# ETHICS, INTEGRITY, AND POLICY CONCERNS IN USING AI TECHNOLOGIES IN SCHOLARLY WORKS

By

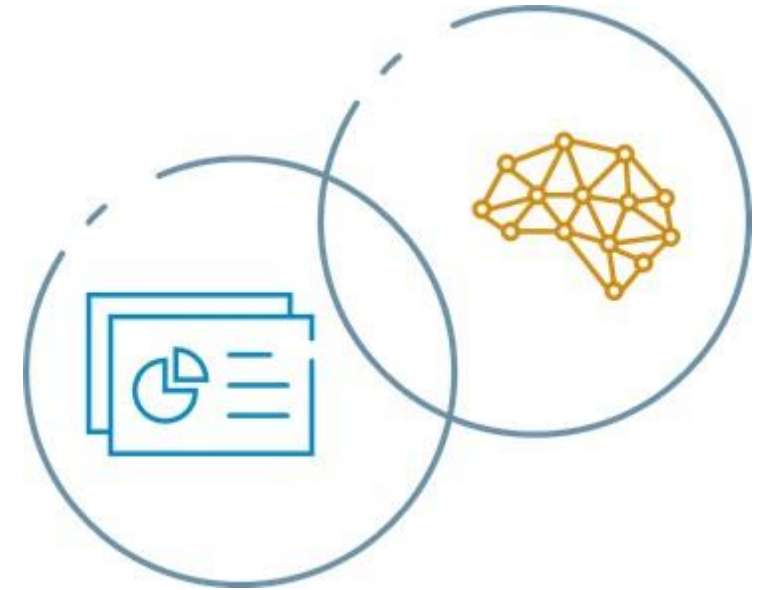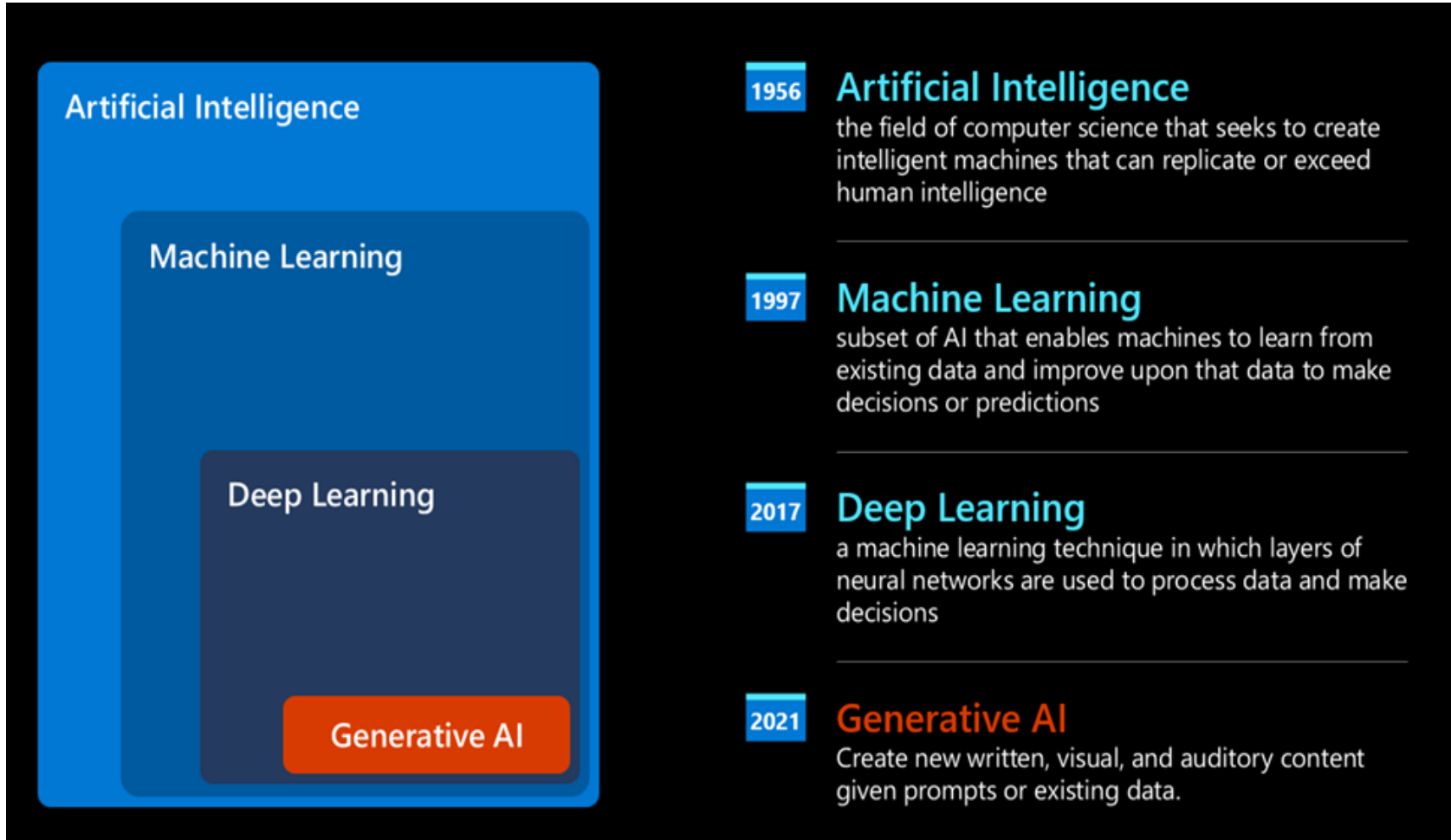**Dhirendra Kumar Padhan**
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INTRODUCTION

