



Colegio de
Bibliotecólogos
del Perú

Experiencias de inteligencia artificial en
bibliotecas universitarias.
Estado del Arte

Avances y desafíos de la inteligencia artificial en los servicios de la Biblioteca en la Universidad Peruana de Ciencias Aplicadas

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Universidad Peruana de Ciencias Aplicadas (UPC)
Lima, Perú. [@libioh](#)

Noviembre 4, 2023

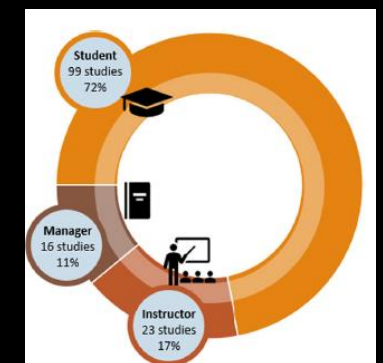
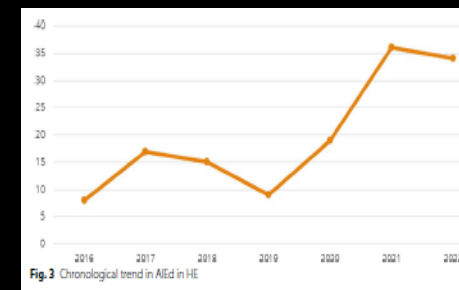
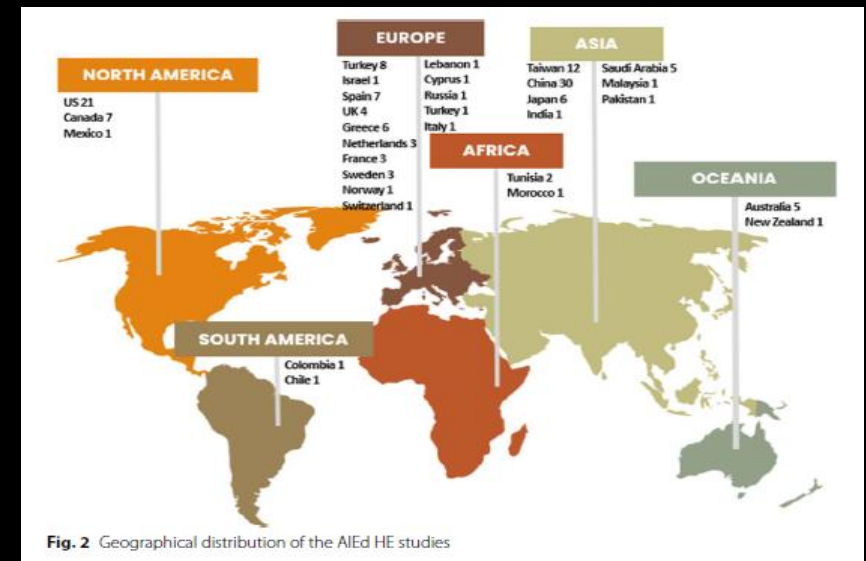


TÓPICOS

- Estado del arte en universidades y bibliotecas académicas
- Impacto IA en bibliotecas académicas.
- Recursos y herramientas académicas en IA en UPC
- Comentarios

Revisión de la literatura: IA en educación superior

- 138 estudios analizados (31 países), seis de los siete continentes del mundo.
- Estados Unidos y China lideran la producción científica.
- Los estudios se centran en los estudiantes (72%), seguido de instructores (17%) y directivos (11%).
- 05 áreas en estudio:
 - Evaluación, Predicción, Asistente IA, Sistemas de Tutoría Inteligente (STI), Gestión del aprendizaje de los alumnos



Revisión de la literatura: IA en Bibliotecas Académicas

Biblioteca	País	Aplicaciones/Servicios de IA
Tsinghua University	China	Robot conversacional Xiaotu, Sistema de Preguntas y Respuestas Inteligente
Nanjing University	China	Robot de inventario inteligente, Asistentes virtuales
Zhejiang University	China	Motor de búsqueda de IA
Shanghai Jiao Tong University	China	Robot de inventario de libros inteligente
Fudan University	China	Robots de consulta inteligentes
University of Science and Technology of China	China	Robots de consulta inteligentes
Beijing Institute of Technology	China	Asistentes virtuales inteligentes
Nankai University	China	Consulta inteligente basada en aplicaciones móviles
Sichuan University	China	Consulta inteligente
Tianjin University	China	Asistentes virtuales inteligentes
Beihang University	China	Asistentes virtuales inteligentes
University of Oxford	Reino Unido	Algunas herramientas de minería de datos y ML
Queen Mary University of London	Reino Unido	Guías de recursos sobre ML y IA

