word: Data.**

AI in Learning: Curation. David James Clarke IV. 29 July 29, 2019

<https://www.linkedin.com/pulse/ai-learning-curation-david-james-clarke-iv/>

## Helping research

## Yewno Discover: *Case Study*



Kamran Naim,  
Stanford University  
Doctoral Candidate & Instructor

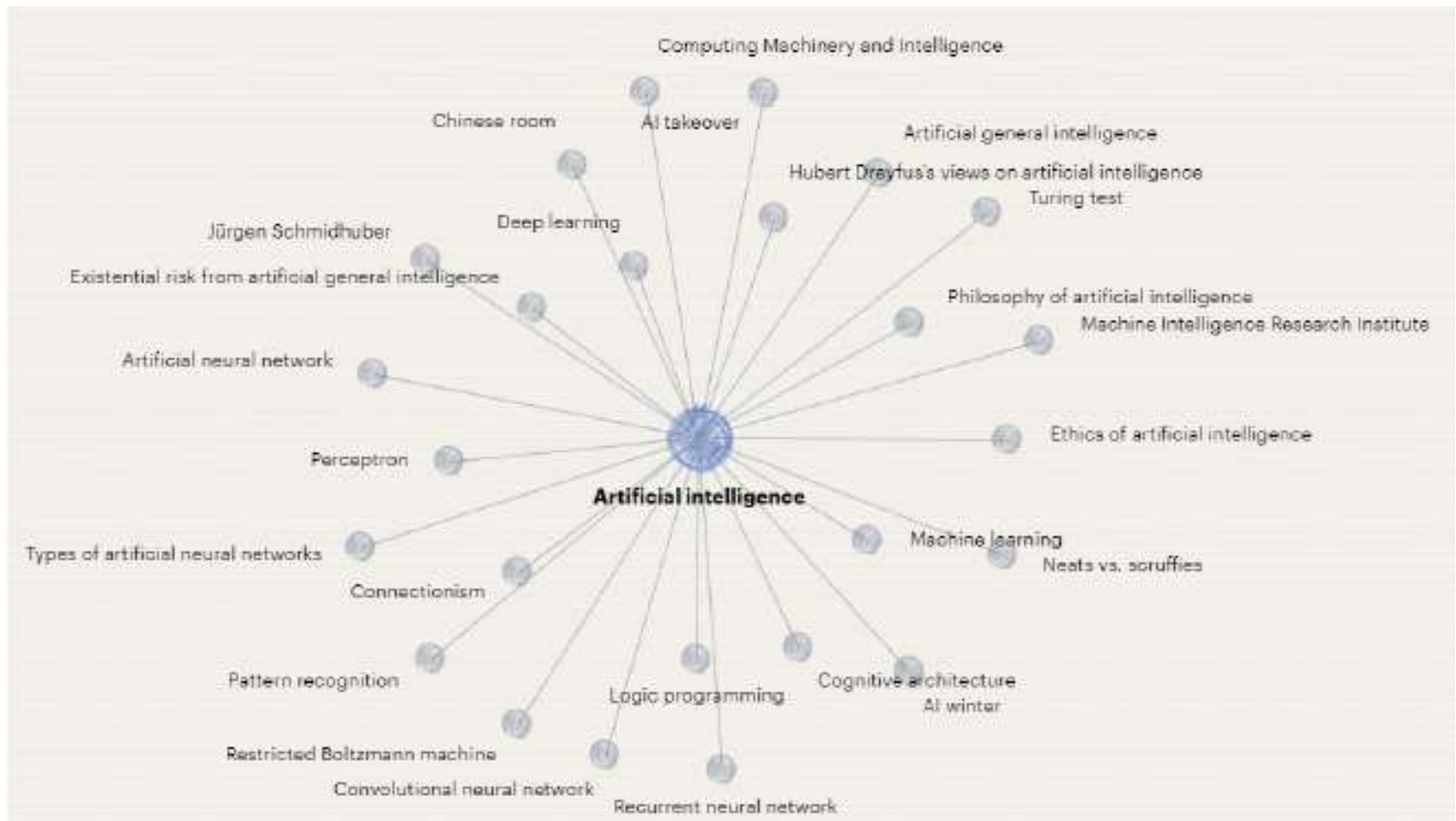
As doctoral candidate and part-time instructor in Stanford's graduate school of Education, Kamran Naim is keenly aware of the importance of developing digital literacy skills to survive today's deluge of information.

