

# AI TOOLS FOR RESEARCH



Monday,  
29th Sept 2025



2.30 PM - 5.30 PM

ACAD and E-certificate will be provided



**Registration Link :**  
<https://tinyurl.com/mjanhj7v>



**Webex Link :**  
<https://tinyurl.com/4rmu49wy>



## Speaker:

Assoc. Prof. Ts. Dr Mohd Shahizan bin Othman  
Associate Prof. Faculty of Computing  
Universiti Teknologi Malaysia(UTM)



## Moderator:

Mohd Shahael Bin Nordin  
Vice President 1, PGSS FM

# About Me



**Mohd Shahizan Othman**  
drshahizan

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Johor Bahru

12:07 - same time

<https://drshahizan.github.io/>

Overview Repositories 48 Projects Packages Stars 2

drshahizan / README.md

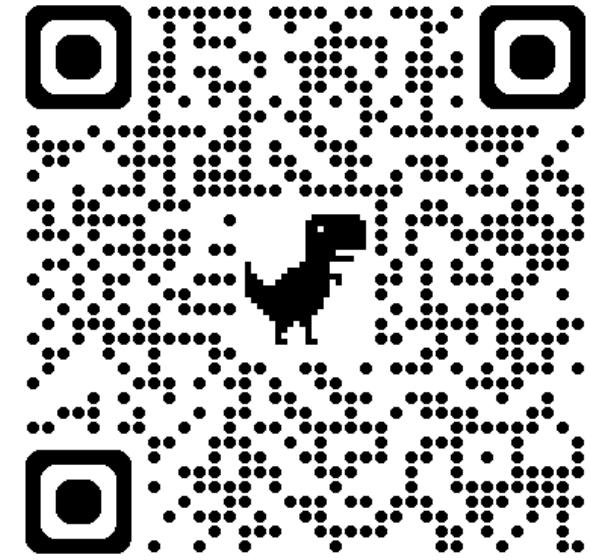
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## Dr Shahizan | Lecturer, Academic Speaker & Tech Educator 🌟

Educating future leaders as a Lecturer at [Universiti Teknologi Malaysia \(UTM\)](#), with a strong passion for software development, innovation, and empowering students through dedicated supervision and impactful academic talks.

Explore my projects below, and let's collaborate on something impactful! 😊

### 🌐 Collaborative Workshops and Courses: Year 2025



<https://github.com/drshahizan>

# Introduction

Welcome to the revolution of academic writing with AI. Explore the potential of artificial intelligence in transforming the way we analyze and understand literature. Join us on this journey of discovery and innovation.



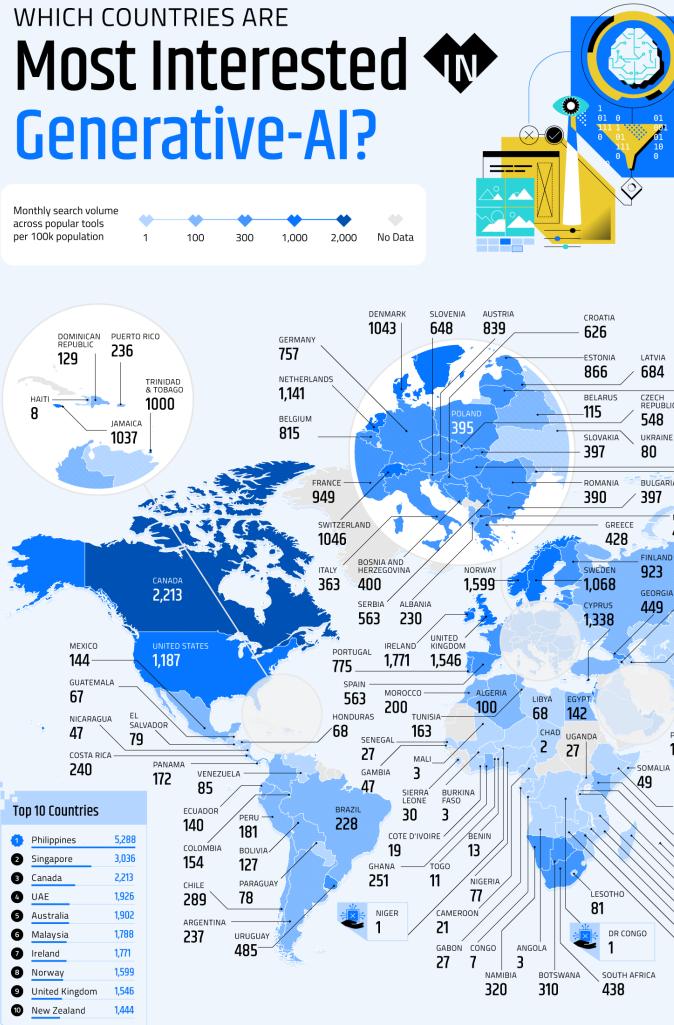
# Generative AI



# Generative AI

Generative Artificial Intelligence (Generative AI) refers to a branch of **artificial intelligence** that leverages advanced **machine learning techniques** to model underlying **patterns in data** and subsequently generate **novel content**. Rather than reproducing the original data, Generative AI creates **new outputs** that resemble the **source material** in **structure** and **style**. Such outputs may take the form of text, images, video, audio, or other digital media.

## WHICH COUNTRIES ARE Most Interested IN Generative-AI?

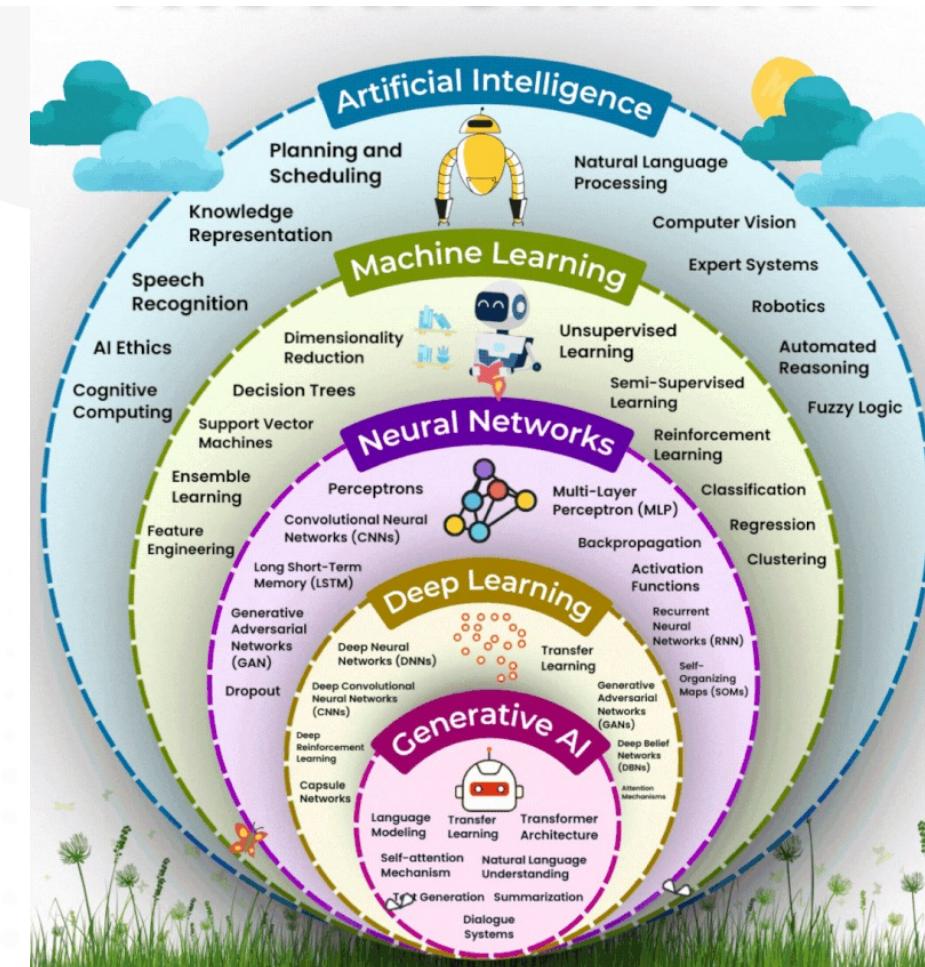


Methodology: We built a seed list of over 90 of the most popular generative AI tools across four categories (text, voice, audio, and image). We then recorded the monthly Google search volume for each in every country, and calculated the overall volume across all tools per 100k population. All search volumes were scaled up according to the search engine market share in each country, using figures from statscounter.com.