- The field of education is being completely revolutionized by Artificial Intelligence (AI), which presents new opportunities to improve evaluation, personalize instruction, increase access, and promote equity.

- The announcement of ChatGPT Open AI in 2022, has compelled the academia to debate, research and study the Artificial Intelligence uses in the scholarly work.

- Speed and accuracy have always been two major tenants of any kind of writing technology.

- Intellectual writing has come across from the early stand-alone word processor devices to today's Microsoft Word software and google docs online, from the personal computer keyboard to the ipad touchscreen, to Artificial intelligence enabled (AI) assistive technologies.

- The present study put forth the concern of academic integrity, advantages and disadvantages of AI enabled technologies in scholarly writing and explore the policy status of Higher Educational Institutions (HEIs) with regards to uses of AI tools.
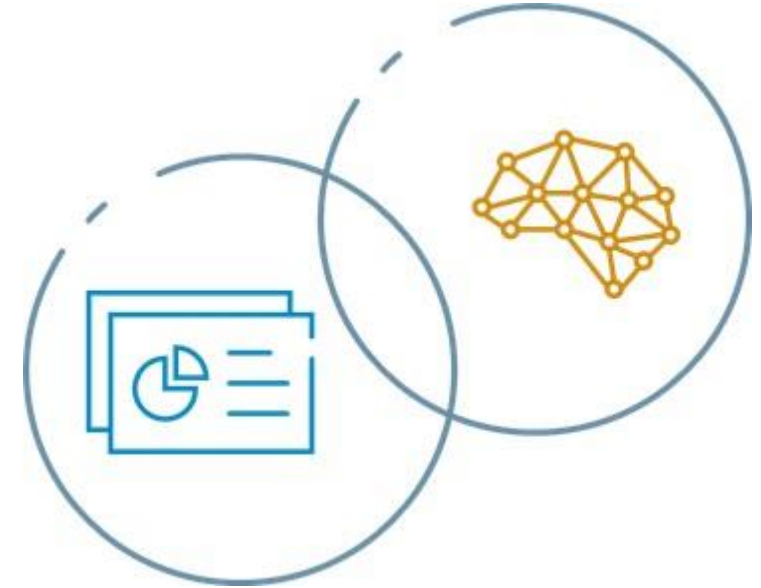
CHRONOLOGY OF ARTIFICIAL INTELLIGENCE

