

Engage, Empower, Educate

Tackling the Challenges of AI @ SMU Libraries

Shameem Nilofar , University Librarian



About Singapore Management University (SMU)

“ A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with meaningful impact and produce broad-based, creative and entrepreneurial leaders who will thrive in the global economy. ”

Schools & Colleges:

- **School of Accountancy**
- **Lee Kong Chian School of Business**
- **School of Economics**
- **School of Computing and Information Systems**
- **Yong Pung How School of Law**
- **School of Social Sciences**
- **College of Integrative Studies**
- **College of Graduate Research Studies**

2006

2017

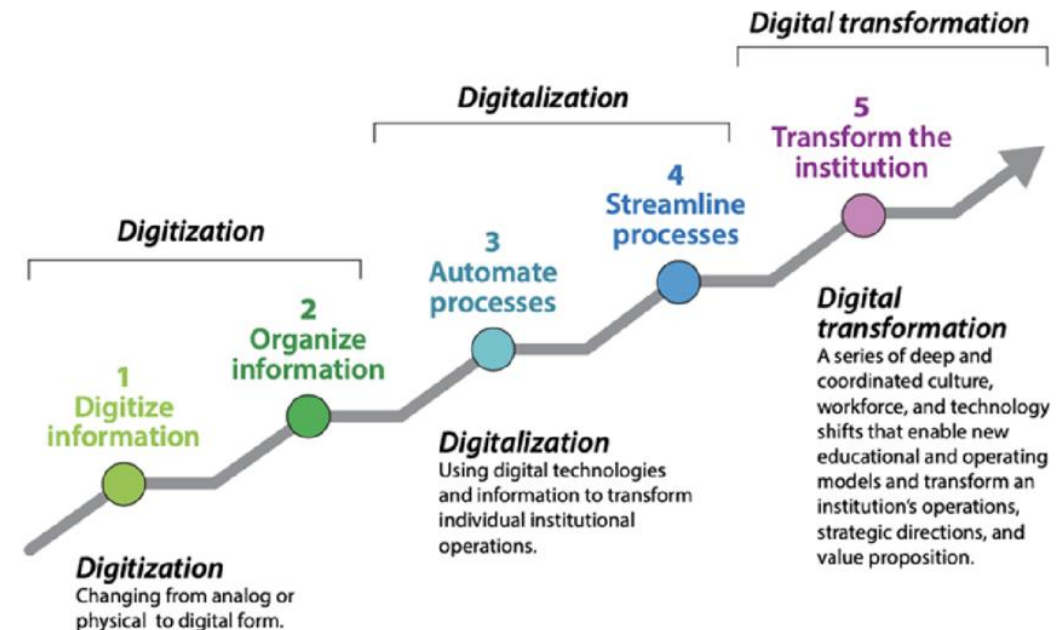


Our Pathway to Digital Transformation

Digitization	Digitalization	Digital Transformation
Transforming non-digital content into a form computers can process	Transforming human-based and document-bound processes into systems that can be computer-operated	Changing business practices and strategies to leverage digital efficiencies
"Digital-first documents and content"	"Digital-first processes and systems"	"Digital-first organizations"
Goal: Take paper and other non-computer understandable documents and transform them into a format that computers can process	Goal: Extract more value from existing digital-format information with additional processing, while also transforming human-based processes into computer-operated ones	Goal: Change the way the business operates by taking advantage of digital-first processes and information to achieve significant efficiencies and enhanced value through operational change
"Digitize these documents" Aka "Digital capture"	"Digitalize these processes"	"Digitally transform this business"