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ElectronicsHub

# The Landscape of Artificial Intelligence

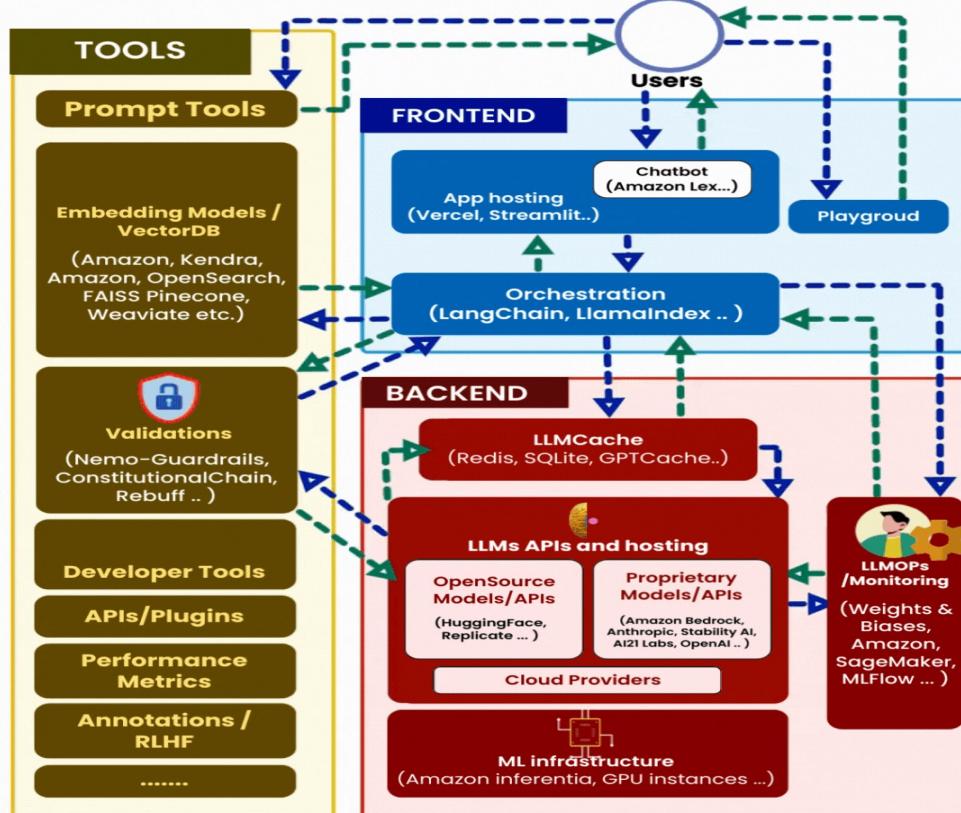




Created by:  
Rocky Bhatia [in](#)