ARTIFICIAL INTELLIGENCE(AI) V/S GENERATIVE AI

| Traditional AI	Generative AI
Often called Weak or Narrow AI	**NextGen AI** (sometimes known as Strong AI or Creative AI)
Concentrates on carrying out an identified activity in an intelligent way	A subset of AI capable of generating something new.
Capable of learning from data and using that data to inform judgements or forecasts.	Using the piece of information, you gave it, the AI produces something new.
The main functions of traditional AI systems are data analysis and prediction.	However, Generative AI goes one step further by producing fresh data that is comparable to its training set.
Pattern recognition is a strong feature for traditional AI.	While creating patterns is where generative AI shines.
Conventional AI is able to interpret data and report on its observations.	However, the same data can be used by Generative AI to produce completely new stuff.
In task-specific applications, traditional AI still performs admirably. Predictive analytics, recommendation engines, chatbots, and many more applications are powered by it.	Wide-ranging generative AI implications open up new possibilities for creativity and innovation. In the field of design, Generative AI can help shorten the ideation process by producing a large number of prototypes in a matter of minutes.
Example: Alexa, recommendation engines on Netflix or Amazon, or Google's search algorithm.	Example: ChatGPT, Google Gemini, and DALL-E OpenAI
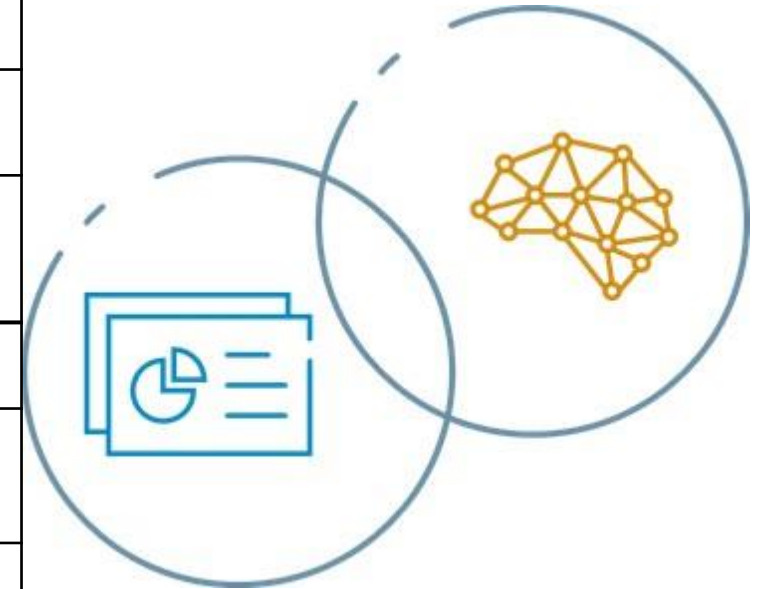
AI IN EDUCATION AND LEARNING
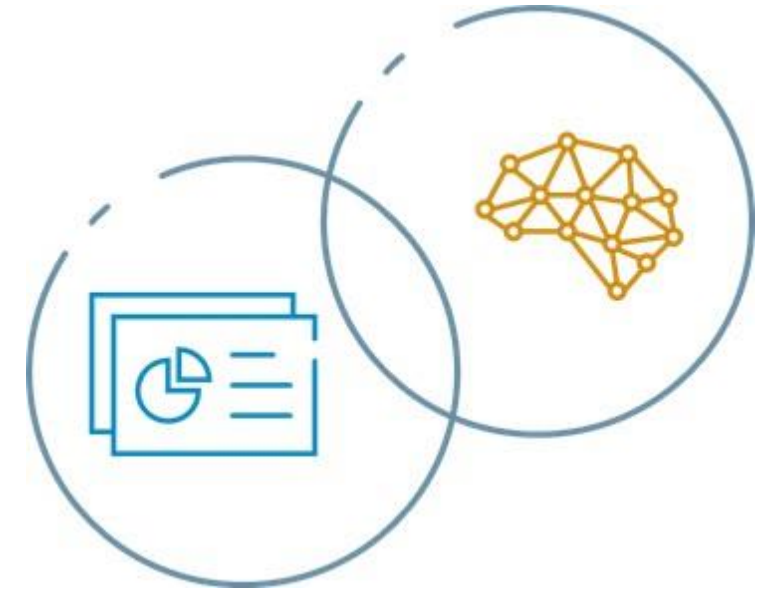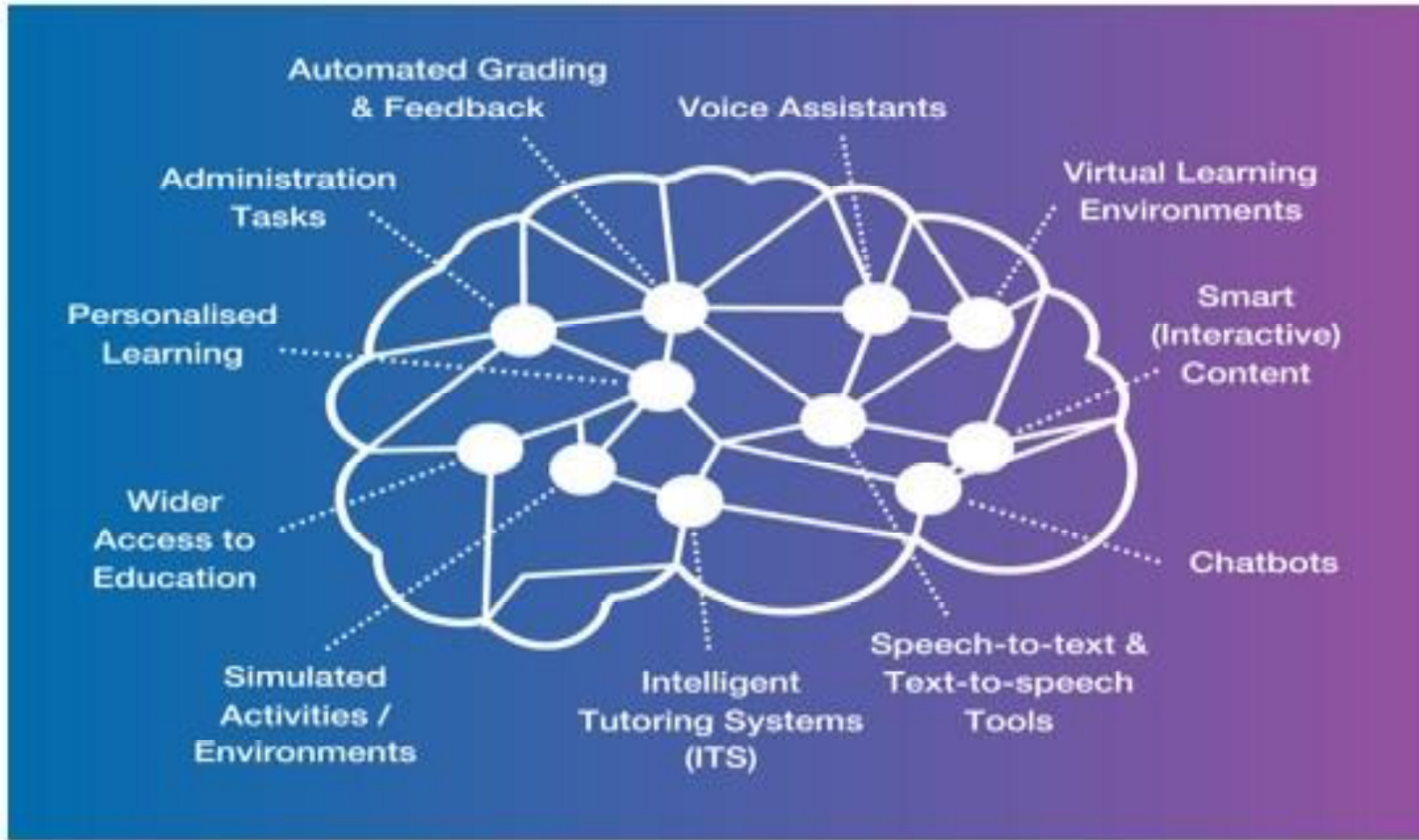
AI TOOLS FOR SCHOLARLY WRITINGS