Source: Cognilytica

Digitization vs. Digitalization vs. Digital Transformation COGNILYTICA

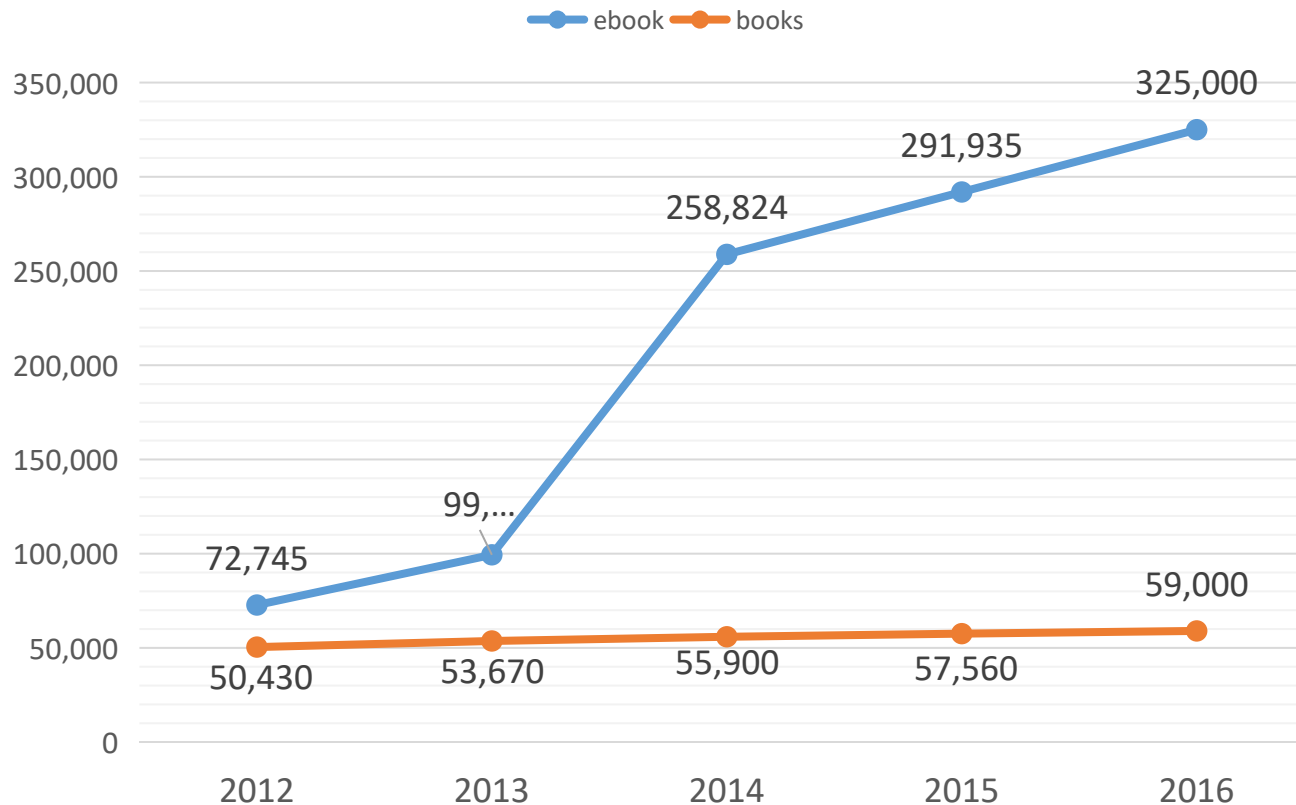


<https://www.forbes.com/sites/cognitiveworld/2020/06/23/ai-runs-into-the-document-and-people-barrier-digitization-and-digitalization/?sh=1f8d2c325794>

Katuu, Shadrack. (2022). Management of public sector records in the digital age. 10.13140/RG.2.2.25539.48163.

Collections (2012 - 2016)

How Many Books Added



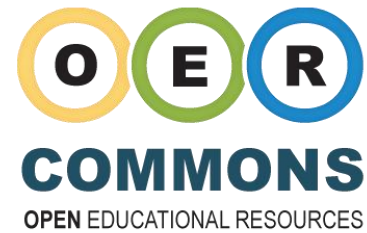
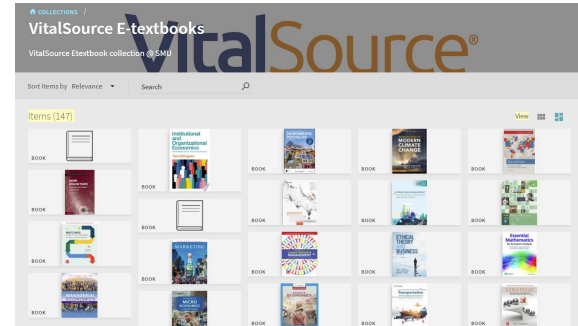
Collections (2024)

- Over 830,000 books (Over 766,000 e-books)
- 127,000+ electronic journals
- 188 electronic databases
- Access to 54,000+ titles of streaming media
- >8 million downloads from InK
- Print and electronic magazines and newspapers in lifestyle collection

Discover research from **SMU Research Data Repository (RDR)**

193,545 views | 81,093 downloads | [more stats...](#)