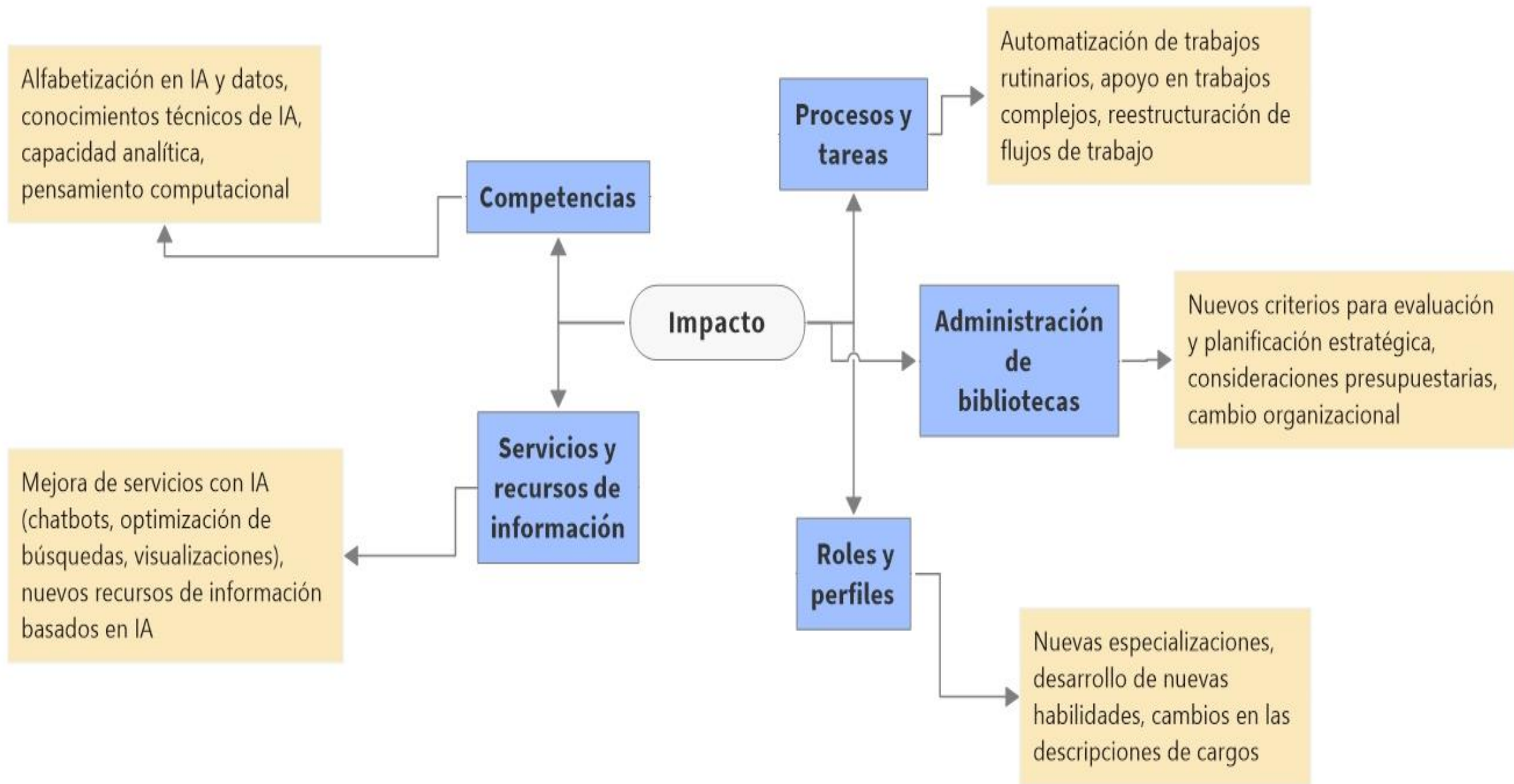
Revisión de la literatura: IA en Bibliotecas Académicas

Back-end

- Adquisiciones
- Procesos técnicos (catalogación, clasificación)
- Gestión de colecciones
- Gestión de repositorios
- Preservación digital
- Automatización de procesos
- Análisis de datos
- Gestión de recursos electrónicos
- Gestión de licencias
- Logística interna
- Mantenimiento de infraestructura
- Gestión de personal

Front-end

- Referencia y búsquedas
- Préstamo y circulación
- Servicios de información
- Extensión y formación de usuarios
- Disseminación selectiva de información
- Recomendación de recursos
- Interfaz de búsqueda y OPAC
- Chatbots y asistentes virtuales
- Realidad virtual y aumentada
- Medios sociales y comunicación
- Exposiciones y eventos
- Espacios de estudio y trabajo



HOW POSTDOCS USE AI CHATBOTS

How has the evolution and rapid adoption of AI chatbots changed your day-to-day work or career plans, if at all?