*"The volume of scholarly content that is produced far exceeds anyone's ability to read it."*

He sees information tools powered by neural networks and artificial intelligence (AI) -- where computers replicate human processes like decision making or perception -- as a cutting-edge method to navigate this growing body of literature.

"Yewno's knowledge map allows Kamran to **investigate concepts and relationships between concepts** to help broaden the keywords he'll use in his research."

<https://www.yewno.com/>



<https://www.yewno.com/>



## Making research more discoverable

Content is at the centre of everything a publisher does. Enriching that content delivers significant value across the whole content life cycle. One particular area where the need for content enrichment can add significant value is in **enabling the researcher to find and discover the most relevant content to assist in the researcher's workflow**. Features that can be enhanced using enrichment techniques are relating articles, subject and context navigation, categorisation of content and identification of entities to provide linking to other relevant content.

<http://www.67bricks.com/index.php/content-enrichment-industry-insights-1-2016>





### Improving discovery through relatedness

Publishers are trying to increase the usage of their content but at the same time ensure that they are providing researchers with the most **relevant content** when they search. One area where content enrichment can assist is in the **area of relatedness**. Here rather than use just the words in the documents to find other related content you can use **techniques to give more meaning and context to the articles and the relationship they have with other articles**. One approach uses software tools to **extract the meaning from content** to create a content fingerprint and then uses this fingerprint to find related pieces of content.

<http://www.67bricks.com/index.php/content-enrichment-industry-insights-1-2016>





## World-leading archive uses GraphDB to build a machine learning assisted knowledge management platform

The IET looked to Ontotext to deliver **artificial intelligence** technologies into its database for **discovering emerging trends and relationships**. This technology gives customers both a deeper understanding of current developments and **more value from the data** they have contributed so much towards.

Press Release 24 August 2016 <https://www.ontotext.com/company/news/ontotext-selected-unleash-power-institution-engineering-technologys-knowledge/>

# AI will shift the business model of publishers



[Elsevier's Dr. Jabe Wilson] points out that while many industries have shifted to digital, the impact is especially dramatic in scientific publishing and R&D “due to the sheer volume of data researchers must sift through.” In fact, the desire to help researchers make sense out of all this data is behind **Elsevier's transformation from publisher to “information analytics provider.”**

<https://www.elsevier.com/connect/jabe-wilson-on-the-future-of-ai-and-scholarly-publishing>

# Student success and student wellbeing

# Student success



“Every time a student interacts with their university – be that **going to the library**, logging into their virtual learning environment or submitting assessments online – they leave behind a digital footprint.

**Learning analytics is the process of using this data to improve learning and teaching”**

Learning analytics in higher education: A review of UK and international practice. Read our updated briefing on learning analytics and student success from January 2017. By Niall Sclater, Alice Peasgood & Joel Mullen. Jisc. 2016. <https://www.jisc.ac.uk/reports/learning-analytics-in-higher-education>