ALL CATEGORIES GROUPS SEARCH 



SMU
SINGAPORE MANAGEMENT
UNIVERSITY Libraries

SMU Libraries / Research Guides / A-Z Databases

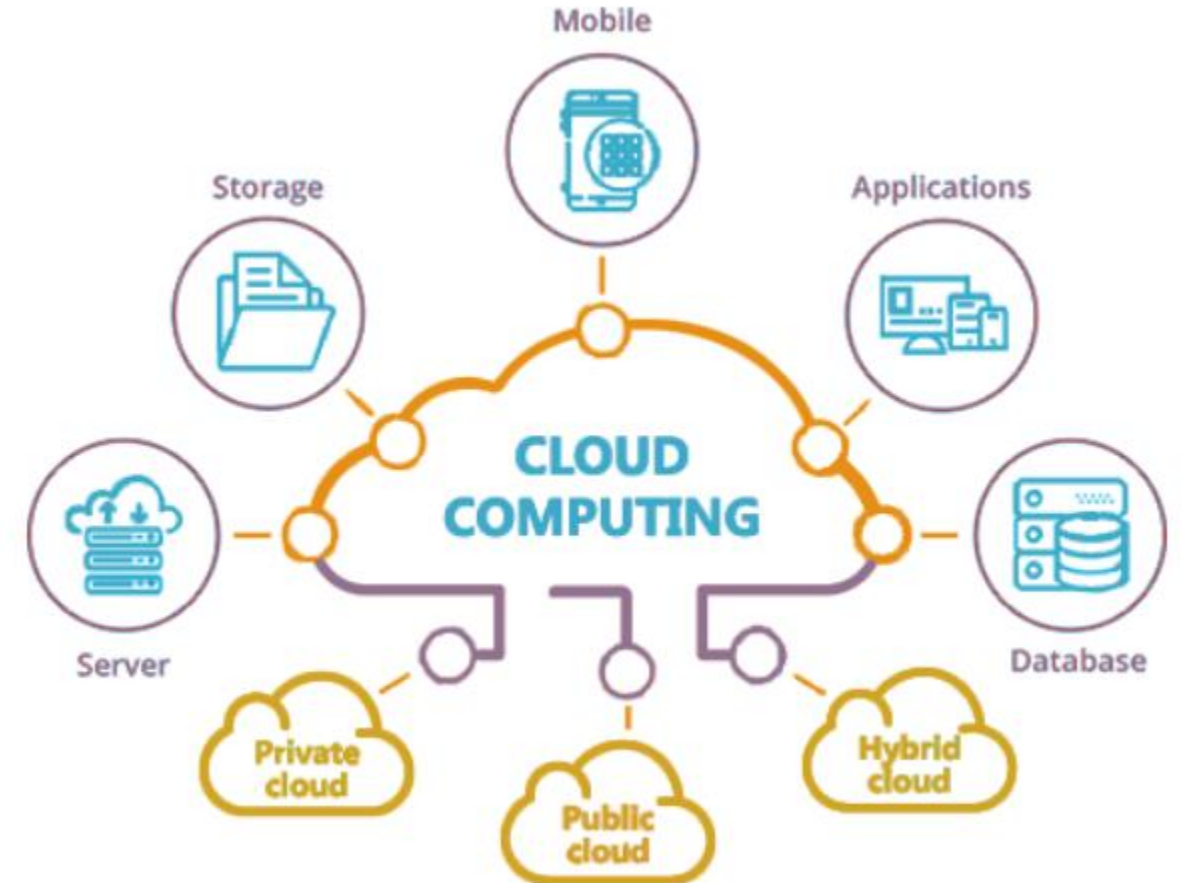
A-Z Databases

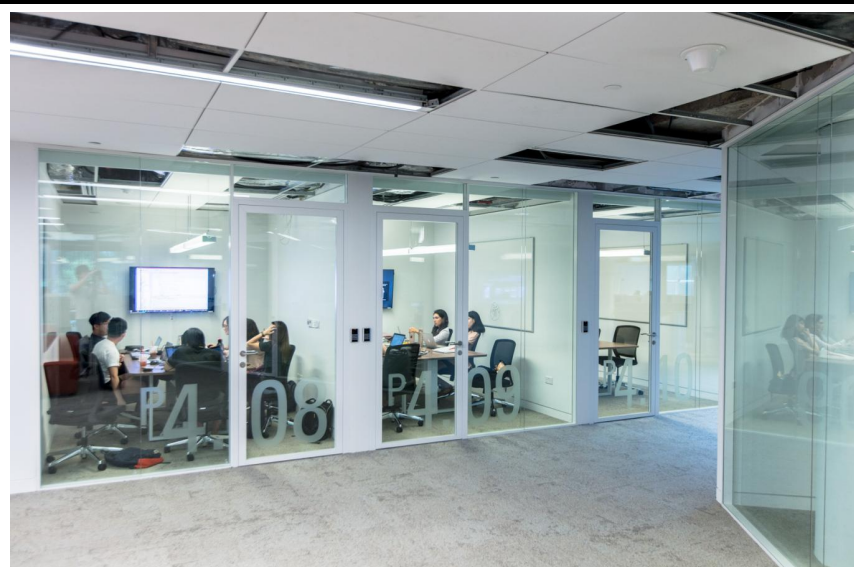
Find the best library databases for your research.

190 Databases found

[All](#) [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) <#>

Resources and Infrastructure









THE WORLD
ACADEMIC
SUMMIT

1 September 2020
14:20 – 15:20
COLLABORATION STAGE

**Helping universities learn,
change and grow with digital transformation**

Many Universities are using digital transformation to change their processes and operations to support new models for services and education that will transform the value proposition and the strategic direction of their University.