31% Changed how I write papers

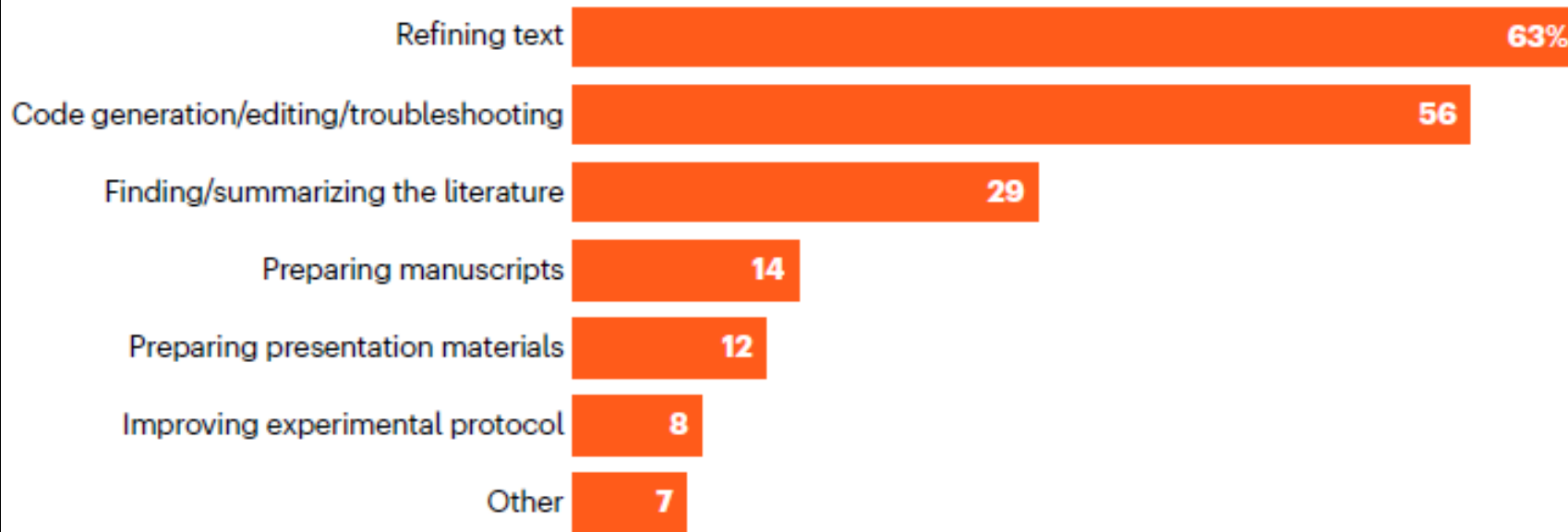
22% Changed how I analyse data

17% Changed how I stay up to date with the literature

Do you use AI chatbots, such as ChatGPT, in your work?



What do you use AI chatbots for?



How often do you use AI chatbots in your work?*



*Percentages don't add up to 100 owing to rounding.

Recursos académicos en UPC

- Recursos y videos
- Webinars y poscast
- Píldoras del saber
- Publicaciones

INTELIGENCIA ARTIFICIAL EN LA EDUCACIÓN

<https://innovacioneducativa.upc.edu.pe/inteligencia-artificial-en-la-educacion/>

Guía temática - Biblioteca

Home Libros Revistas Tesis Páginas de interés

Presentación

Esta guía temática presenta los principales recursos de información sobre **inteligencia artificial (IA)** que forman parte del Sistema de Bibliotecas de la UPC, así como de como de instituciones y portales web relacionados. Contiene libros, revistas, bases de datos, tesis y sitios web especializados, entre otros recursos.

La finalidad es facilitar a todos los miembros de la comunidad universitaria el acceso a información relevante para su formación académica y el desarrollo de sus investigaciones.

La guía cubre los siguientes tópicos:

- Inteligencia artificial (IA)
- Lógica para IA (lógica proposicional, inferencia probabilística, lógica difusa)
- Redes neuronales artificiales

<https://biblioteca.upc.edu.pe/inteligenciaartificial>

INICIO **RECURSOS Y VIDEOS** WEBINARS Y PODCAST PÍLDORAS DEL SABER PUBLICACIONES CONTÁCTANOS

Guías

Guía para Docentes: Cómo usar ChatGPT para potenciar el aprendizaje activo

Guía para docentes: Cómo usar el ChatGPT para potenciar el aprendizaje activo de Ministerio de Educación, Chile

ChatGPT Prompt Engineering for Developers

INICIO RECURSOS Y VIDEOS WEBINARS Y PODCAST **PÍLDORAS DEL SABER** PUBLICACIONES CONTÁCTANOS

AI Talks – Conversaciones de docentes sobre el uso de la IA en la Educación

Herramientas de IA para la investigación usos prácticos (Viernes 27 de octubre)


Equipos académicos: IA en UPC

Introducción


Seis preguntas a docentes-investigadores (en su gran mayoría doctores), sobre temas de Inteligencia Artificial

Dos consideraciones preliminares:
Inicio: Congreso de Darmouth 1956
Turing 1950: Computing Machines and Intelligence

Ramas de la IA:
Sistemas expertos, Aprendizaje automático, Minería de Datos, Metaheurísticas, Razonamiento Basado en Casos, Agentes Inteligentes, Lógica Difusa, Redes Neuronales