R learnwithrockybhatia.com  
Your Gateway for Tech Learning

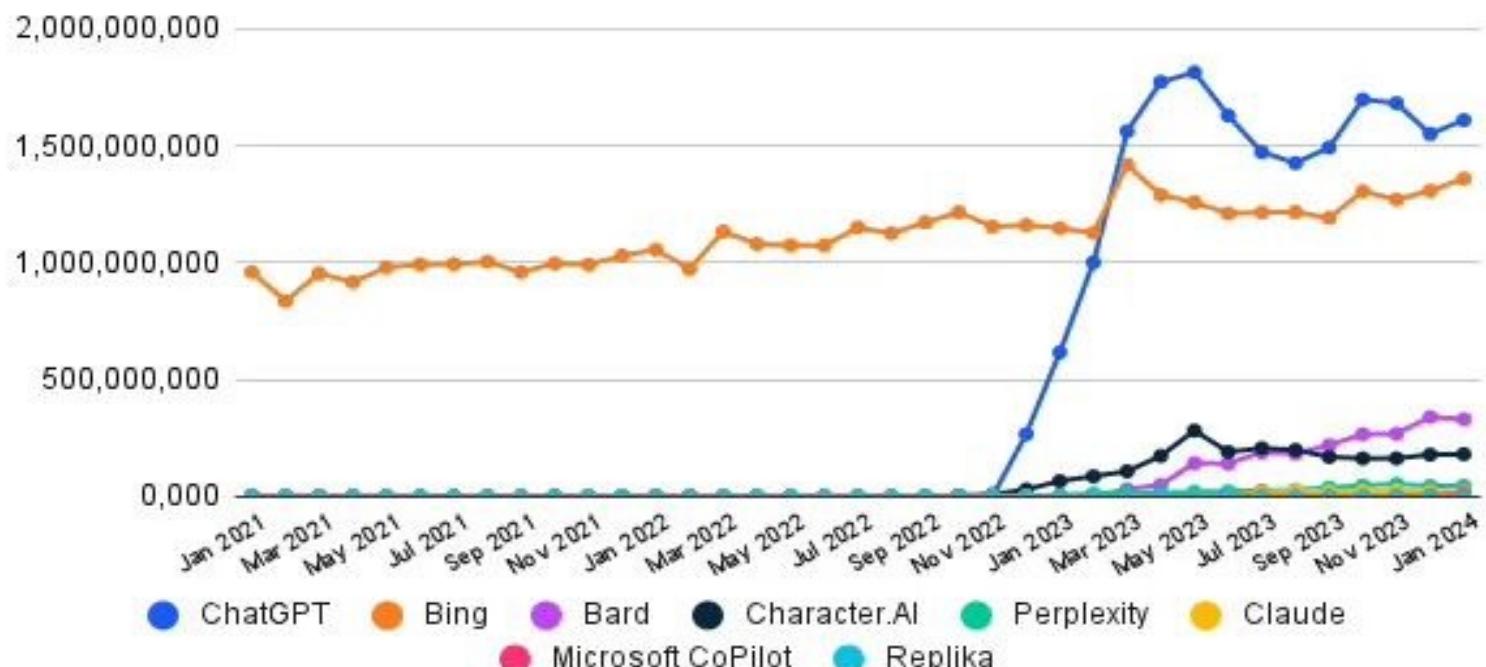
# Generative AI Application Ecosystem



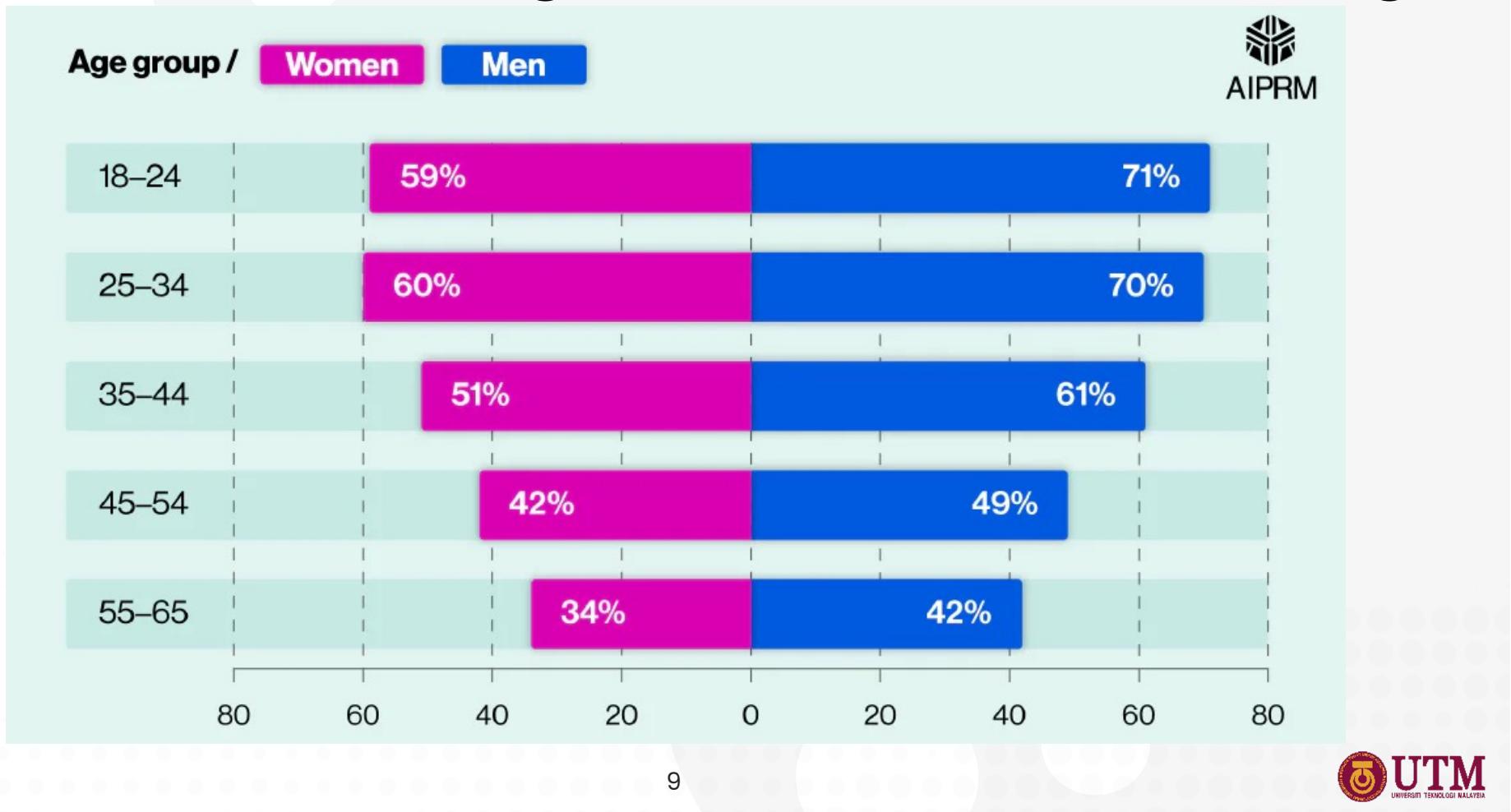
# The Development of Generative AI

## AI Chat

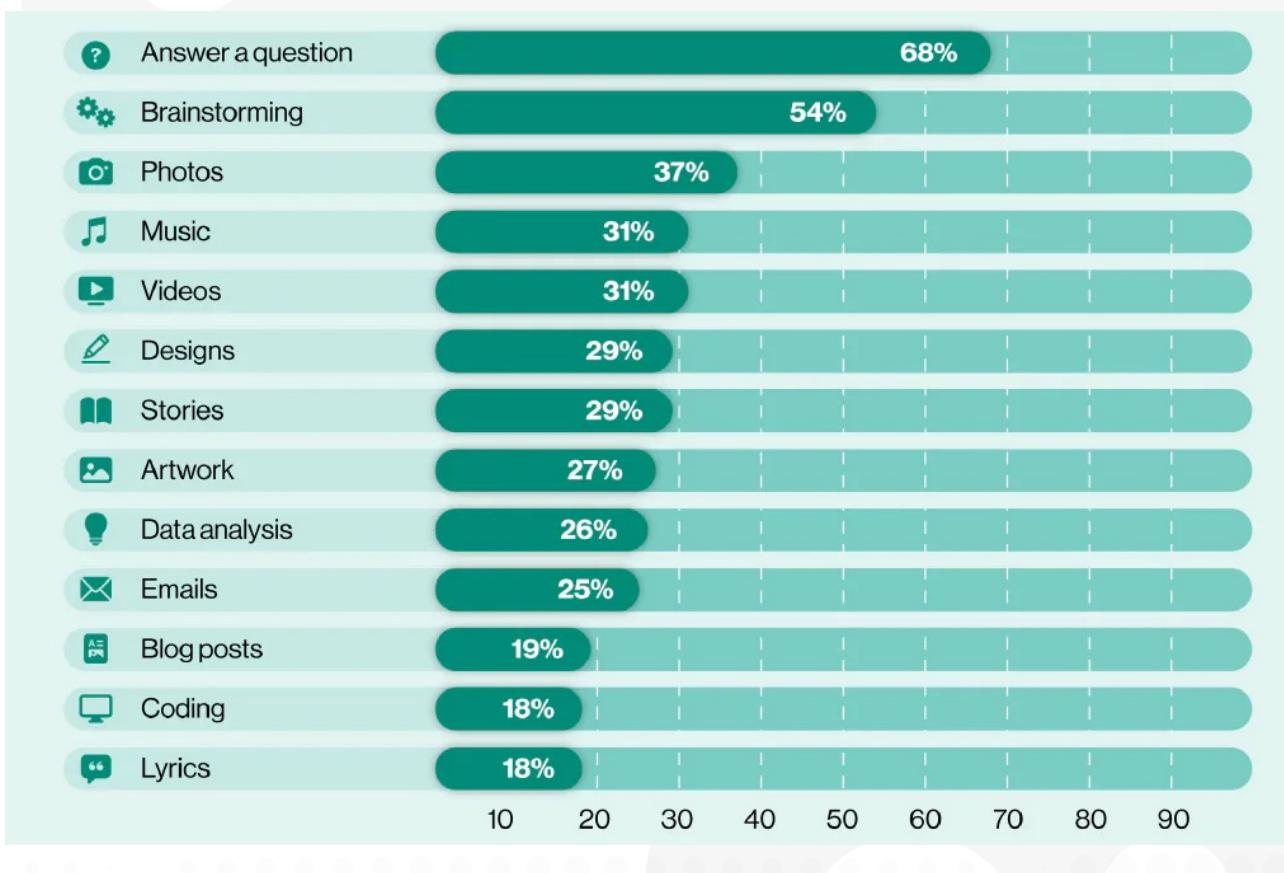
Desktop & Mobile Web Visits Jan 2024



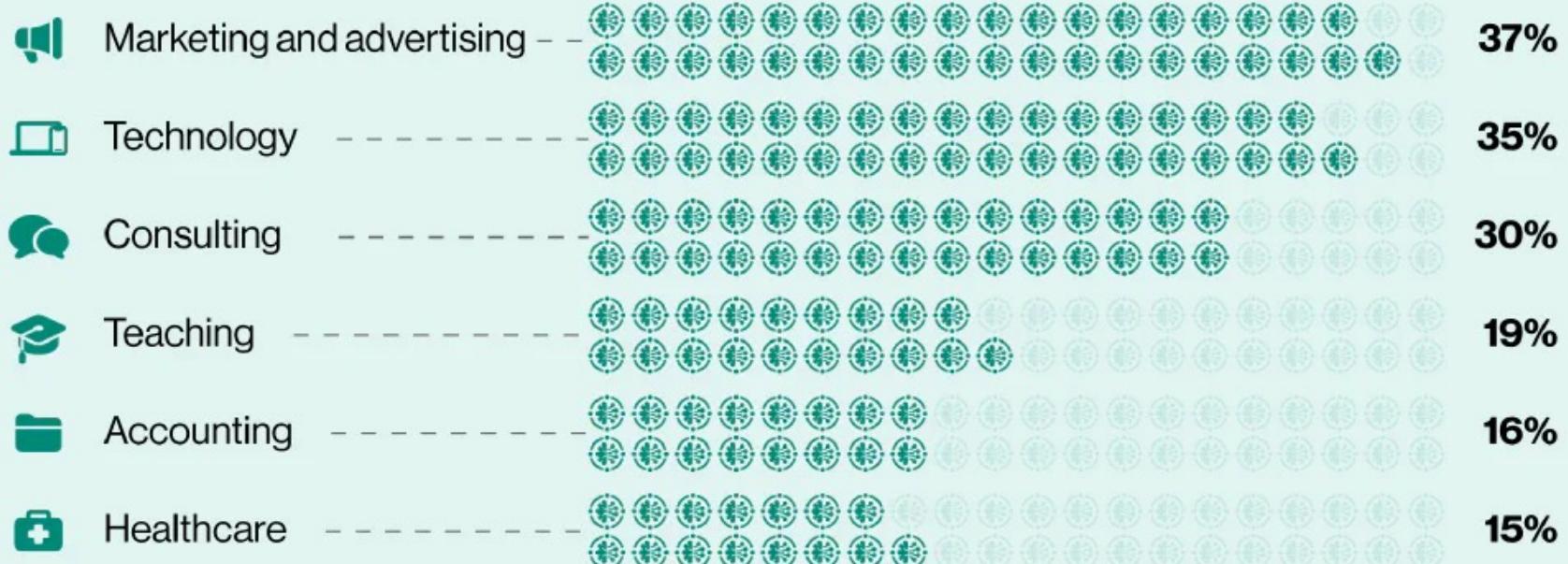
# Generative AI Usage across Gender and Age