A Service Delivery Transformation Enabled by Digital Transformation

National Artificial Intelligence Strategy 2.0 (First iteration in 2019)



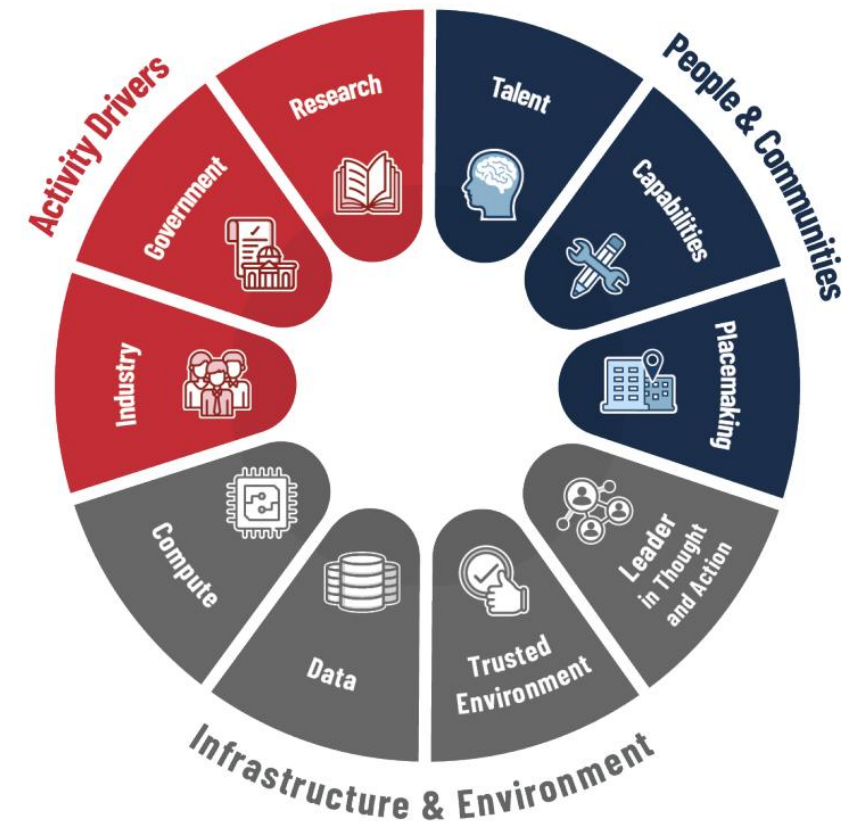
From Opportunity to Necessity. People “must know” AI, not just see it as a “good to have”. We need both technical experts and savvy users to maximise AI’s potential for Singapore.



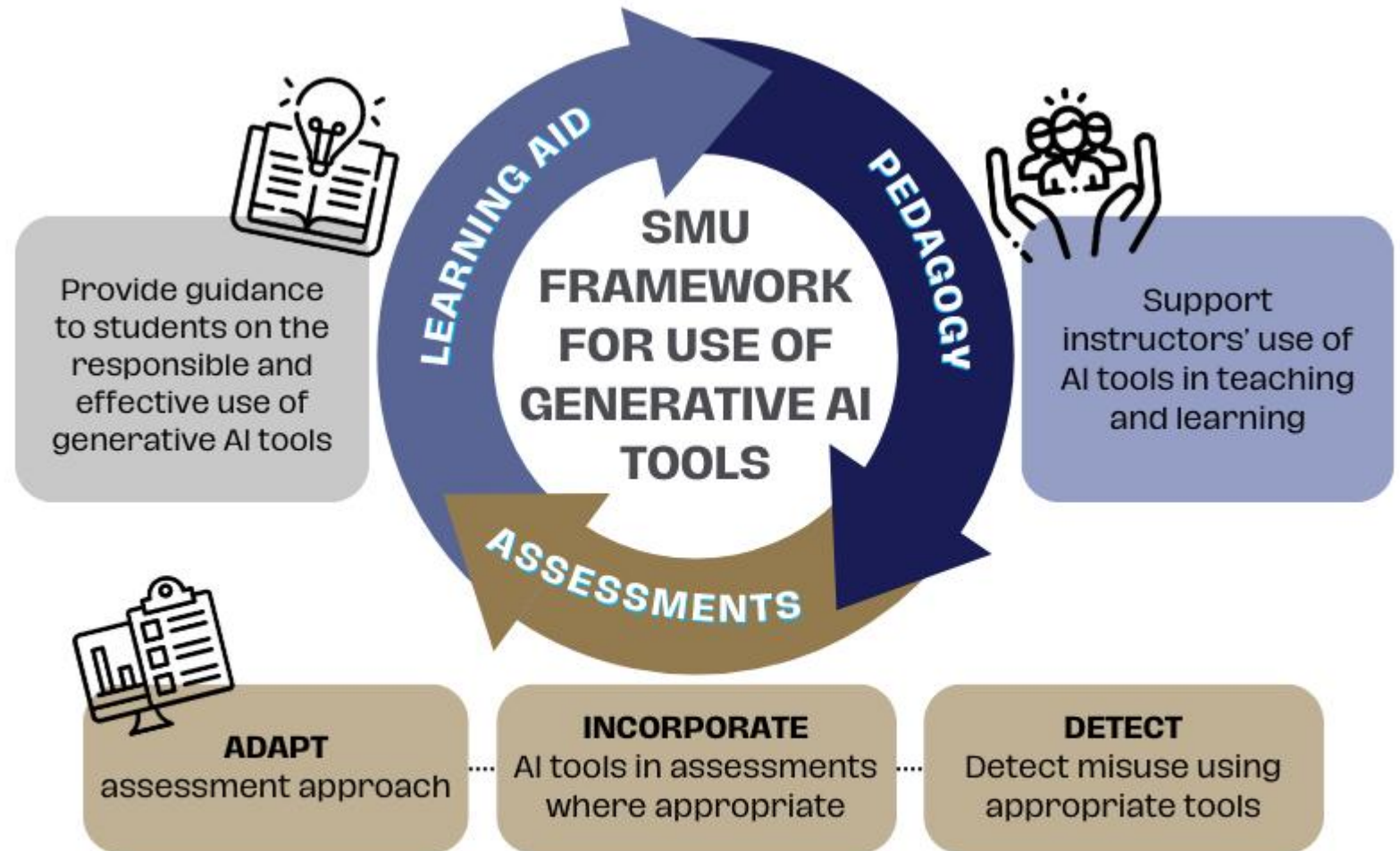
From Local to Global. Our people and businesses should operate with the ambition to be world-leading in AI. Singapore should be well-connected to global innovation networks, working with the best to overcome complex challenges surrounding AI today (e.g. energy, data, and ethics). Singapore must contribute to AI breakthroughs and products that the world values.