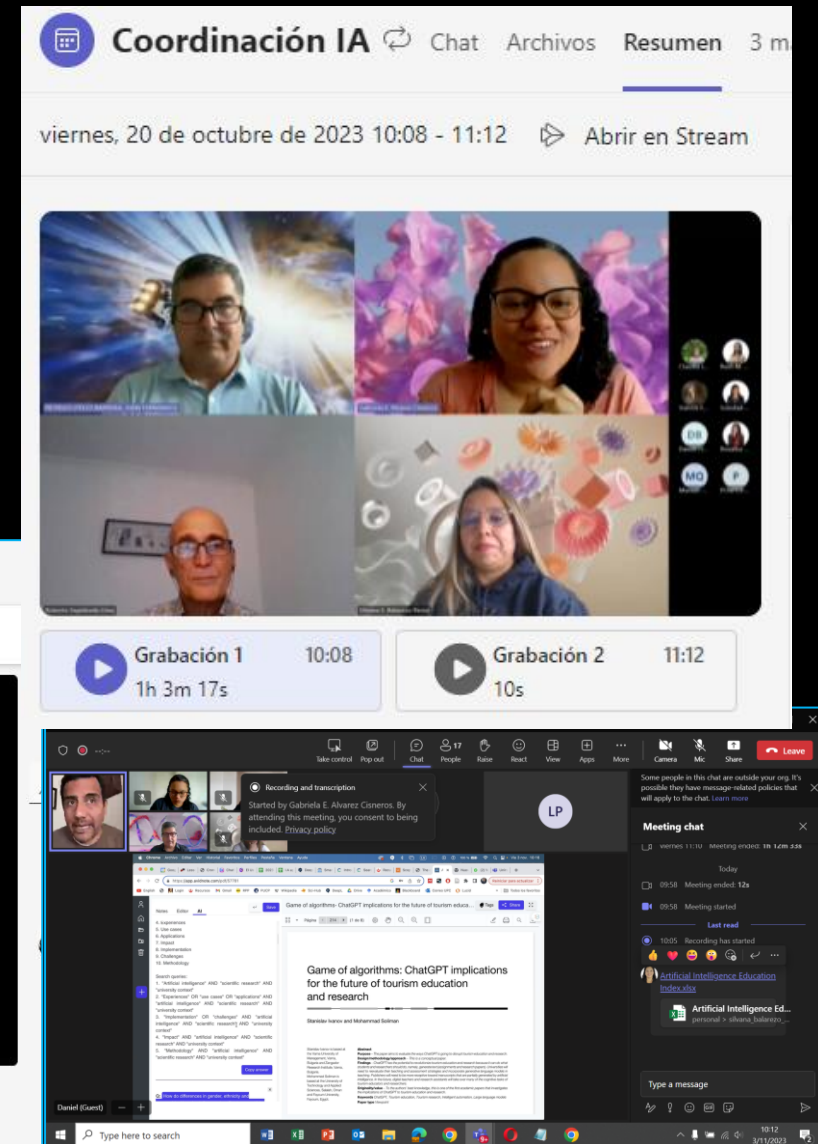


- Cada viernes, reunión de equipos académicos en IA
- Tópicos: inteligencia artificial en la docencia, casos de uso, herramientas, entre otros).
- Se inició en enero 2023.



Coordinación IA

viernes, 20 de octubre de 2023 Caduca dentro de 42 días • 4 visualizaciones • Gabriela E. Álvarez Cisneros



Coordinación IA Chat Archivos Resumen 3 m

viernes, 20 de octubre de 2023 10:08 - 11:12 Abrir en Stream

Grabación 1 10:08 1h 3m 17s

Grabación 2 11:12 10s

Meeting chat

Game of algorithms: ChatGPT implications for the future of tourism education and research

Políticas IA en UPC

LEY Nº 31814

LA PRESIDENTA DE LA REPÚBLICA

POR CUANTO:

EL CONGRESO DE LA REPÚBLICA;

Ha dado la Ley siguiente:


LEY QUE PROMUEVE EL USO DE LA INTELIGENCIA ARTIFICIAL EN FAVOR DEL DESARROLLO ECONÓMICO Y SOCIAL DEL PAÍS



ESTRATEGIA NACIONAL DE INTELIGENCIA ARTIFICIAL

Documento de Trabajo para la Participación de la Ciudadanía
2021-2026

Secretaría de Gobierno y Transformación Digital
PRESIDENCIA DEL CONSEJO DE MINISTROS

	LINEAMIENTOS PARA EL USO DE HERRAMIENTAS DE INTELIGENCIA ARTIFICIAL GENERATIVA EN EL PROCESO DE ENSEÑANZA – APRENDIZAJE Y ASSESSMENT	EYA-PYL-07	VERSIÓN 01	PAGINA 1 de 6
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1. OBJETIVO

Establecer los lineamientos para el uso de herramientas basadas en Inteligencia Artificial Generativa en el proceso de enseñanza – aprendizaje y *assessment* dentro de la universidad.

2. ALCANCE

Docentes, estudiantes y personal administrativo vinculado con el proceso de enseñanza - aprendizaje y *assessment*.