# The Use of Generative AI

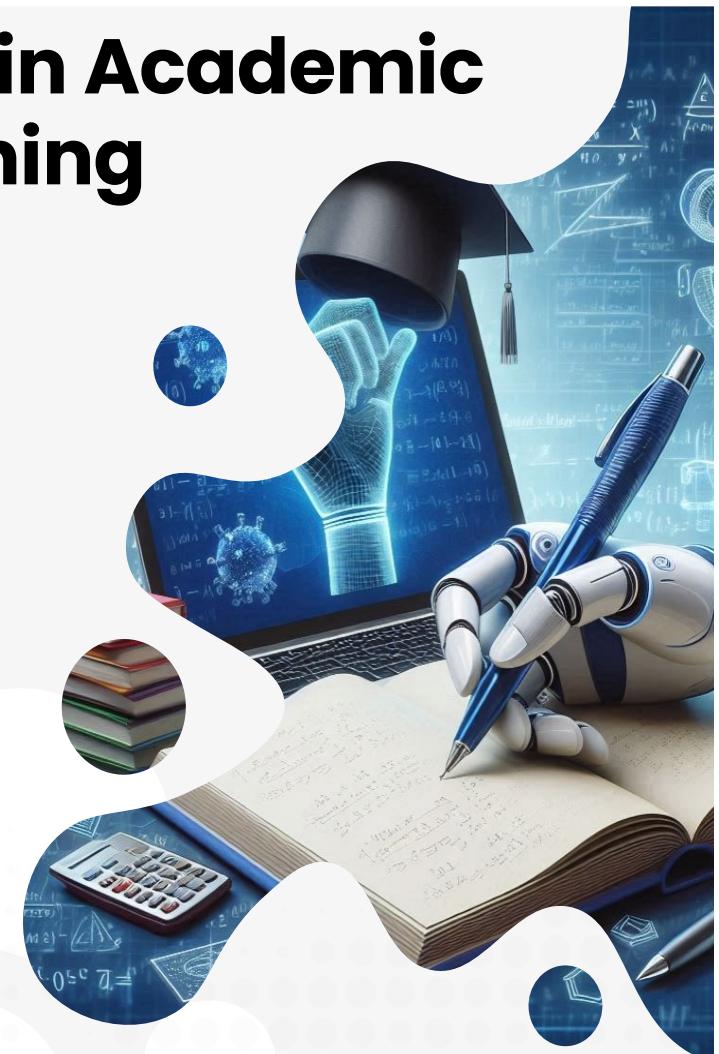
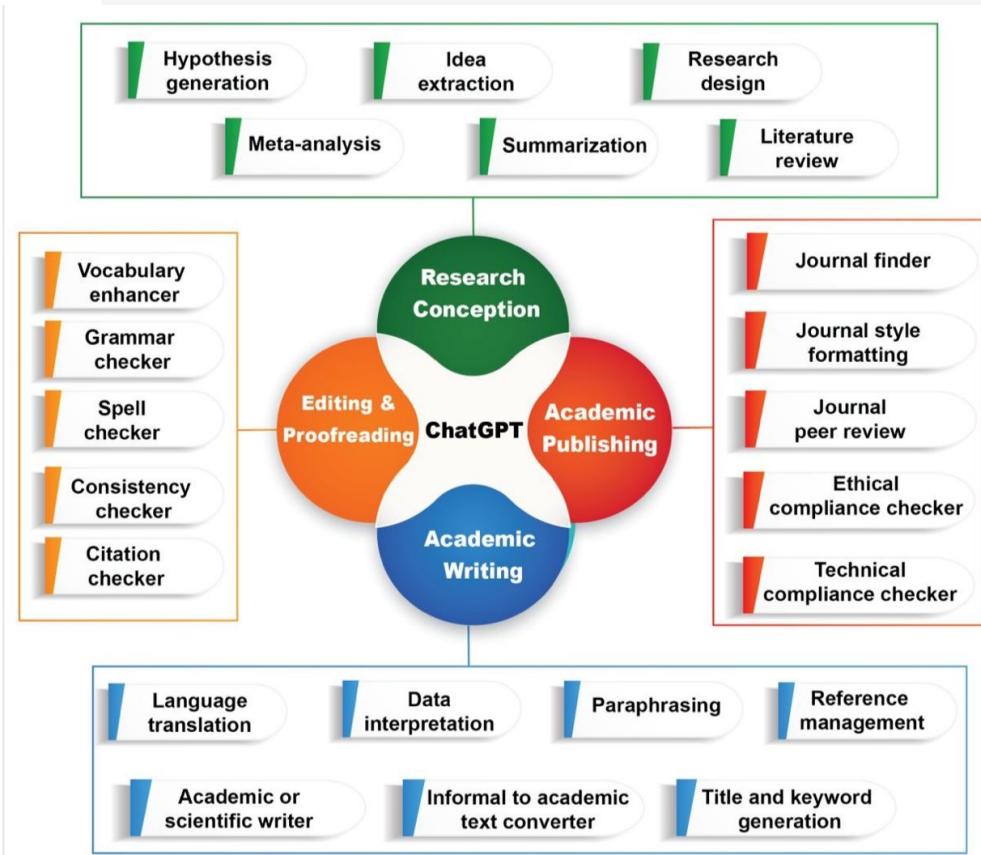


# Generative AI Adoption by Industry: 2023 Statistics



Sumber: Statistica

# The Application of ChatGPT in Academic Writing and Publishing



# Understanding AI in Academic Contexts

## 1. Idea Generation

AI tools can help overcome writer's block by generating research prompts and ideas based on the topic.

## 2. Writing Assistance

AI can provide real-time suggestions for structure, content, and clarity to improve the quality of academic papers.

## 3. Citation and Referencing

AI assists in formatting citations and references accurately, adhering to academic standards like APA, MLA, and Chicago styles.

## 4. Grammar and Style Correction

AI-powered tools help in correcting grammar and enhancing the writing style to meet scholarly standards.

## 5. Literature Review

AI can aid in conducting literature reviews by finding credible sources, articles, and relevant data.





# Understanding AI in Academic Contexts

6. **Data Analysis:** Machine Learning techniques enable AI to analyze data and provide personalized research recommendations.
7. **Outline Creation:** AI tools can create detailed outlines, organizing thoughts and structuring content for clear and coherent writing.
8. **Plagiarism Check:** AI systems can scan academic work to ensure originality and proper attribution of sources.
9. **Research Paper Composition:** Researchers can use AI to compose books, research grants, and articles for scholarly journals.
10. **Human-AI Collaboration:** Studies on human-AI interactions in academic writing investigate how researchers collaborate with AI tools during the writing process.

# AI Tools in Literature Review

- Automated Searching:** AI tools can quickly search through databases and find relevant literature based on keywords and topics.
- Data Extraction:** They can extract key information such as methodologies, results, and conclusions from a large number of documents.
- Analysis and Synthesis:** AI can analyze the extracted data to identify trends, patterns, and gaps in the literature.
- Summarization:** These tools can provide concise summaries of individual papers or entire bodies of work.
- Reference Management:** AI can help organize and manage citations and references efficiently.
- Predictive Trends:** AI tools can predict future research trends by analyzing citation networks and publication patterns.



# Indexed Journal

An indexed journal refers to a scholarly journal that is included in a **bibliographic database** or **index**.



Scopus®

IET Inspec

Compendex



publons

EBSCO



INDEXED IN  
DOAJ



Google  
Scholar



Semantic Scholar

ULRICH'S WEB™  
GLOBAL SERIALS DIRECTORY



# AI TOOLS FOR SCIENTIFIC RESEARCH



Razia Aliani  
@RaziaAliani

## AI-POWERED SEARCH ENGINES

Semantic Scholar-Free	SciSpace-\$20/month (Free plan available)	Consensus-Free	Scite-\$20/month \$120/year	Scinapse-\$39/month (Free plan available)	Lumina-\$20/month (Free plan available)	Elicit-\$12/month, \$120/year (Free plan available)	Search Smart-Free	The Literature (biomed only) Free
R Discovery (mobile app) \$12/month, \$72/year	System* System Pro (biomed only) \$12/month, \$99/year	Undermind-\$20/month (Free plan available)	OpenScholar-Free	OpenRead-\$5/month (Free plan available)	Keenious-\$120/year (Free plan available)	Sourceley-\$9/month (Free plan available)	STORM Storm-Free	Evidence Hunt (biomed only) €120/year (Free plan available)

## AI-POWERED WRITING & READING ASSISTANTS

Jenni-\$20/month	Paperpal-\$119/year (Free plan available)	Writewise-\$11.6/month, \$95.8/year	Yomu-\$7/month or \$7/pay-as-you-go	Scholarity-\$9.99/month, \$99/year (Free plan available)	JSTOR AI Research Tool - Limited availability	SciSpace Copilot-\$20/month (Free plan available)
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## CHATTING WITH PDF

NotebookLM-Free	SciSummary-\$4.99/month	Anara-\$20/month, \$144/year (Free plan available)	ChatPDF-\$12.99/month (Free plan available)	Lateral-\$14.99/month, €120/year (Free plan available)	AskYourPDF-\$144.99/year (Free plan available)	Humata - \$1.99/month (.edu email), \$9.99/month (Free plan available)
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## LITERATURE MAPPING

Research Rabbit-Free	Inciteful-Free	Dimensions-Free	Litmaps-\$12.50/month, \$120/year (Free plan available)	Connected Papers - \$5/month, \$36/year (5 free graphs)
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## GENERATIVE AI APPS

ChatGPT-\$20/month (GPT-4), Free GPT-3.5	Claude-\$20/month (Claude 3 Opus) Free Claude 3 Sonnet	Google Gemini-\$20/month (Advanced), Free Gemini	Microsoft Copilot-\$20/month (Copilot +), Free Copilot	Pi-Free	Perplexity-\$20/month (Free plan available)
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## PRESENTATION MAKING TOOLS

Gamma-\$96/year (Free plan available)	Decktopus-\$14.99/month (Free plan available)	myRA-\$5/analysis (Free plan available)	Julius-Julius - €18.60/month
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## THEMATIC ANALYSIS

AudioPen-\$159 for 2 years (Free plan available)	Peer Reviewer GPT-Free	Napkin AI-Free	Map This - \$50/year (Free plan available)
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## DATA ANALYSIS