From Projects to Systems. For AI to have widespread and positive impact on our economy and society, Singapore has to move beyond flagship National AI Projects. We will take a systems approach, bringing together stakeholders within and outside Singapore to add to our resources, capabilities, and infrastructure, accelerate the exchange of ideas, and administer AI-enabled solutions at scale.



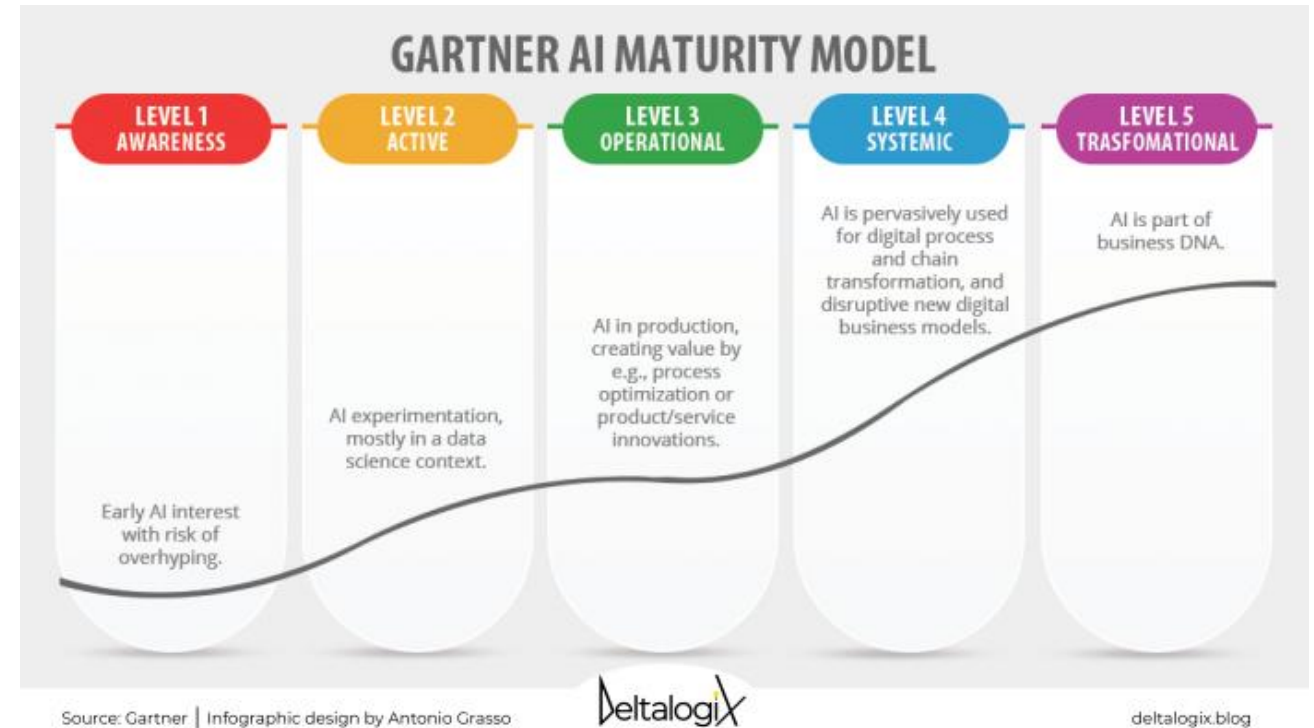
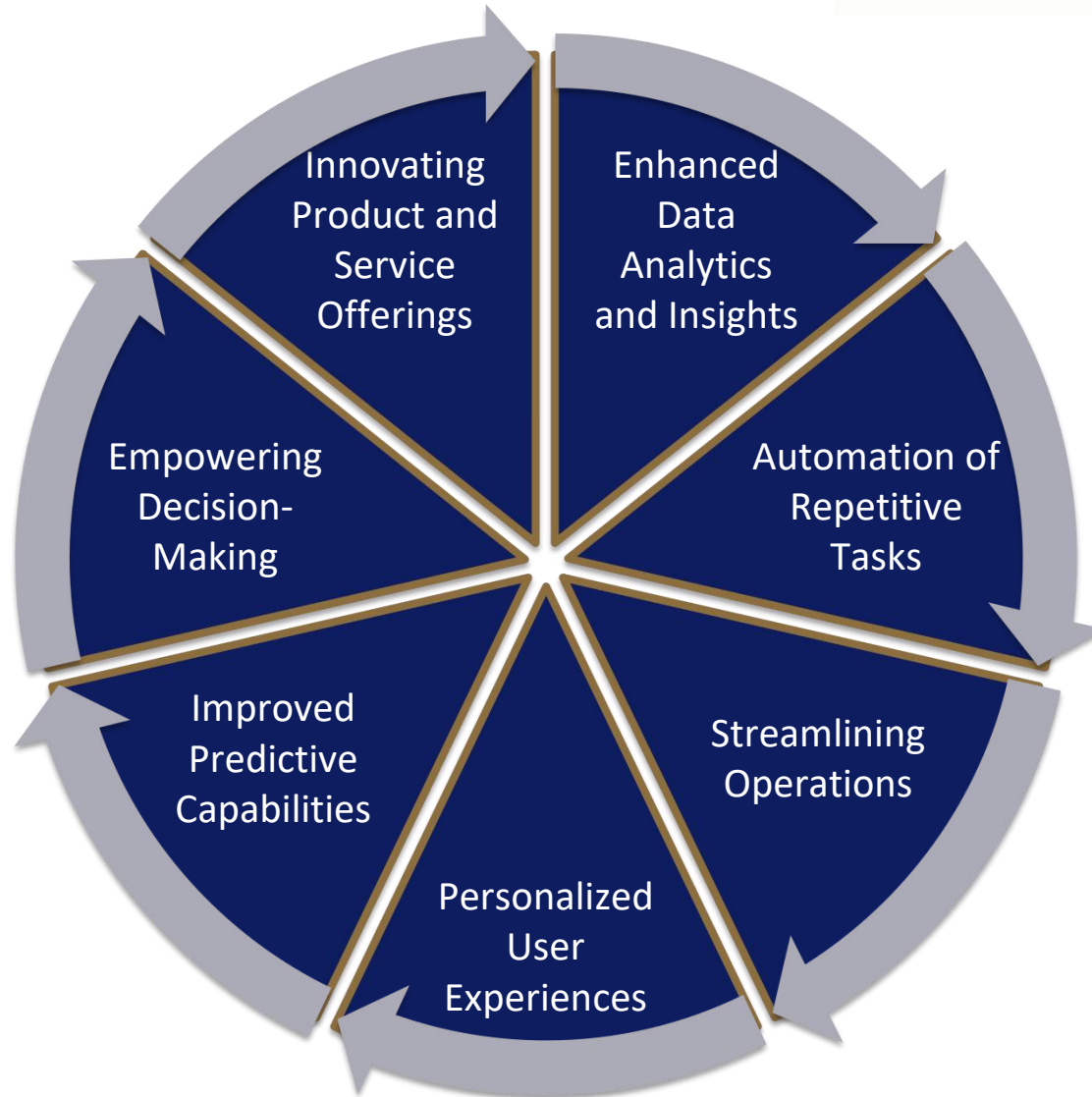
Framework for the use of AI in education