3. DOCUMENTOS A CONSULTAR / REFERENCIAS

- Modelo Educativo UPC.
- Mineduc (2023). Guía para Docentes: Cómo usar ChatGPT para potenciar el aprendizaje activo. <https://ciudadaniadigital.mineduc.cl/wp-content/uploads/2023/05/Guia-para-Docentes-Como-usar-ChatGPT-Mineduc.pdf>
- Unesco (2023). ChatGPT e inteligencia artificial en la educación superior: guía de inicio rápido. https://unesdoc.unesco.org/ark:/48223/pf0000385146_spa
- Patrick Harte; Fawad Khaleel (2013) Keep calm and carry on: ChatGPT doesn't change a thing for academic integrity. <https://www.timeshighereducation.com/campus/keep-calm-and-carry-chatgot-doesnt-change-thing-academic-integrity>
- Kristen Moore (2023) Using ChatGPT in Math Lesson Planning <https://www.edutopia.org/article/using-chatgpt-plan-high-school-math-lessons/>
- Ricardo Treviño (2023) Hace Tec programa piloto integrando herramientas de IA en clases [Hace Tec programa piloto integrando herramientas de IA en clases | Tecnológico de Monterrey](https://www.tecnologico.com.mx/tecnologia/tecnologia-de-monterrey/hace-tec-programa-piloto-integrando-herramientas-de-ia-en-clases)

- OBJETIVO
- ALCANCE
- DOCUMENTOS A CONSULTAR / REFERENCIAS
- TERMINOS Y DEFINICIONES
- ANTECEDENTES
- LINEAMIENTOS ÉTICOS

Generación de metadatos: Definir el perfil

¿Qué le gustaría que ChatGPT supiera sobre usted para ofrecerle mejores respuestas?

¿Cómo le gustaría que ChatGPT respondiera?

Custom instructions ⓘ

What would you like ChatGPT to know about you to provide better responses?

- Profession/Role: University Professor
- Key Responsibilities: Lecturing, research, academic advising.
- Knowledge or Expertise: Subject specialization, academic writing, grant applications.
- Typical Challenges: Research funding, academic rigor, publication.
- Current Projects: Research papers, course development.
- Jargon or Terminology: Peer review, tenure, pedagogy.
- Goals and Objectives: Advancing knowledge, scholarly impact.

490/1500

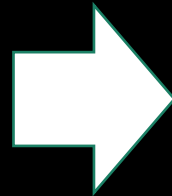
How would you like ChatGPT to respond?

- Tone and Formality: Scholarly, in-depth, analytical.
- Level of Detail: Advanced concepts, research methodologies.
- Preferred References: Academic journals, primary sources.
- Examples or Analogies: Academic theories, prior research.
- Avoidance of Ambiguity: Explicit definitions, reasoned arguments.
- Resource Links: Research databases, funding sources.
- Follow Up Questions: Research impact, future studies.
- Tables: Research findings, statistical data. Only when necessary.

548/1500

Enable for new chats

Cancel Save



School Librarian

Favorite

Persona Type **Education**

What would you like...

- Profession/Role: School Librarian
- Key Responsibilities: Resource management, information literacy, student assistance.
- Knowledge or Expertise: Library science, book curation, educational technology.
- Typical Challenges: Budget constraints, student engagement, digital divide.
- Current Projects: Library updates, digital cataloging.
- Jargon or Terminology: Dewey Decimal, OPAC, circulation.
- Goals and Objectives: Promoting literacy, resource accessibility.
- Interactions: Students, teachers, community.

How would you like...

- Tone and Formality: Enthusiastic, informative, resourceful.
- Level of Detail: Library tools, book recommendations.
- Preferred References: Library standards, literature lists.
- Examples or Analogies: The library as a "knowledge hub," literacy stories.
- Avoidance of Ambiguity: Clear procedures, explicit directions.
- Resource Links: E-books, online databases.
- Follow Up Questions: Student interests, tech integration.
- Tables: Reading lists, library events. Only when necessary.
- Problem Solving Method: Resource identification, community partnerships.

Generación de metadatos: Palabras clave

Repositorio Académico UPC

- Colección de artículos científicos (afiliación de UPC SCOPUS, WoS y SciELO).
- Se utiliza GPT-4.
- Generación de 10 palabras clave (en inglés) adicionales.
- Se enmarca en una política de mejorar la visibilidad web (Webometrics):
 - Incrementar metadatos
 - Incrementar los contenidos
 - Incrementar los backlinks



Palabras clave
cross-sectional studies
emigrants and immigrants
food insecurity
Peru
prevalence
refugees
Venezuela
Food Insecurity (FI)
Venezuelan Immigrants
Prevalence
Determinants
Cross-Sectional Study
ENPOVE 2022
Food Insecurity Experience Scale (FIES)
Poisson Log Generalized Linear
Regression
Socio-Demographic Characteristics
Show less