Literature Search

- Research rabbit
- Chatpdf
- Semantic Scholar
- IRIS. AI
- SCISPACE

Grammar and Paraphrasing

- Grammarly
- Quillbot
- Paperpal
- Scribber
- Wordtune

Writing Assistants

- Google Gemini
- Copy Ai
- Contentbot
- Jasper
- Rytr

Citations

- SCITE
- JABREF
- JENNI
- Zotero
- Endnote

Illustrations

- Midjourney
- Dall-e 2
- Canava
- Deep Dream Generator
- Adobe Firefly

ACADEMIC WRITING IN THE AGE OF ARTIFICIAL INTELLIGENCE

Image Source: https://edintegrity.biomedcentral.com/articles/10.1007/s40979-023-00144-1/figures/1

ADVANTAGES AND DISADVANTAGES OF AI ENABLED TECHNOLOGIES IN ACADEMIC WRITINGS:

Advantages

- Efficiency
- Data Analysis
- Language Assistance
- Content Generation
- Research Discovery
- Collaboration
- Accessibility
- Personalization
- Quality control
- Cross-disciplinary Insights

Disadvantages

- Bias and Ethics
- Over Reliance
- Technical Challenges
- Cost and Access
- Algorithm Opacity
- Legal and Copyright Issues
- Loss of Human Touch
- Validation and Verification
- Resistance to change
- Quality concerns
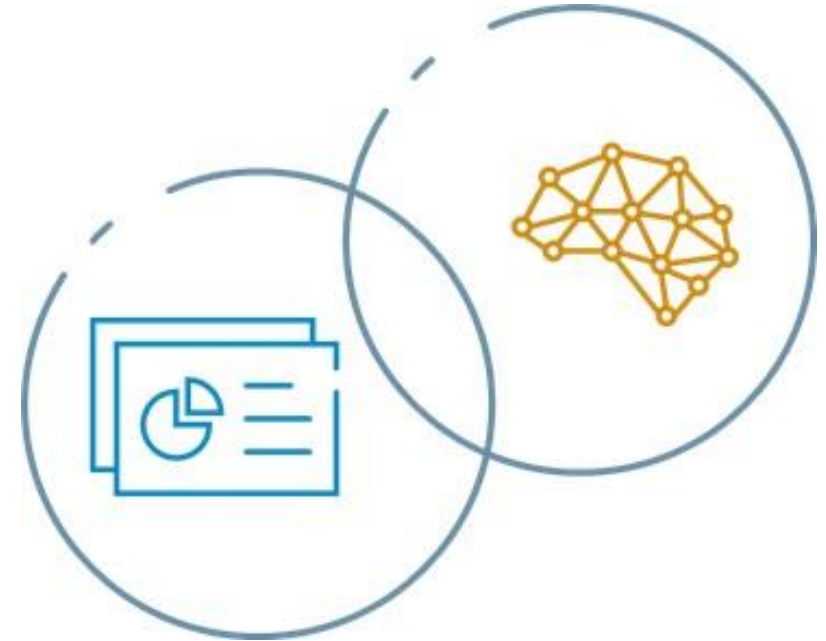
CONCERNS IN GENERATIVE AI