SMU's position

The University recognises the benefits of generative AI tools and is committed to integrating generative AI tools into education, while safeguarding academic integrity and rigour. At the same time, the University aims to teach students to use these tools responsibly and effectively.

The AI Disruption



Generative AI will change your Business and Service Models. Here is the SMU Libraries way in learning to adapt and thrive in this environment.

Innovation and ambidexterity

From the Literature

Foster innovation outside the core	Secure innovation without interrupting the core business by creating new divisions, partnering with start-ups or partners
Product innovation days	Organize product innovation days, hackathons, competitions or brainstorming sessions to generate ideas
Partner with research institutions	Partner with research institutions to share knowledge and innovation
Invest in a mix of technologies	Invest in a mix of technology projects to explore emerging technologies and possibilities

Table 4.
Best practices for innovation and ambidexterity

Business structure

Horizontal structure	Reduce the vertical flow of information and authority
Cross-functional teams	Organize work in cross-functional teams with the required authority to manage projects and products in an agile way
DT subsidiaries or divisions	To lead the DT, a dedicated subsidiary or division can be created within the company with the necessary skills, authority and top management support
Continuously realigned	The business structure must be continuously realigned with the new technologies and the IT infrastructure

Table 5.
Best practices for a modern organizational structure

SMU Libraries Engagement, Empowerment & Education Strategy



Fostering Innovation in new areas with a “Proof-of-concept” approach (Risk Vs. Benefits Approach)




Creating the “Right” Organizational Fit





ResearchRadar - Keeping track of the latest and freshest information for researchers

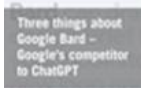


Scite assistant – academic search engine enhanced with ChatGPT

By Aaron Tay, Lead Data Services

Last month, I [reviewed Elicit's Elicit.org](#), one of the new academic search engines that leverages the power of state of art Large Language Models(LLM) to improve search. I follow up with Scite assistant, yet another academic search that combines academic search with ChatGPT. One of the main advantages of Scite assistant over Elicit.org is that it draws on its own database which includes both open access as well as some paywalled content.