<https://www.frontiersin.org/articles/10.3389/fnut.2023.1187221/full>

Resumen
Introduction: Food insecurity (FI) is a public health problem affecting many regions of the world. In Venezuela, the political, social and economic situation experienced since 2010 has caused a mass migration of its population to other countries, including Peru, which, in turn, may have limited access to and availability of food leading to a high nutritional burden in this population. The objective of this study was to determine the prevalence and analyze the determinants of FI in the households of Venezuelan immigrants in Peru. Methods: A cross-sectional study was conducted using the "Encuesta Dirigida a la Población Venezolana que Reside en el País" (ENPOVE 2022). The dependent variable was moderate-severe FI (yes/no), which was constructed from an eight-item Food Insecurity Experience Scale (FIES) to measure FI at the household level. Poisson log generalized linear regression models were fitted to assess the association between the independent variables and FI. In addition, the reliability of the FIES as a tool for measuring food insecurity in the target population was determined. Results: A total of 3,491 households were included in the study. We found that 39.0% of the households had moderate-severe FI. Regarding the determinants, inadequate internal resources and lack of adequate strategies that mitigate the prevalence of FI in the first to evaluate the

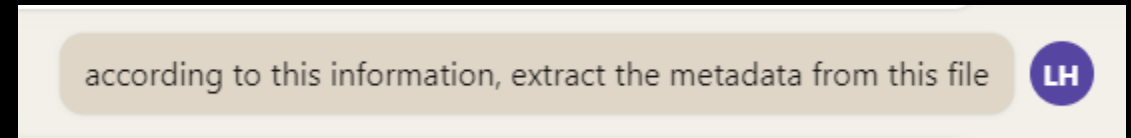
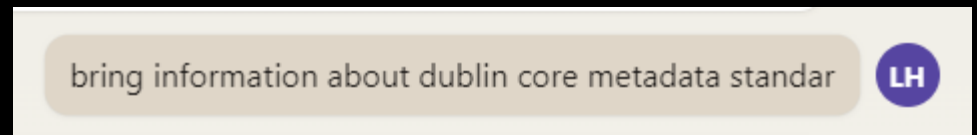
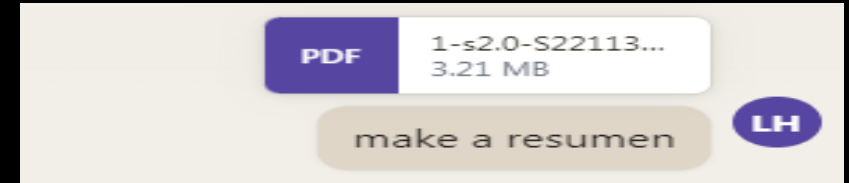
Figure 4.2: Search distribution graph of extracted keywords

3
See more details
Posted by 4 X users
9 readers on Mendeley

Extracción de metadatos : Dublin Core

Extracción de metadatos

1. Recopilación de información
2. Identificación de metadatos
3. Extraer texto
4. Limpiar texto
5. Organización metadatos
6. Formato de salida
7. Mejorar (salida)



Here is the Dublin Core metadata extracted from the PDF file:

Title: High altitudes, population density, and poverty: Unraveling the complexities of COVID-19 in Peru during the years 2020–2022

Creator: David A. Vizcardo, Jorge R. Aranibar, César Vladimir Munayco Escate

Subject: COVID-19, Peru, altitude, population density, poverty, SARS-CoV-2

Description: This ecological study analyzed associations between altitude, population density, poverty and COVID-19 incidence and case fatality rate across 196 provinces in Peru from 2020-2022 using government data.

Publisher: Elsevier Inc.

Contributor: Preventive Medicine Reports

Date: 2023

Type: Text

Format: PDF

Identifier: <https://doi.org/10.1016/j.pmedr.2023.102423>

Based on the Dublin Core metadata extracted from the PDF research article, here are the corresponding Dublin Core elements and tags:

```
dc:title
High altitudes, population density, and poverty: Unraveling the complexities of COVID-19 in Peru during the years 2020–2022
</dc:title>
dc:creator
David A. Vizcardo, Jorge R. Aranibar, César Vladimir Munayco Escate
</dc:creator>
dc:subject
COVID-19, Peru, altitude, population density, poverty, SARS-CoV-2
</dc:subject>
dc:description
This ecological study analyzed associations between altitude, population density, poverty and COVID-19 incidence and case fatality rate across 196 provinces in Peru from 2020-2022 using government data.
</dc:description>
dc:publisher
Elsevier Inc.
</dc:publisher>
```



Extracción de metadatos: Dublin Core

Extracción de metadatos

1. Recopilación de información

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3. Extraer texto


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7. Mejorar (salida)

Elemento	Valor
dc:title	High altitudes, population density, and poverty: Unraveling the complexities of COVID-19 in Peru during the years 2020–2022
dc:creator	David A. Vizcardo, Jorge R. Aranibar, César Vladimir Munayco Escate
dc:subject	COVID-19, Peru, altitude, population density, poverty, SARS-CoV-2
dc:description	This ecological study analyzed associations between altitude, population density, poverty and COVID-19 incidence and case fatality rate across 196 provinces in Peru from 2020-2022 using
dc:publisher	Elsevier Inc.
dc:contributor	Preventive Medicine Reports
dc:date	
dc:type	Text
dc:format	PDF
dc:identifier	https://doi.org/10.1016/j.pmedr.2023.102423
dc:language	en
dc:relation	Preventive Medicine Reports, Volume 36, 2023, 102423
dc:rights	© 2023 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license
dc:coverage	Peru