MindMeister-Free	Notion-Free	Notion AI-Free	Notion AI-Free
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Notion AI-Free	Notion AI-Free	Notion AI-Free	Notion AI-Free
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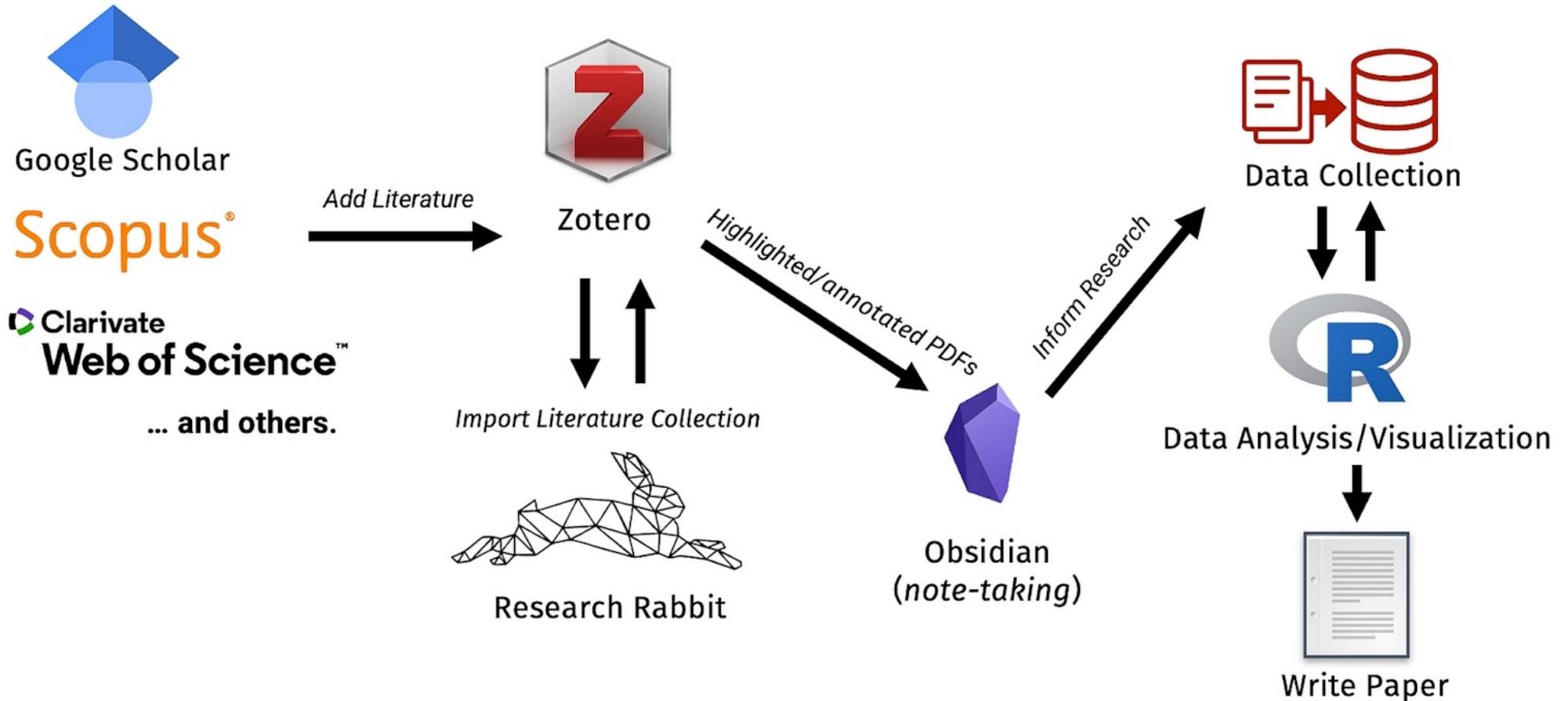
Notion AI-Free	Notion AI-Free	Notion AI-Free	Notion AI-Free
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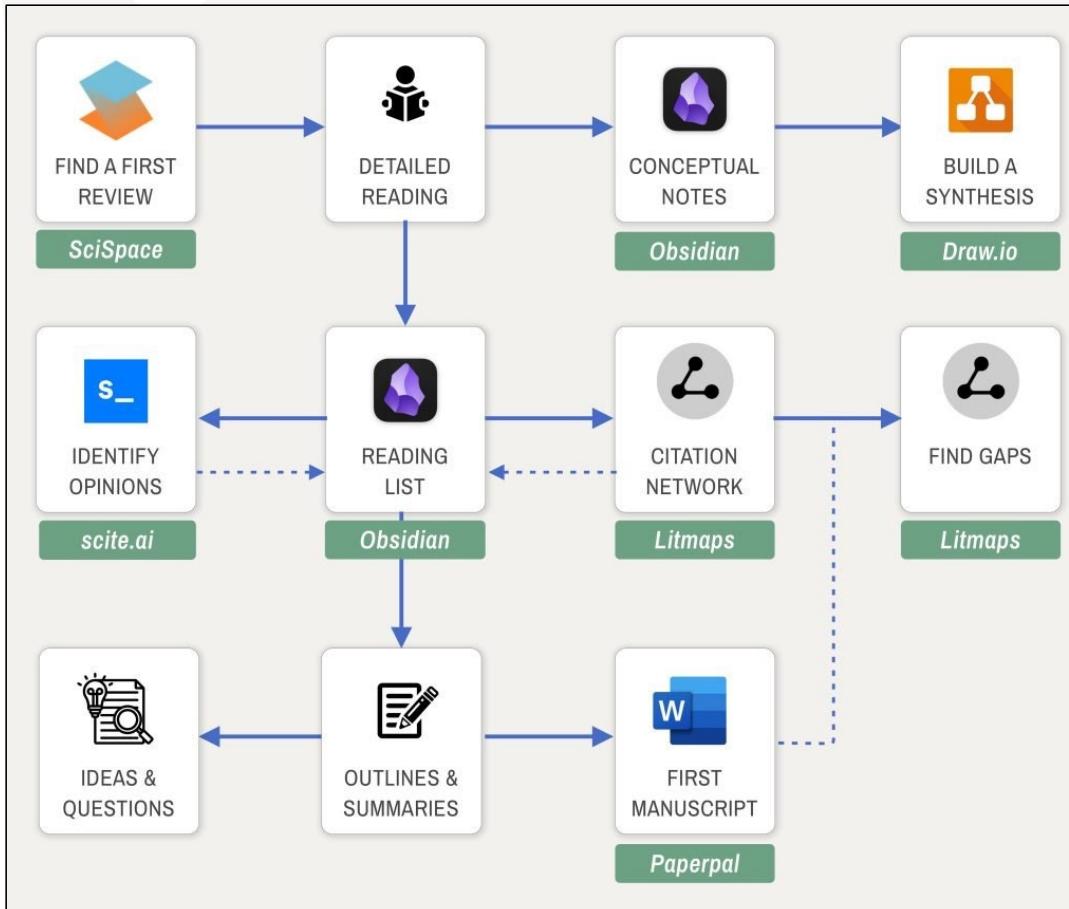
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# The Academic Research Workflow