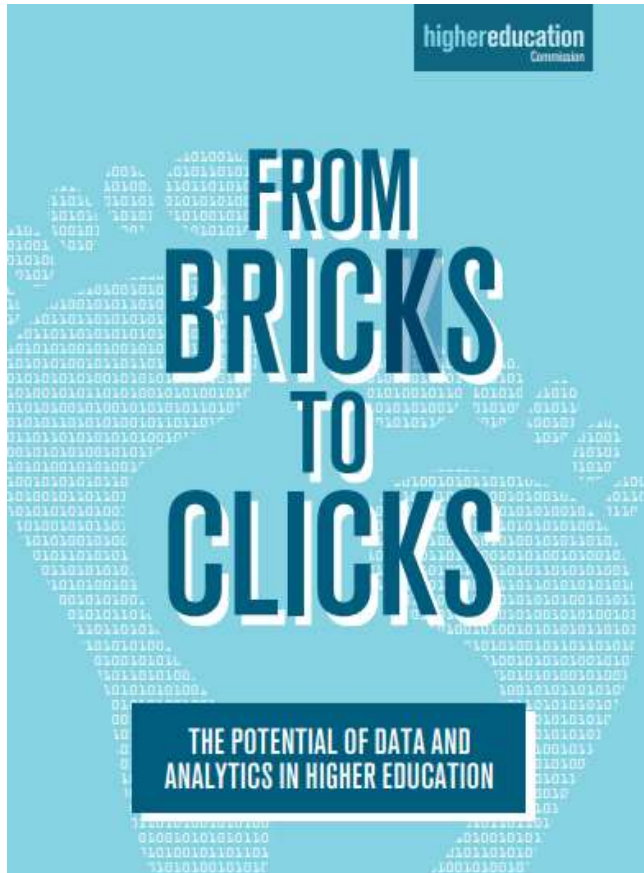


## Learning analytics for strategic leaders

Improve students' wellbeing and success, and boost your organisation's student retention – uncover insights that help staff deliver more personalised learning and a better student experience with our [learning analytics service](https://www.jisc.ac.uk/learning-analytics/strategic-leaders).



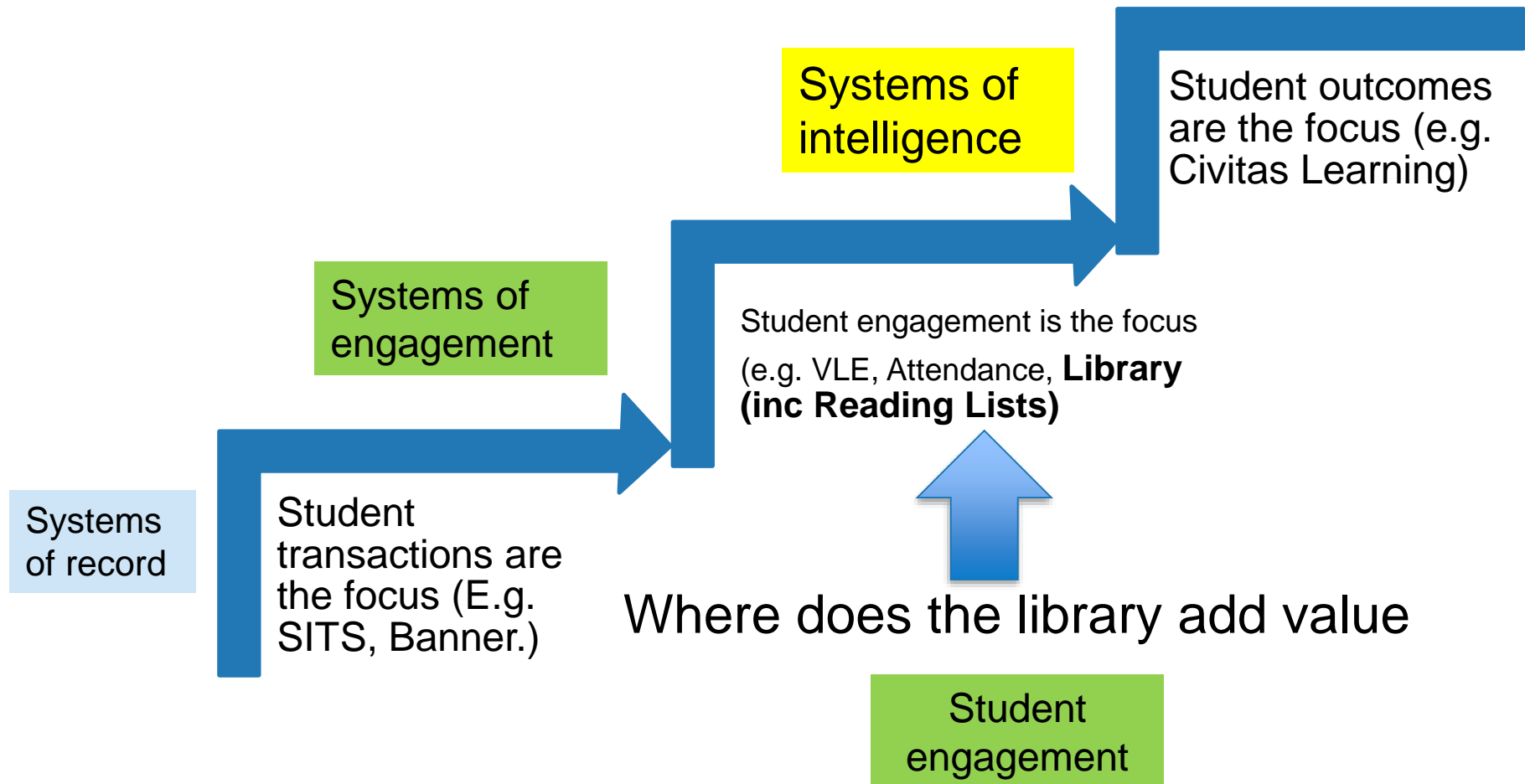
<https://www.jisc.ac.uk/learning-analytics/strategic-leaders>