Test_Elvis.csv - LibreOffice Calc

Archivo Editar Ver Insertar Formato Estilos Hoja Datos Herramientas Ventana Ayuda

Liberation Sans 10 pt N K S A

A1	Elemento				
	A	B	C	D	
1	Elemento	dc:title	dc:creator	dc:subject	dc:description
2	Valor	High altitudes, population density, and poverty: Unraveling the complexities of COVID-19 in Peru during the years 2020–2022	David A. Vizcardo, Jorge R. Aranibar, César Vladimir Munayco Escate	COVID-19, Peru, altitude, population density, poverty, SARS-CoV-2	This ecological study analyzed associations between altitude, population density, poverty and COVID-19 incidence and case fatality rate across 196 provinces in Peru from 2020-2022 using
3					
4					
5					
6					
7					

Webinars – Organizados por biblioteca UPC

- ChatGPT: ¿es una nueva herramienta para optimizar nuestros trabajos académicos?
(abr 2023)
- La importancia de la ética en la investigación académica a propósito del chat GPT
(may 2023)
- Inteligencia Artificial en el manejo responsable de la información
(oct 2023)



Fuentes de información (LLMs) - comparación

	Bing Chat	Perplexity.ai	Elicit.org	Scite assistant	Scispace	Consensus.ai
Source	Bing	Bing	Semantic Scholar	Open metadata + Selected partners	Unclear	Semantic Scholar
Coverage type	General web	General web	Academic journals, Conf paper etc	Academic journals, Conf paper etc	Academic journals, Conf paper etc	Academic journals, Conf paper etc
Coverage (metadata)	unknown	unknown	Roughly 175 million	Similar to Elicit	Unknown but likely to be similar	Roughly 75 million
Coverage (full text)	Bing index-	Bing Index-	Open Access content only	33 million	Open Access content only	Open Access content only
Can summarize papers in structured table (lit review matrix)?	No	No	Yes	No	Yes	Consensus Meter for Yes/No questions on 20 results
Can upload your own PDF?	No	No	Yes	No	No	No
Pros/Special feature	Edge plugin	Perplexity Plugin	Most established, good extraction of data	Allows many customization of sources used	Has extension	Employs extractive summary not just generative

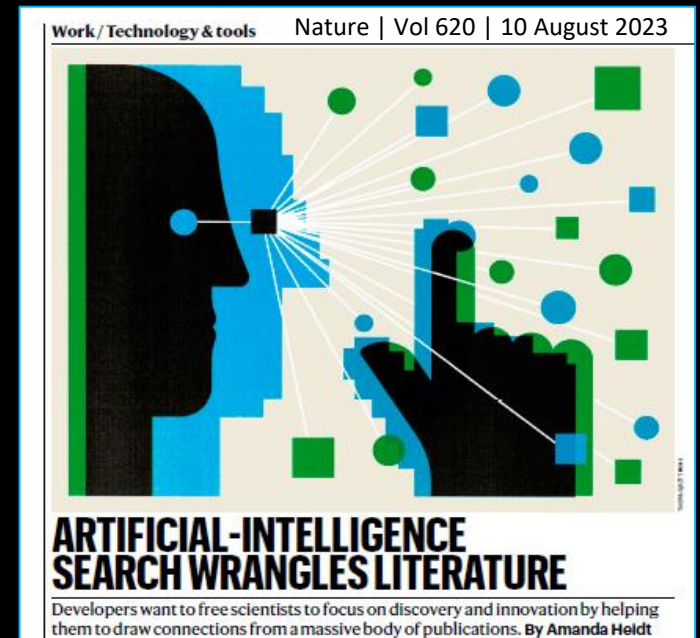
Alfabetización: Clasificación en UPC

- Fuentes de información científica
- Asistentes IA
- Análisis de datos
 - Bibliometría
- Herramientas
 - Lectura de documentos (PDF, DOC)
 - Revisión de literatura (PRISMA)
 - Redacción de documentos
 - Generación de imágenes
 - Referencias y citas

AI SCIENCE SEARCH ENGINES EXPLODE IN NUMBER

Nature | Vol 616 | 27 April 2023

Tools powered by large language models are intended to help researchers digest or do science.



Fuentes de información IA



Búsqueda + IA



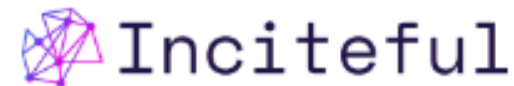
AI-powered Research Intelligence Engine



ChatGPT 4



Elicit



scite

System[®]Pro



Paper Digest

An AI-powered platform to track, search, review & rewrite scientific literature without hallucinations


Literature Review

Text Rewriter



Fuentes de información IA




 **PubMed Research**

[Install](#)

The most powerful PubMed search tool, powered by Google Custom Search! Find research articles swiftly and easily.