1. Accuracy

2. Bias

3. Privacy

4. Intellectual Property

AI POLICY STATUS IN QS RANKED HEIs

AI policy on websites of top 30 QS Ranked world HEIs

AI POLICY STATUS IN QS RANKED HEIs

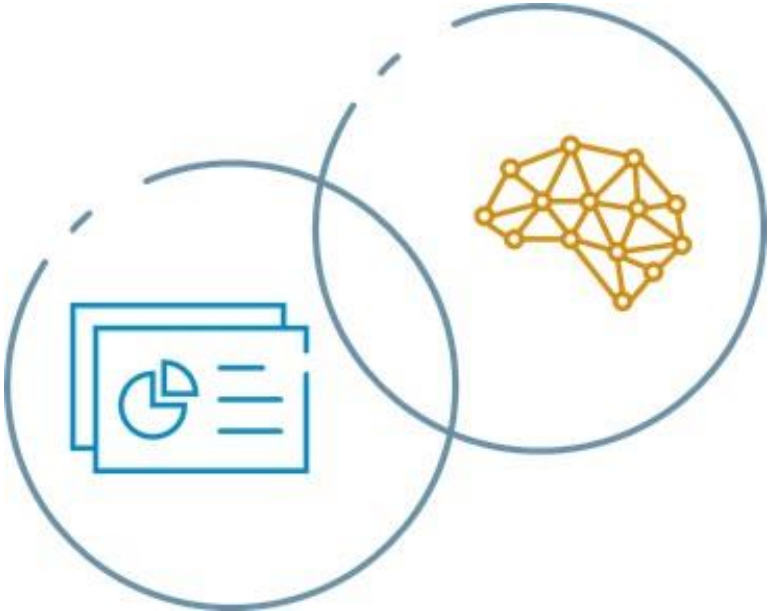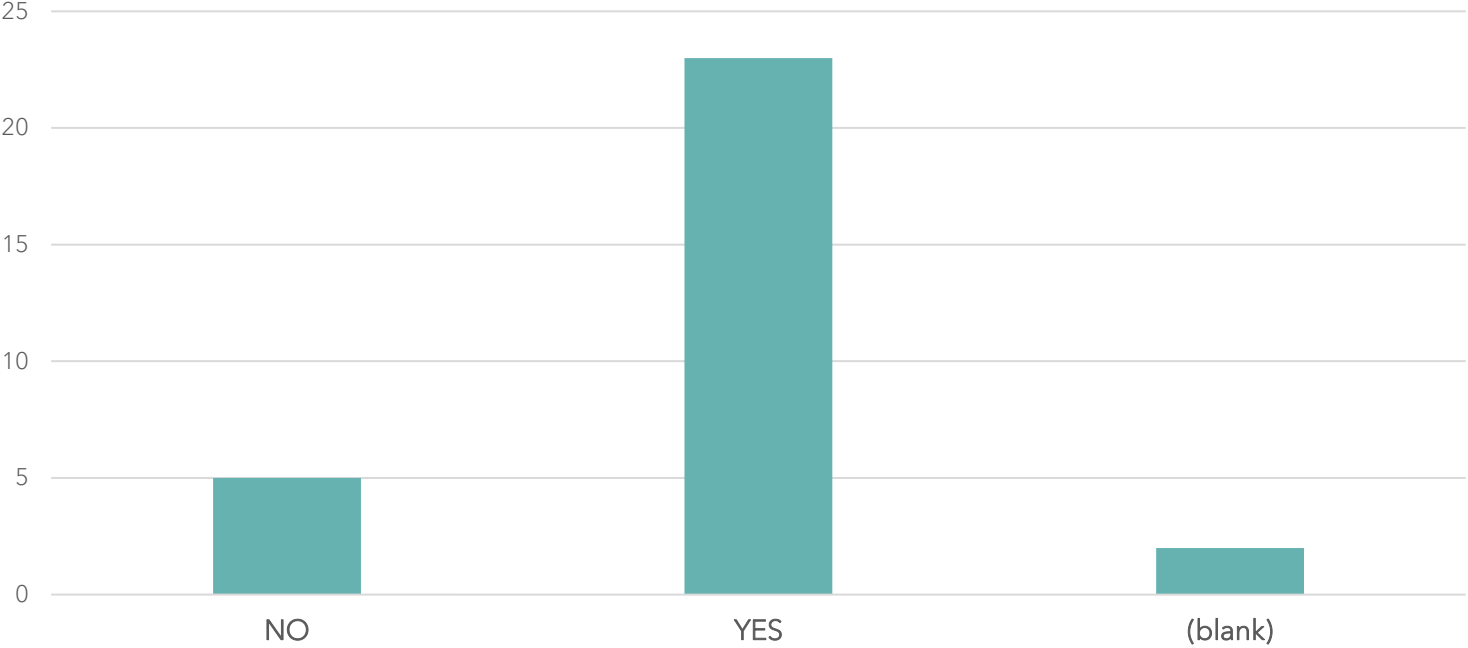| SN	Name of the Ins.	AI policy availability	Name of the policy	Guidance Available	Date of policy update
1	MIT, US	NO			
2	Cambridge Unv., UK	YES	Artificial Intelligence, assessment integrity, and implications for education	YES	27.4.2024
3	Unv. Of Oxford, UK	YES	New guidance for safely using Artificial Intelligence	YES	27.11.2023
4	Harvard University, US	YES	Guidelines for Using ChatGPT and other Generative AI tools at Harvard	YES	
5	Stanford University, US	YES	Generative AI Policy Guidance	YES	16.2.2023
6	Imperial College London, UK	YES	AI & Education Guidance Hub	YES	21.3.2024
7	ETH Zurich, Switzerland	YES	The ETH Guidelines on Science-Policy Engagement		1.2.2024
8	National University of Singapore (NUS), Singapore	YES	A General Message to Our Students on the Use of AI Tools	YES	
9	UCL Bloomsbury, UK	YES	Engaging with AI in your education and assessment	YES	
10	University of California, Berkeley (UCB), US	NO			
11	University of Chicago, US	YES	Generative Artificial Intelligence (AI) Guidance	YES	
12	University of Pennsylvania, US		Statement on Guidance for the University of Pennsylvania Community on Use of Generative Artificial Intelligence	YES	
13	Cornell University, US	YES	Cornell's AI Strategy	YES	
14	The University of Melbourne, Australia	YES	University policy and actions		
15	California Institute of Technology (Caltech), US	YES	Ethical Use of AI: Guidelines for Fall 2024 Applicants	YES	1.1.2024
16	Yale University, US	YES	Guidelines for the Use of Generative AI Tools	YES	20.9.2023
17	Peking University, China				
18	Princeton University, US	YES	Guidance on AI/ChatGPT	YES	25.1.2023
19	The University of New South Wales (UNSW Sydney), Australia	YES	Chat GPT & Generative AI at UNSW	YES	7.6.2023
20	University of Sydney, Australia	YES	Academic policy updates in 2023		2023
21	University of Toronto, Canada	YES	Use artificial intelligence intelligently	YES	2023
22	Unv. Of Edinburgh, UK	YES	AI Guidance for Staff and Students	YES	
23	Columbia University, US	YES	Generative AI Policy	YES	
24	Université PSL, France	NO			
25	Tsinghua University, China	NO			
26	Nanyang Technological University, Singapore (NTU Singapore), Singapore	NO			
27	The University of HongKong, Hongkong	YES	Policy on Use of Generative Artificial Intelligence for Teaching and Learning	YES	4.10.2023
28	Johns Hopkins University, US	YES	Johns Hopkins University AI policy	YES	
29	The University of Tokyo, Japan	YES	Guidelines for Instructors Regarding AI in University Education at Tokyo University of Foreign Studies	YES	23.3.2023
30	University of California, Los Angeles (UCLA), US	YES	GUIDANCE FOR THE USE OF GENERATIVE AI	YES	3.3.2023