**We recommend that all institutions should consider introducing an appropriate learning analytics system to improve student support and performance.**

<https://www.policyconnect.org.uk/he/research/report-bricks-clicks-potential-data-and-analytics-higher-education>

# Pathway to student success – Where do library systems/tech fit?





# Tools for Student Success - an AI based approach



SOLUTIONS TECHNOLOGY COMMUNITY RESOURCES ABOUT CONTACT US

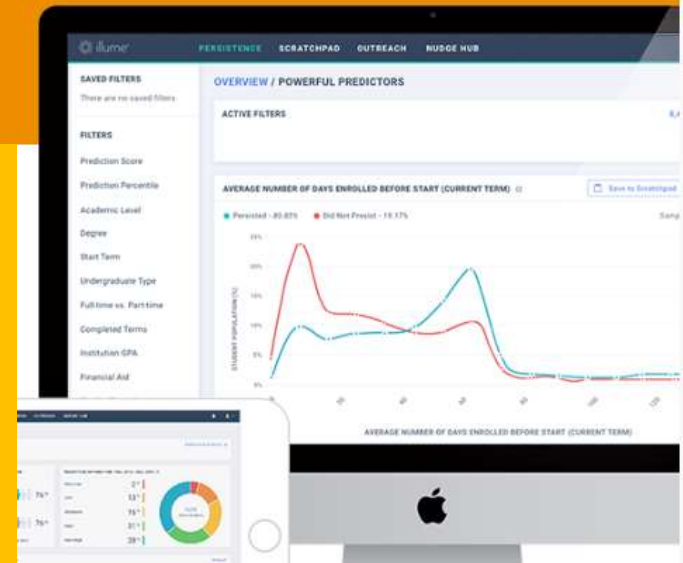
## illume® | INITIATE SUCCESS

Take precise actions that dramatically  drive results across your institution.

As your command center for student success, Illume® uses your institution's data to develop personalized predictions that are timely, accurate, and actionable.

**Pinpoint at-risk students** hiding in plain sight, develop coordinated student success initiatives, and deploy **targeted interventions**.

Each student's data tells a story. **Are you listening?**



<https://www.civitaslearning.com/technology/illume/>



## Inspire for Advisors (CIVITAS)

IfA forms an essential tool for triangulating information, better understanding individual student's behaviour and **identifying when a student might need support or a timely 'nudge'**



<https://campuspress.uwl.ac.uk/teaching/how-to/learning-technology/civitas-ifa/>



## Using Student Data for Educational Analytics

“Northumbria University’s approach to the utilisation of Educational Analytics is directly linked to the University Strategy”

The following data, which is currently captured by the University, is initially in scope for Educational Analytics:

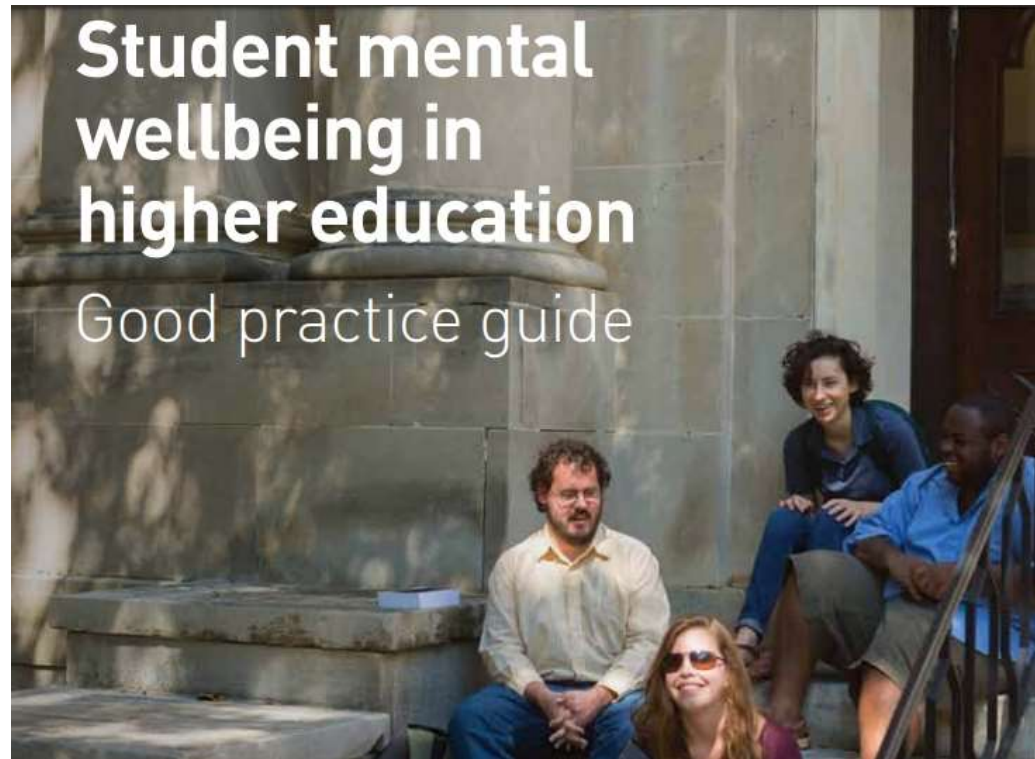
- personal information provided by the student at registration
- student level study records held by the University including assessment marks
- details of a student’s assigned Personal Tutor system-generated data from Blackboard, such as the date and frequency of accessing pages
- student attendance data
- **library borrowing logs**
- smart card activity log on Campus
- Northumbria gym membership

**This data will be used in line with the University’s Student and Applicant Privacy Notice.**

<https://www.northumbria.ac.uk/-/media/corporate-website/new-sitecore-gallery/services/academic-registry/documents/qte/student-engagement/ethical-use-of-student-data-for-educational-analytics.pdf?la=en&hash=EEB8CF87D03669F66A935ECEA17D084F05947832>

# Student wellbeing

“Universities have an important role to play in providing support for students with mental health difficulties”



Universities UK, Student mental wellbeing in higher education: good practice guide. London: Universities UK, 2015, <https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2015/student-mental-wellbeing-in-he.pdf>

## Study Happy Library wellbeing initiatives from the University of Warwick



Study Happy Library wellbeing initiatives from the University of Warwick. Antony Brewerton and Becky Woolley. SCONUL Focus 68. 2016 [sconul.ac.uk/sites/default/files/documents/4\\_18.pdf](http://sconul.ac.uk/sites/default/files/documents/4_18.pdf)



# Why is the library involved in student wellbeing?

One question that we hear is: 'Why on earth is the library doing this?'



**All this fits nicely with the University of Warwick Library mission statement:** 'connecting you with information, support and your community'.

In 2014 the university launched a new strategy, 'Looking forward'. This highlights 'community' as a key University Value and adds new weight to this by making 'Engage our communities' one of our six strategic goals. **A key objective for us in the library is to create 'the conditions for our students and staff to succeed'.**

Study Happy Library wellbeing initiatives from the University of Warwick. Antony Brewerton and Becky Woolley. SCONUL Focus 68. 2016 [sconul.ac.uk/sites/default/files/documents/4\\_18.pdf](http://sconul.ac.uk/sites/default/files/documents/4_18.pdf)

There are wider reasons why more and more libraries are becoming a key part of their university's wellbeing package of support.



Students go to the library all the time. There is a 'stickiness' they have with libraries and they keep coming back to us. They feel at home. They know the staff. **They know we are looking out for them. If we notice they are stressed** and talk to them about looking after themselves, this feels natural.

Study Happy Library wellbeing initiatives from the University of Warwick. Antony Brewerton and Becky Woolley. SCONUL Focus 68. 2016 [sconul.ac.uk/sites/default/files/documents/4\\_18.pdf](https://sconul.ac.uk/sites/default/files/documents/4_18.pdf)



# Should someone step in to help?



Image from Flickr Texas A&M University-Commerce Marketing Communications Photography  
14284-educational technology 3535.jpg

**How do we know** they are in trouble? - what information do we have?

Even if we know there is an issue **should an intervention be made?**

**What kind of intervention?** Who, how, where, when....?

Is it ethical to **not** intervene?