[Developer info](#)

 **BioRxiv Researcher**

[Install](#)

The most powerful science research tool, powered by Google Custom Search! Find research articles swiftly...


[Developer info](#)

 **Scholar Assist**

[Uninstall](#)

Search academic research papers from arXiv and find answers to your questions.


[Developer info](#)

 **ScholarAI**

[Uninstall](#)

Unleash scientific research: search 200M+ peer-reviewed papers and explore images and text from scientific...


[Developer info](#)

 **AI Browse and Sea...**

[Install](#)

Combine Google search results with AI, research information from the internet and browse webpages.


[Developer info](#)

 **AI Search Engine**

[Uninstall](#)

Search and browse the internet/web using Google Search (SERP) with AI Search Engine. Summarize & chat with...


[Developer info](#)

 **Consensus Search**

[Uninstall](#)

Get answers & insights directly from 200M+ scientific papers. To use, just ask a research question.

[Developer info](#)

 **Science**

[Uninstall](#)

Search over 250M scientific papers and research articles. Perfect for researchers or students.

[Developer info](#)

Herramientas IA: Recursos en UPC

Gestión de documentos

Chat with any PDF

 keenious

 HUMATA

 Petal

Explainpaper

unriddle

 ChatDOC

Revisión de literatura

 AVIDNOTE

 wordtune

 SpinBot

paper  digest

 GraphMaker

Escritura y redacción

 QuillBot

 jenni

 SpinBot

 Citefast

MyBib 

Revisión de la literatura: ChatGPT vs PRISMA

Can ChatGPT Write a Good Boolean Query for Systematic Review Literature Search?

SHUAI WANG, The University of Queensland, Australia

HARRISEN SCELLS, Leipzig University, Germany

GUIDO ZUCCON, The University of Queensland, Australia

BEVAN KOOPMAN, CSIRO, Australia

Systematic reviews are comprehensive reviews of the literature for a highly focused research question. These reviews are often

treated as
in the med
studies for
systematic
or invalid
retrieved t
to effective
investigate
review lite
ChatGPT i
study dem
The ability
researcher
higher pre

ACM Ref
Shuai War
Systematic

Can ChatGPT Write a Good Boolean Query for Systematic Review Literature Search? • 5

	Prompt ID	Prompt
Simple	q1	For a systematic review titled "{review_title}", can you generate a systematic review Boolean query to find all included studies on PubMed for the review topic?
	q2	You are an information specialist who develops Boolean queries for systematic reviews. You have extensive experience developing highly effective queries for searching the medical literature. Your specialty is developing queries that retrieve as few irrelevant documents as possible and retrieve all relevant documents for your information need. Now you have your information need to conduct research on {review_title}. Please construct a highly effective systematic review Boolean query that can best serve your information need.
Detailed	q3	Imagine you are an expert systematic review information specialist; now you are given a systematic review research topic, with the topic title "{review_title}". Your task is to generate a highly effective systematic review Boolean query to search on PubMed (refer to the professionally made ones); the query needs to be as inclusive as possible so that it can retrieve all the relevant studies that can be included in the research topic; on the other hand, the query needs to retrieve fewer irrelevant studies so that researchers can spend less time judging the retrieved documents.
	q4	You are an information specialist who develops Boolean queries for systematic reviews. You have extensive experience developing highly effective queries for searching the medical literature. Your specialty is developing queries that retrieve as few irrelevant documents as possible and retrieve all relevant documents for your information need. You are able to take on information need such as "{example_review_title}"

<https://arxiv.org/abs/2302.03495>



biomedicines



Systematic Review

PRISMA Systematic Literature Review, including with Meta-Analysis vs. Chatbot/GPT (AI) regarding Current Scientific Data on the Main Effects of the Calf Blood Deproteinized Hemoderivative Medicine (Actovegin) in Ischemic Stroke

Aurelian Anghelescu ^{1,2,†}, Florentina Carmen Firan ^{3,†}, Gelu Onose ^{2,4,*}, Constantin Munteanu ^{2,5,*}, Andreea-Iulia Trandafir ^{2,4}, Ilinca Ciobanu ², Ștefan Gheorghita ² and Vlad Ciobanu ⁶

Annex 1

Q1: What is Actovegin?

Q2: What studies are there about Actovegin and ischemic stroke?

Q3: Can you tell me the authors and titles of the studies conducted on the effect of Actovegin on ischemic stroke?

Q4: Are these the most relevant studies?

Q5: Do you know what PRISMA is?

Q6: Can you do a systematic review for Actovegin and ischemic stroke?

<https://doi.org/10.3390/biomedicines11061623>

Comentarios

- Mayor integración de la IA en los buscadores académicos. Se extenderá a servicios como: chatbots, análisis de datos, automatización de procesos.
- Incorporar la IA dentro de los planes estratégicos de las bibliotecas: adopción de tecnologías y alfabetización mediática e informacional (conocimientos sobre IA, curación de datos, pensamiento crítico, aspectos éticos, búsquedas).
- Incrementar el número de repositorios de datos nacionales enmarcados en una política de ciencia abierta (UNESCO, 2022).

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