[Learn more →](#)

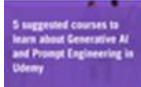


Three things about Google Bard

By Aaron Tay, Lead Data Services

The popularity of ChatGPT and GPT models is widely believed to be a threat to Google. Google has responded in various ways, including with the launch of [Google Bard](#), their answer to ChatGPT and Bing Chat. Available now in Singapore, I provide a preliminary review of how it stacks up against its rivals.

[Learn more →](#)



5 suggested courses to learn about Generative AI and Prompt Engineering in Udemy

By Aaron Tay, Lead Data Services

Curious or worried about the generative AI trend. Here are 5 Udemy courses suitable for varying levels of expertise

[Learn more →](#)

Communicating your research with Visual Abstracts

SMU Libraries' new literature and systematic review support pilot service

Transcribe your interview and focus groups recordings for free with Whisper.

Quarto: A multi-purpose tool for research documentation and dissemination


Investment & Data Studio: Research Software available

Available offsite



NVIVO




ProQuest

TDM Studio


Log In


Create Account


TDM Studio

Text and data mining solution

- Access a wealth of content across disciplines including newspapers, dissertations and theses, journals, and primary sources.
- Support both teaching and research with a Python and R Jupyter coding interface as well as pre-configured visualizations.


Workbench Dashboard
Find content and write code to analyze


Visualization Dashboard
Find content and use data visualizations to analyze without coding




Introductory R for Social Science

SMU Libraries and the School of Social Sciences are organising a series of in-person workshops to introduce R, a free software that can be used for statistical research, for use in the context of social science. Students who are interested to use R to run research or are enrolled in any of the following social science courses are encouraged to attend these workshops. Students who have some experience using R may also like to attend the workshops to refresh their knowledge. Social Science courses that use R as a statistical tool:

- Research Methods in Sociology and Political Science
- Psychology Research Methods I
- Psychology Research Methods II

The workshop comprises four 90-minute long sessions. Students should only register if they are able to attend all 4 sessions. Please note that the workshops are not compulsory and non-credit bearing. Workshop materials will be sent to successful registrants closer to the date.



18 AUG, 25 AUG, 1 SEP,
8 SEP 2023
FRIDAY
3.30PM - 5.00PM



SOSSCIS Building,
Level 3,
Classroom 3.2

WORKSHOP CONTENTS

1 Introduction to R

- Use R studio to create and organize their R code files.
- Identify syntax, operators, and the different data types in R.
- Explain variables assignment in R.
- Import data from other sources to RStudio

2 Data Cleaning in R

- Outline the different quantitative data types and data distributions.
- Conduct basic data cleaning, such as removing duplicates and outliers, dummy coding, etc.
- Calculate summary statistics in R.

3 Basic Stats in R



- Chi-square test of independence
- Correlation
- t-tests
- ANOVA


4 More Stats in R

- Perform regression analysis in R.
- Use the relevant R packages and Zotero to generate citations for R packages they used.
- List at least 3 recommended coding style guidelines

Register here by 7 Aug 2023

This event is jointly organised by:



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Content – All UG sessions

- 4 Sessions of 90 minutes each
- Teaching Assistant(s): ✨ Danping, Mui Yen, Aaron ✨
- Collaborative Google Docs for after-class notes
- Contents:
 - Session 1: R Basics
 - Session 2: Data cleaning basics, Data visualization
 - Session 3: T-Tests, Correlation, ANOVA, Chi-Square
 - Session 4: Linear & Logistic Regression, Software Citation

- Teaching Assistant: PG SA (MQF Student with stats background)
- Collaborative Google Docs for after-class notes
- Contents:
 - Session 1: R Basics
 - Session 2: Data cleaning basics, Data visualization
 - Session 3: T-Tests, Correlation, ANOVA, Chi-Square
 - Session 4: Linear & Logistic Regression with continuous and categorical IV, Regression table for reporting, Internal Consistency (cronbach's alpha), Software Citation
- Each session comes with multiple-choice quiz (4 questions each)
 - quiz score will be considered for their attendance marking