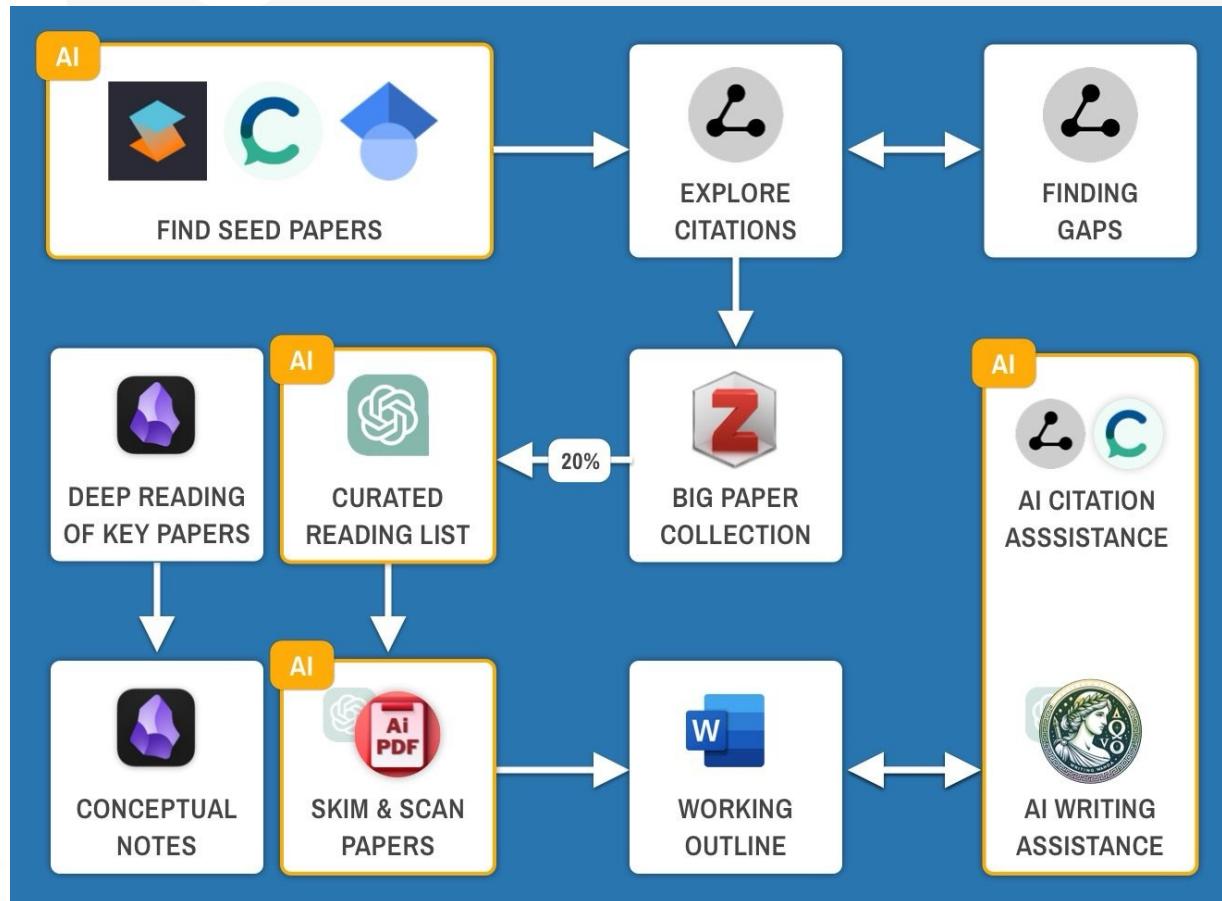
## Ruben Dario Palacio, PhD



# The Effortless AI Literature Review



# The Effortless AI Literature Review



# AI Tools

Topic	AI Tools
Generative AI	This tool is the powerhouse behind <b>creating new, original content</b> across various mediums, and it's pivotal in <b>customizing user experiences</b> by learning from data patterns.
Identifying Research Gaps	It is an analytical tool that scours the <b>scientific literature</b> to discover unexplored areas and provide researchers with a <b>roadmap for breakthrough discoveries</b> .
Paper Discovery	This tool acts as a <b>scholarly search engine</b> , helping users <b>find relevant academic papers</b> quickly and efficiently.
Paper Visualization	It transforms complex research findings into <b>engaging, visual representations</b> , making it easier to <b>grasp and communicate</b> scholarly information.
Text Summarizers	These are designed to <b>distill lengthy documents into concise summaries</b> , preserving key information while <b>saving time</b> for the reader.
Journal Matching	It aids authors by <b>matching their manuscripts</b> with suitable journals, ensuring a good fit based on the <b>paper's topic and quality</b> .
Others	This category includes a variety of specialized tools that <b>address specific needs</b> within the realm of applications, enhancing <b>efficiency and innovation</b> across diverse tasks.



# Research Gaps

# Scopus AI

The screenshot shows the Scopus AI homepage. At the top left is the Scopus logo with a tree icon. At the top right are a search icon and a menu icon. Below the header is a large "Start exploring" button. Underneath are five navigation tabs: "Documents", "Authors", "Researcher Discovery", "Organizations", and "Scopus AI", with "Scopus AI" being the active tab and having a "New" badge. A main search bar below the tabs contains the placeholder "What would you like to learn more about?". Under the search bar is a "Deep research" button with a radio button and an arrow icon. At the bottom left is a "Conversation history" section with the text "Sign in or [create account](#) to save and revisit your conversations."

Scopus

Start exploring

Documents Authors Researcher Discovery Organizations Scopus AI New

Explore topics and discover relevant references since 2003

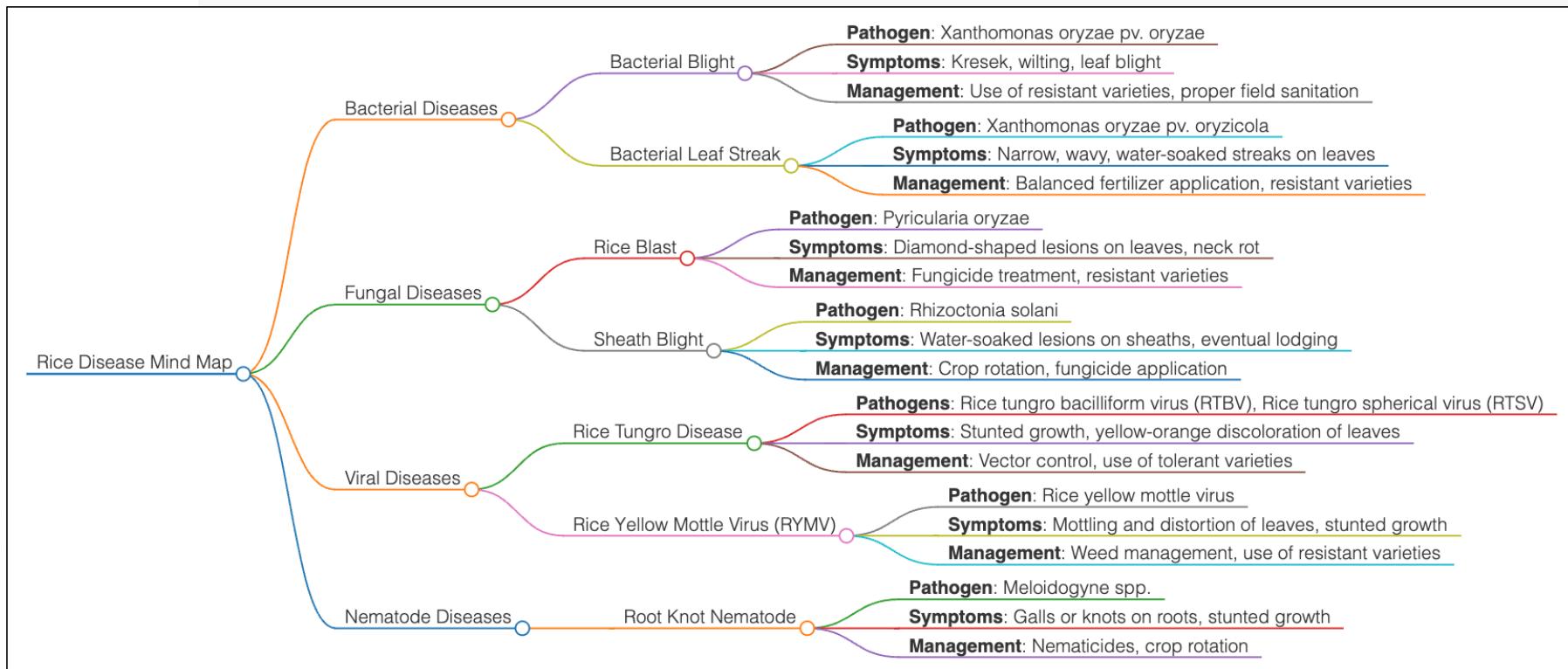
What would you like to learn more about?

Deep research →

**Conversation history**

[Sign in](#) or [create account](#) to save and revisit your conversations.

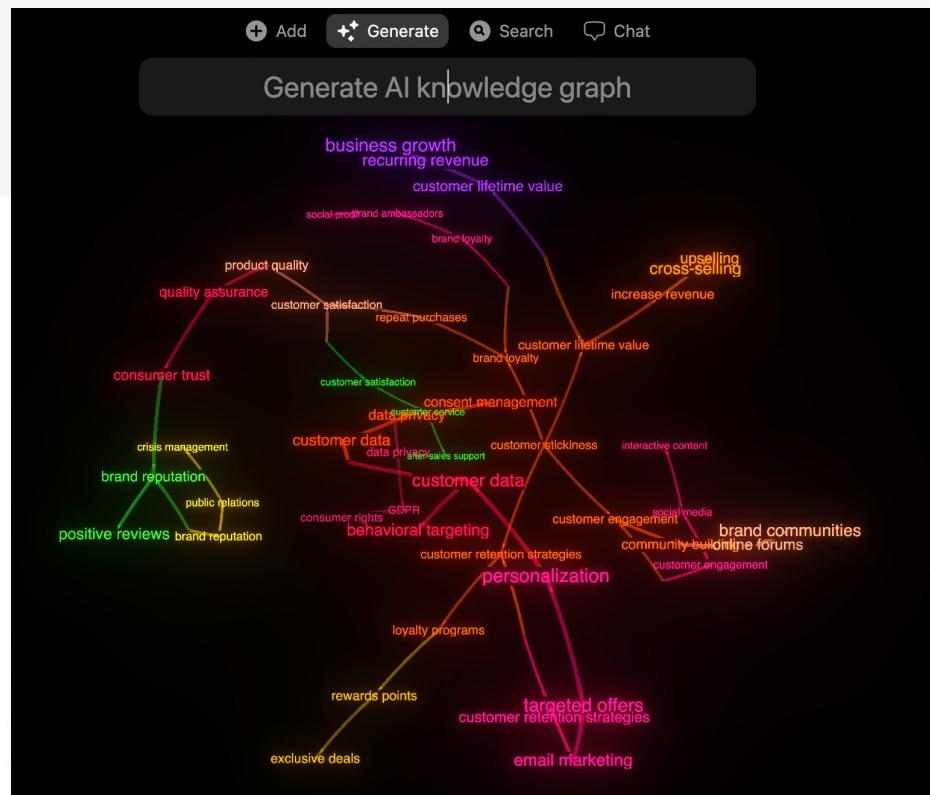
# MarkMap



Markmap is a tool that visualizes markdown documents as interactive mind maps. It's useful for organizing and navigating complex information, making it easier to understand and explore the content.



# Think Machine



Think Machine is a powerful 3d mind mapper with AI built in. It's the best way to visualize your thoughts and research new ideas.