AI POLICY IN HEIs OF INDIA

	Name of the Institution	City	AI Initiative	Date of Initiation
1	Indian Institute of Science, Bengaluru	Bengaluru	Emerging AI Tools for Education and Research: Perspective and Policies for IISc	January, 2024
2	Indian Institute of Technology Madras	Chennai	Centre for Responsible AI (CeRAI)	May, 2023
3	Indian Institute of Technology Kanpur	Kanpur	Certificate Course in AI, ML and Deep Learning	2024
4	Indian Institute of Technology Hyderabad	Hyderabad	Dept. of Artificial Intelligence	2019
5	S.R.M. Institute of Science and Technology	Chennai	Centre for AI	NA
6	Aligarh Muslim University	Aligarh	Interdisciplinary Centre for Artificial Intelligence	2019
7	Birla Institute of Technology and Science, Pilani	Pilani	PG programme in Artiificial Intelligence	
8	University of Hyderabad	Hyderabad	M Tech in AI	NA
9	National Institute of Technology Rourkela	Rourkela	B Tech in AI	NA
10	National Institute of Technology Tiruchirappalli	Tiruchirappalli	Artificial Intelligence Research Laboratory	2018
11	Indian Institute of Technology Gandhinagar	Gandhinagar	B Tech in AI	NA
12	Amrita Vishwa Vidyapeetham	Coimbatore	B Tech and M Tech in AI	NA
13	National Institute of Technology Karnataka, Surathkal	Surathkal	B Tech in AI	2021-22
14	Indian Institute of Technology Ropar	Rupnagar	B Tech in AI	NA
15	Kalinga Institute of Industrial Technology	Bhubaneswar	KIIT's students AI society	NA
16	Amity University	Gautam Budh Nagar	Amity centre for Artificial Intelligence	NA
17	Bharathidasan University	Tiruchirappalli	B Sc in AI and ML	NA
18	Ashoka University	Sonipat	Compendium on Artificial Intelligence (AI): A Collection of Policy Briefs on AI	2021
19	Delhi School of Artiificial Intelligence	Delhi	AI for Bharat	

CONCLUSION

➢ The whole world is looking ahead to the uncountable potentials of AI technologies in addressing the present world issues by automating and accelerating technologies with ethically and morally correct means.

➢ Boosting speed, efficiency, correctness in language and grammar, support to creativity and innovation are boon out of the AI enabled assistive technologies for the scholarly work.

➢ Whereas the concern of ethics, integrity, morality and ownership of intellectual properties are at stake where AI technologies are used for academic and research work.

➢ The dearth of standard policy documents on the legal and ethical uses of AI technologies has a paramount impact on harnessing its potential in education and learning.

➢ Effective use of AI in academic pursuits requires striking a balance between the advantages of efficiency and automation and the requirement for human creativity, critical thinking, and ethical issues.

THANK YOU

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