# The Guardian



James Murray, whose son took his own life, wants universities to use patterns of data to identify struggling students

Student suicides: the bereaved father who says data could save lives  
Guardian Education 8 October 2018

<https://www.theguardian.com/education/2018/oct/08/student-suicides-the-bereaved-father-who-says-data-could-save-lives>

# The Guardian

The final alarm bell was that Ben was in the midst of the process of withdrawing from university. Yet according to Murray, **nobody at the university had a face-to-face meeting with him.** “There seems to have been a lot of concern about what was going on, but no clear escalation or suggested interventions, including ‘why don’t you go to support services?’” he says.

Student suicides: the bereaved father who says data could save lives

Guardian Education 8 October 2018

<https://www.theguardian.com/education/2018/oct/08/student-suicides-the-bereaved-father-who-says-data-could-save-lives>

# The Guardian

Murray is proposing that universities introduce a system that would automatically **pull together disparate data** – from schools, the student, attendance, assessment and **library** access. Multiple red flags would trigger an early warning alert and **a meeting with a student support professional**.

Student suicides: the bereaved father who says data could save lives

Guardian Education 8 October 2018

<https://www.theguardian.com/education/2018/oct/08/student-suicides-the-bereaved-father-who-says-data-could-save-lives>

# What should libraries do?



## Put your data to work


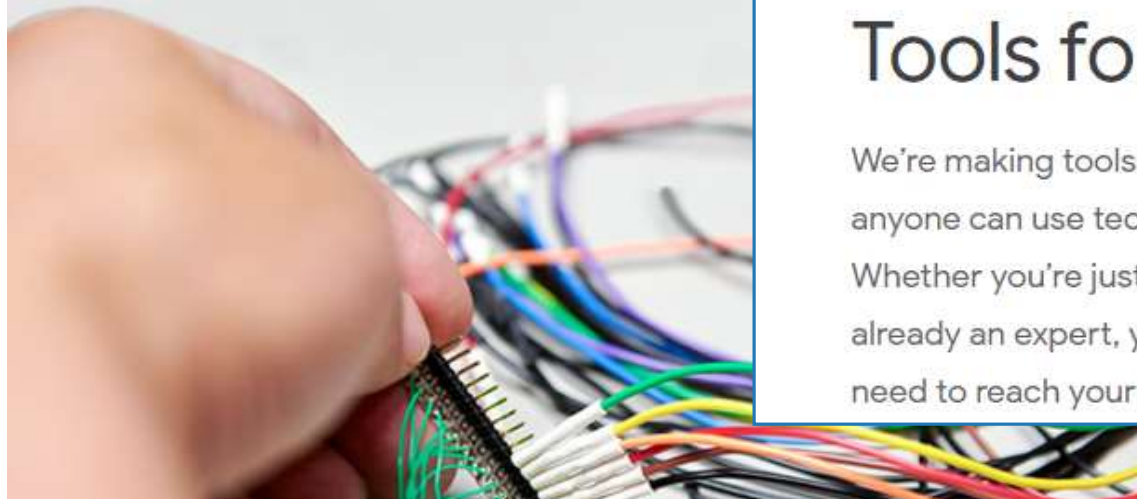
Your university or college already collects a variety of data about students and you can use it to:

- **Transform their learning experience**
- **Support their wellbeing**
- **Help them to achieve more**

Our learning analytics service helps you put your data to work to tackle some of the big strategic challenges. It is the world's first national learning analytics service developed to address the **key strategic goals of HE and FE** organisations.

<https://www.jisc.ac.uk/learning-analytics>

# AI companies want your data



## Start building

We're fostering a collaborative ecosystem with open-source tools, public datasets, and APIs that allow all of us to make the most of machine learning.