SCISPACE

# SCISPACE

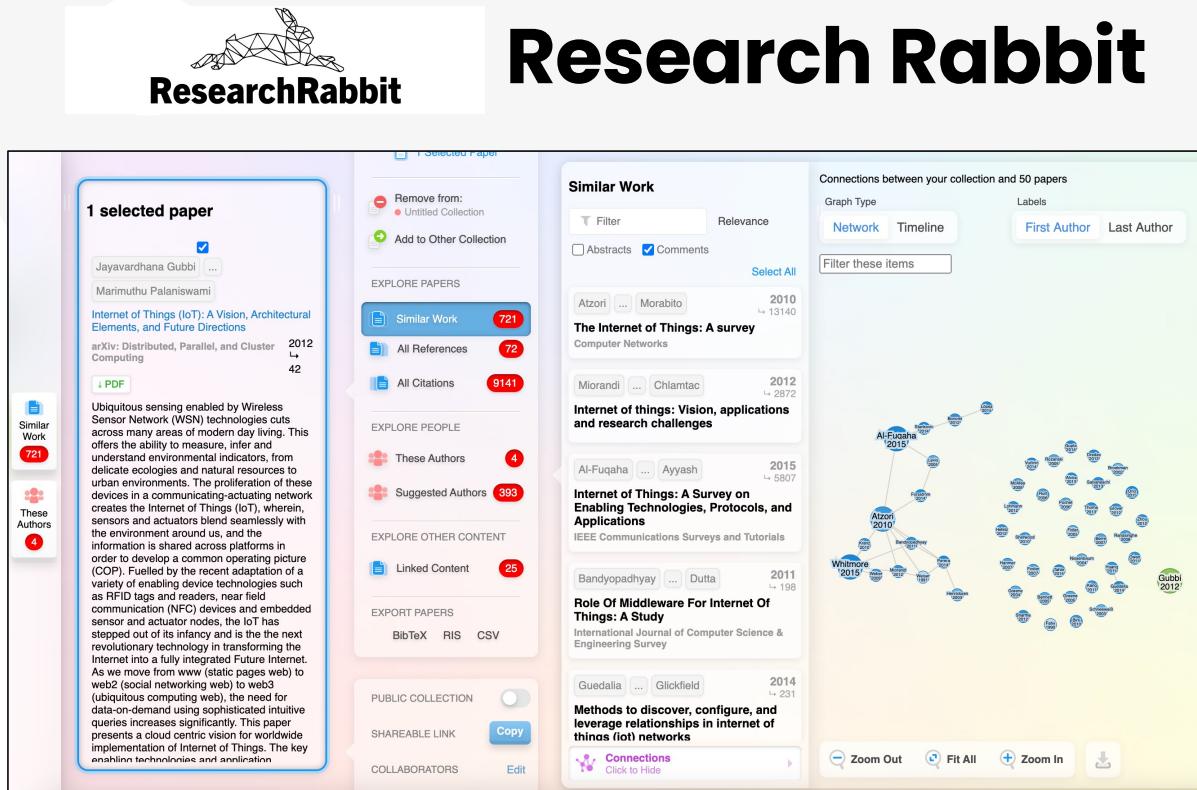
Educational pedagogy in language education encompasses various aspects such as learning styles, constructivism, digital technologies, and environmental education integration. Research emphasizes the importance of pluricultural and plurilingual competences for collaborative dialogue in language education [1]. Additionally, the analysis of learning styles and pedagogy in English highlights the significant contributions from the Social Sciences field, particularly through journal articles [2]. Constructivism plays a crucial role in shaping modern language teaching practices, especially in the digital age, by emphasizing knowledge transfer and changing teacher roles [3]. Moreover, the integration of digital technologies in language education, following pedagogical design principles like the ADDIE model, enhances the learning process and teacher information competence [4]. Lastly, environmental education integration in language learning aims to raise awareness of environmental issues and promote green pedagogy in ELT, emphasizing the need for environmental literacy programs and materials [5].

Was this helpful? Ask a follow up

Papers (10)	Insights	TL;DR
Book Chapter • DOI <a href="#">107 Emotion in language education and pedagogy</a> Kjersti Lohne 24 Apr 2023 Ask Copilot	Language education plays a crucial role in developing pluricultural competences through emotional factors, affecting language acquisition and learning, and promoting values and critical thinking in a diverse society.	In this article, the authors analyzed studies on how affective factors and emotions influence language acquisition and learning and proposed methodological principles and practical tasks that can be applied to language education and that may ensure the learning of values, attitudes, skills, knowledge and critical thinking needed in a plurilingual and pluricultural society.

Offers AI tools for literature review, including finding new, connected papers using a visual graph.

# Research Rabbit



Research Rabbit is a research discovery tool that helps you find new, connected papers using a visual graph. You can essentially create maps around metadata, which helps you not only explore similar papers but also connections between them.

# scite\_ Scite

The screenshot shows the scite search interface. At the top, there is a search bar with the placeholder "A model of factors affecting learning performance..." and an "Install extension!" button. Below the search bar is a navigation menu with links for Assistant, Product, Solutions, Pricing, Blog, and Login. The main search area has a "Search" dropdown set to "All" and various filters like Authors, Year, Sections, Types, Citations, Journal, Affiliation, Pub Type, Topics, Editorial Notice, MeSH, and More. The search results section displays 14,939 results found in 2.09 seconds. A summary text from a result discusses the relationship between social media and learning capabilities. Below this, a specific result is shown for a paper titled "Using Social Media as a Tool for Improving Academic Performance through Collaborative Learning in Malaysian Higher Education" by Waleed Mugahed Al-Rahmi, Mohd Shahizan Othman, and Lizawati Mi Yusof, published in 2015 in the journal RES. The result includes options to view full text, add to dashboard, and cite.

Analyzes the quality and credibility of research papers. While not directly identifying gaps, Scite's analysis of existing research limitations can point researchers towards areas needing more information or investigation.

# Paper Discovery



# Zeta Alpha

The screenshot shows the Zeta Alpha AI search interface. At the top, there's a navigation bar with 'R&D in AI', 'All of Science', and 'All the Web'. Below it is a search bar with the query 'Educational Leadership and Management'. The main area displays 14,178 results. One result is highlighted: 'Educational Leadership and Management' with a detailed description about guiding individuals, teams, and organizations in education. Another result is shown below: 'Leadership in AI: Is Your Leadership Fit for Data Science?' by Dr. Mandar Karhade, MD, PhD. On the right side, there's a 'Visualization' section featuring a neural network diagram titled 'Bibliometric Index for Academic Leadership' with various nodes and connections. At the bottom right, there are statistics: 'Documents: 50 | Similarity links: 401 | Groups: 4'.

Zeta Alpha is the best Neural Discovery Platform for AI and beyond. Use state-of-the-art Neural Search and Generative AI to improve how you and your team discover, organize and share internal knowledge. Make better decisions, avoid reinventing the wheel, make staying in the know effortless, and make an impact with your work faster.



# EvidentHunt

The screenshot shows the EvidenceHunt search interface. On the left, there's a sidebar with tabs for PICO, Category, and PubMed, with PICO selected. It includes fields for Intervention (e.g., drug, treatment, surgery), Study type (Randomized trial, Meta-analysis, Systematic review, Clinical intervention, Rodent study), Protocol, Sort by (Impact factor), and search filters (Only search last week, Focus on cost-effectiveness). A large blue 'Search' button is at the bottom. The main area is titled 'Search' and shows a result for 'Symptomatic Dengue in Children in 10 Asian and Latin American Countries'. The result includes the date (24 Mar, 2016), source (The New England journal of medicine), author (M L'Azou et al), and sample size (N = 3424 Clinical Intervention). Below the result is an 'Annotation legend' with Population (blue), Intervention (green), Control (orange), Outcome (purple), and Conclusion (teal). The full abstract of the study is displayed, mentioning children across 10 countries in Southeast Asia and Latin America, monitoring acute febrile illness and virologically confirmed dengue (VCD) in 3424 healthy children, and defining dengue hemorrhagic fever according to World Health Organization criteria.

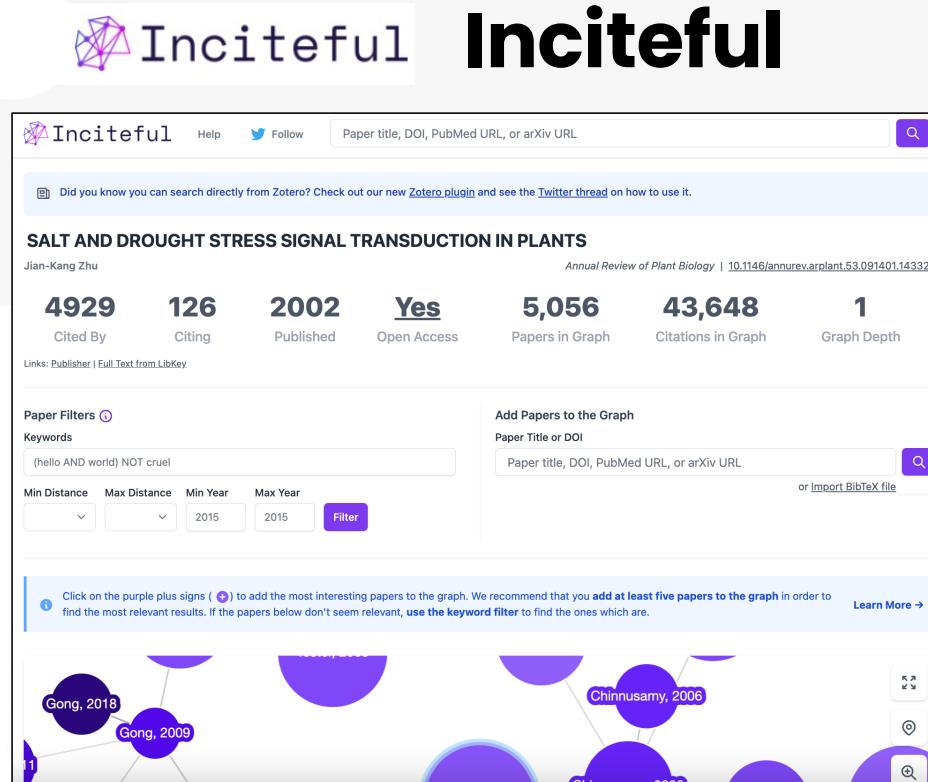
EvidenceHunt is an AI-powered clinical evidence search engine that helps healthcare professionals find the latest and most relevant evidence quickly and easily. It is based on a large dataset of clinical trials, systematic reviews, and other evidence sources, and uses artificial intelligence to identify and rank the most relevant results for each search query.