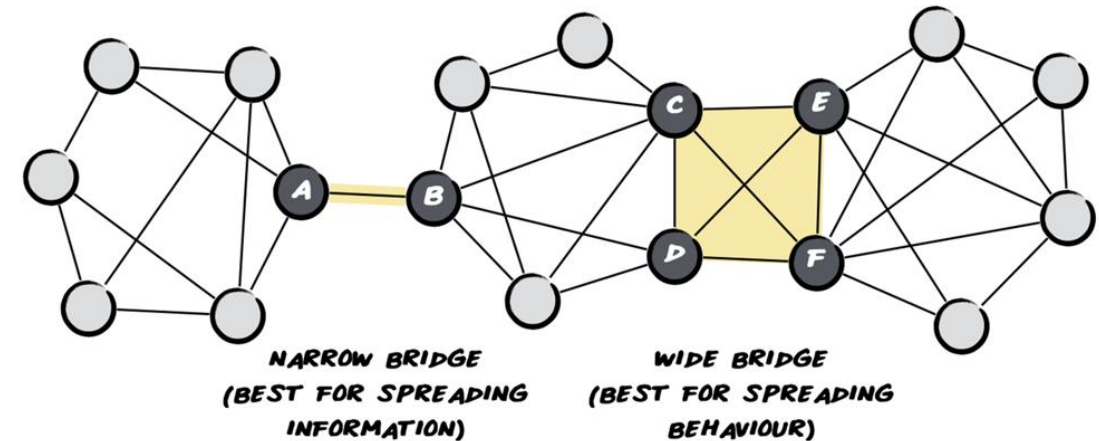


A Digital Learning Object created in partnership with Internal & External Collaborators

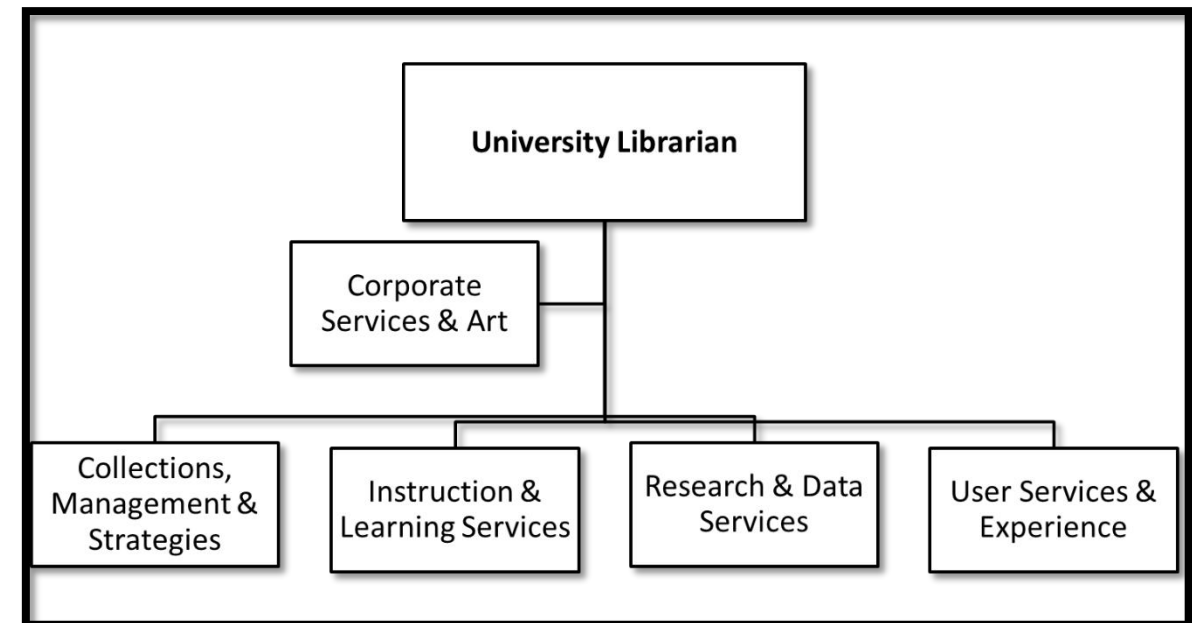
Finding the “Right” Fit For Purpose

Response	5-6	3-4	1-2
The library serves as a starting point or "gateway" for locating information for my research	69.70%	24.24%	6.06%
The library pays for resources I need, from academic journals to books to electronic databases	90.00%	9.00%	1.00%
The library serves as a repository of resources – in other words, it archives, preserves, and keeps track of resources	69.70%	25.25%	5.05%
The library supports and facilitates my teaching activities	73.00%	24.00%	3.00%
The library provides active support that helps to increase my productivity in research and scholarship	72.00%	24.00%	4.00%
The library helps undergraduates develop research, critical analysis, and information literacy skills	72.00%	25.00%	3.00%
The library supports graduate students in conducting research, managing data, and publishing scholarship	79.00%	18.00%	3.00%
The library provides access to technology resources that support student learning	81.00%	13.00%	6.00%
The library provides an informal academic environment and space that supports student learning	76.00%	20.00%	4.00%

Based on Ithaka S+R Survey administered to SMU Faculty in 2022



Credit : “Change – How to make Big Things Happen” by Damen Centola, based on Mark Granovetter’s pioneering work in the 1970’s.



Key Learning Points – Risks to Mitigate



- No visible Crisis
- A culture that avoids confrontation
- Lack of trust/team building and buy-in
- Under-communicating or mixed messages
- Unaligned system or structures that block action
- Disempowered without the right skillset
- Leadership lacking the skills to orchestrate the changes
- Allowing old habits and/or culture to rear its head again

Thank You