[Explore our tools](#)

### TOOLS AND RESOURCES

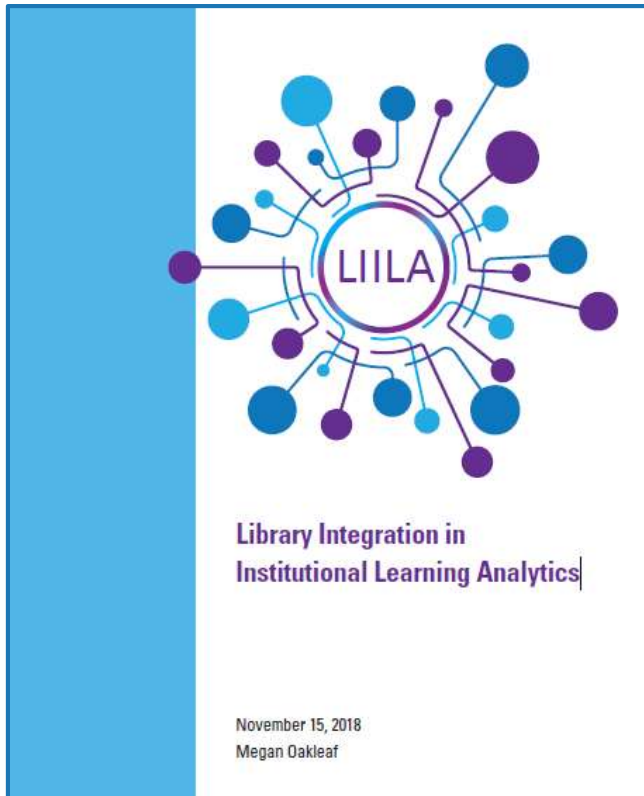
## Tools for everyone

We're making tools and resources available so that anyone can use technology to solve problems. Whether you're just getting started or you're already an expert, you'll find the resources you need to reach your next breakthrough.

<https://ai.google/tools/>



# How to get the library involved in learning analytics



<https://er.educause.edu/-/media/files/library/2018/11/liila.pdf?la=en&hash=4253E6937DF10C850196A30066FF38E6C3B4F32D>

## Next steps

Librarians may choose to:

1. increase awareness and deepen professional discussion on this topic
2. be informed and forthright about current data practices
3. communicate and negotiate with vendor and institutional partners
4. situate learning analytics among other assessment approaches
5. engage the learning analytics conversation at the institutional level
6. identify and analyze questions or problems meriting a learning analytics approach
7. envision library data contributions
8. explore interoperability standards
9. identify key user stories
10. pursue pilot studies



There is **a need for research libraries to act, starting with clarifying AI ethics policies, principles, and practices.**

**There are significant AI ethics initiatives underway in 2019** both globally and nationally. This is a critical and opportune time for research libraries to assess and **actively engage in informing the principles and practices of AI** institutionally, in public policy, and in the research and learning community.

What do Artificial Intelligence (AI) and Ethics of AI Mean in the Context of Research Libraries?  
Mary Lee Kennedy. Research Library Issues, no. 299 (2019): Ethics of Artificial Intelligence  
<https://publications.arl.org/rli299/3>



## What are the OECD Principles



The OECD Principles on Artificial Intelligence promote artificial intelligence (AI) that is innovative and trustworthy and that respects human rights and democratic values..

The OECD AI Principles set standards for AI that are practical and flexible enough to stand the test of time in a rapidly evolving field. They complement existing OECD standards in areas such as privacy, digital security risk management and responsible business conduct.

In June 2019, the G20 adopted human-centred AI Principles that draw from the OECD AI Principles.

<https://www.oecd.org/gov/digital/ai/principles/>

# Libraries can be exemplars of good practice

Certain personal data are often required in order for digital systems to deliver information, particularly subscribed content. Additionally, user activity data can provide useful insights on how to improve collections and services. However, **the gathering, storage, and use of these data must respect the trust users place in libraries and their partners.** There are ways to address these operational needs while also respecting the rights and expectations of privacy



Libraries can be the 'good guys' in terms of data and AI

## NISO Consensus Principles on User's Digital Privacy in Library, Publisher, and Software-Provider Systems (NISO Privacy Principles)

Published on December 10, 2015

<https://www.niso.org/publications/privacy-principles>

www.kenchadconsulting.com



# Libraries make the world better - make yours more effective

**Change, innovation and strategy**....library services platforms, digital content, ebooks, library support for teaching, learning and research, research data, reading list systems, open source, open access, open data, the cloud, innovation, new business models

[Read More](#)

An extended version of this presentation is available at <http://www.kenchadconsulting.com/conferences/>

# AI-the role and opportunity for libraries

## Internet Librarian

### London October 2019

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