The screenshot shows the Semantic Scholar website interface. At the top, there is a logo with the text "SEMANTIC SCHOLAR". Below the logo, a search bar says "Search 217,798,411 papers from all fields of science". To the right of the search bar are buttons for "Search" and "MOI". The main content area features a profile card for "M. Othman". The profile card includes a blue circular icon with a white person symbol, the name "M. Othman", and statistics: Publications (123), h-index (22), Citations (1,850), and Highly Influential Citations (103). Below the stats are buttons for "Follow Author..." and "Claim Author Page". A note states: "Author pages are created from data sourced from our academic... show more". To the right of the profile card are four tabs: "Publications", "Citing Authors", "Referenced Authors", and "Co-Authors". Under the "Publications" tab, a paper titled "A model of factors affecting learning performance through the use of social media in Malaysian higher education" is listed. The paper is by W. Al-rahmi, Norma Alias, M. Othman, Victoria I. Marín, G. Tur, and Education, Computer Science. It was published in Comput. Educ. on 1 June 2018. It has 163 citations, 15 reviews, a PDF link, and options to Publisher, Save, Alert, and Cite. Below this is another paper titled "The impact of social media use on academic performance among university students: a pilot study" by W. Al-rahmi, M. Othman, and Education. It was published in 2013. A note states: "There is no doubt that Social media has gained wider acceptability and usability and is also becoming probably the most important communication tools among students especially at the higher level of... Expand". This paper has 151 citations, 14 reviews, a PDF link, and options to Save, Alert, and Cite. At the bottom of the profile card, there is a section for "Co-Authors" featuring L. M. Yusuf.

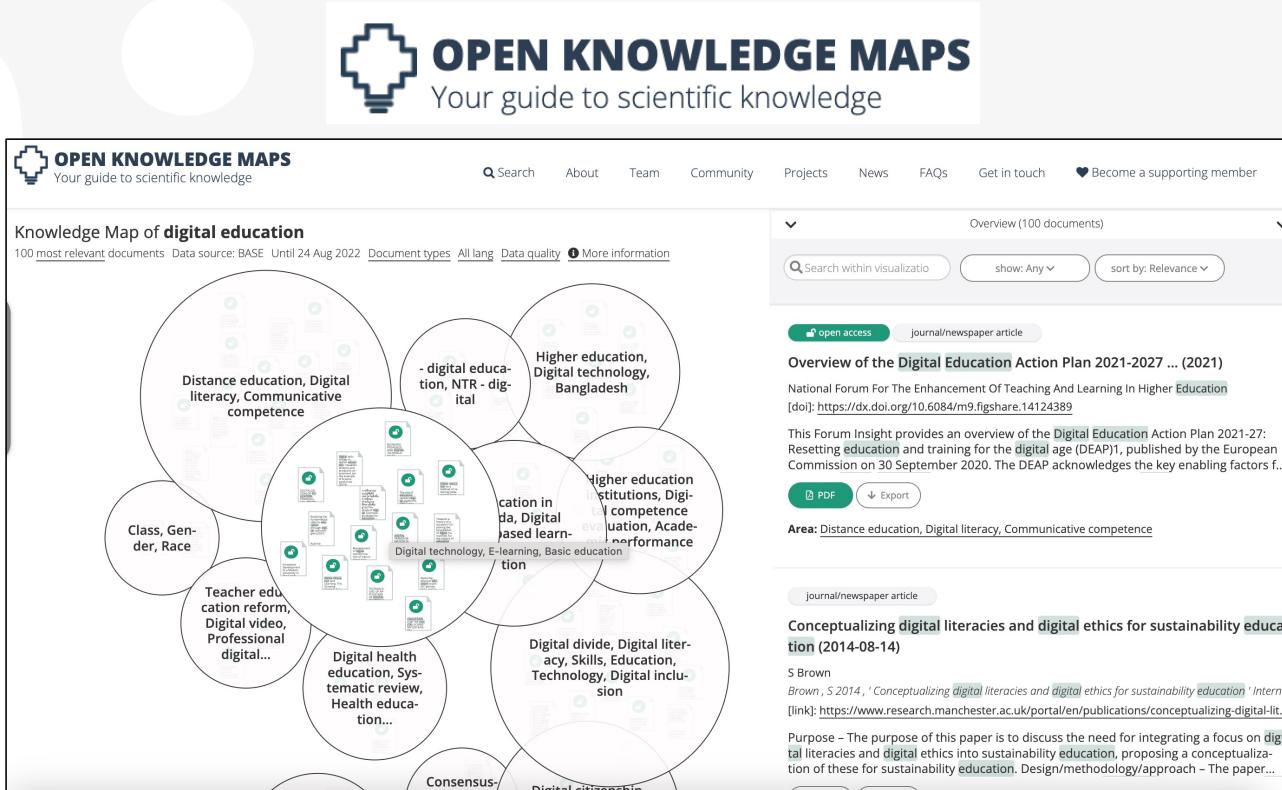
Semantic Scholar is a free AI-powered research tool that aggregates scientific literature from various fields of science, including nanotechnology and moral reasoning, and uses AI and engineering to understand the semantics of the research to help scholars discover relevant publications.



# Paper Visualization

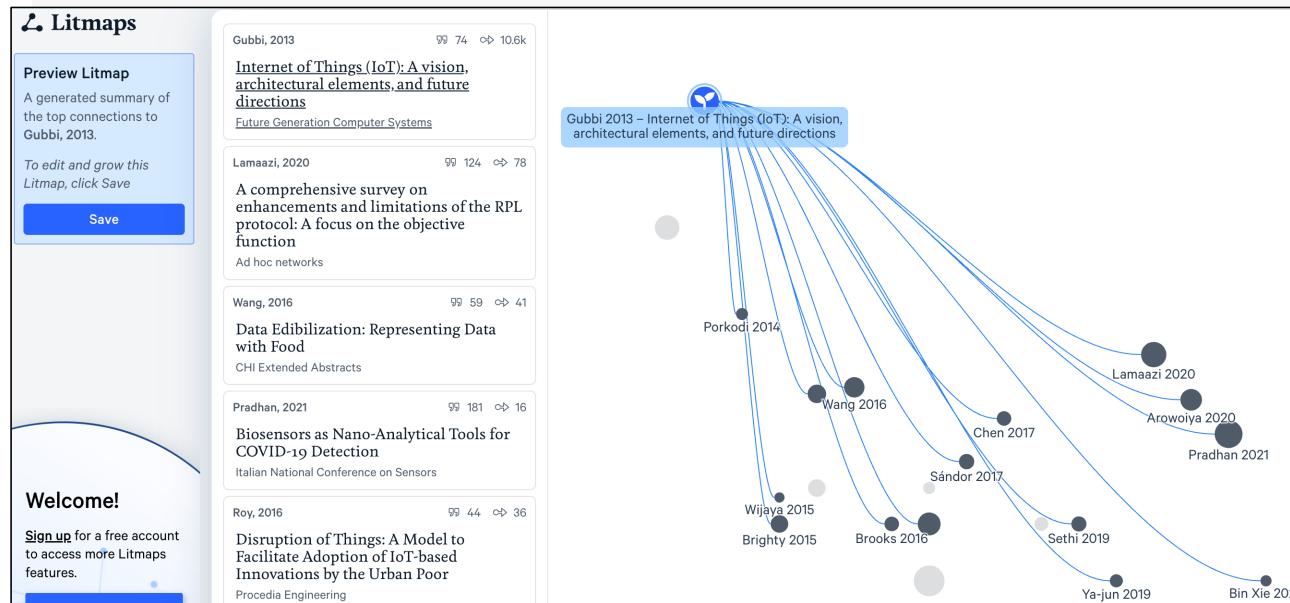


The goal of Inciteful is to give the world free tools to help you map academic literature. It can be used in a variety of ways depending on what you are trying to accomplish. Start from seed paper(s), you can have an overview on the current state of that topic. Then, by adding more seed papers or filters, you can further craft the citation graph and have a focus on your search.



Open Knowledge Maps (OKM) is an open-source platform for creating and visualizing knowledge graphs. It is based on the RDF (Resource Description Framework) standard, which makes it possible to integrate data from different sources.

# Litmaps Litmaps

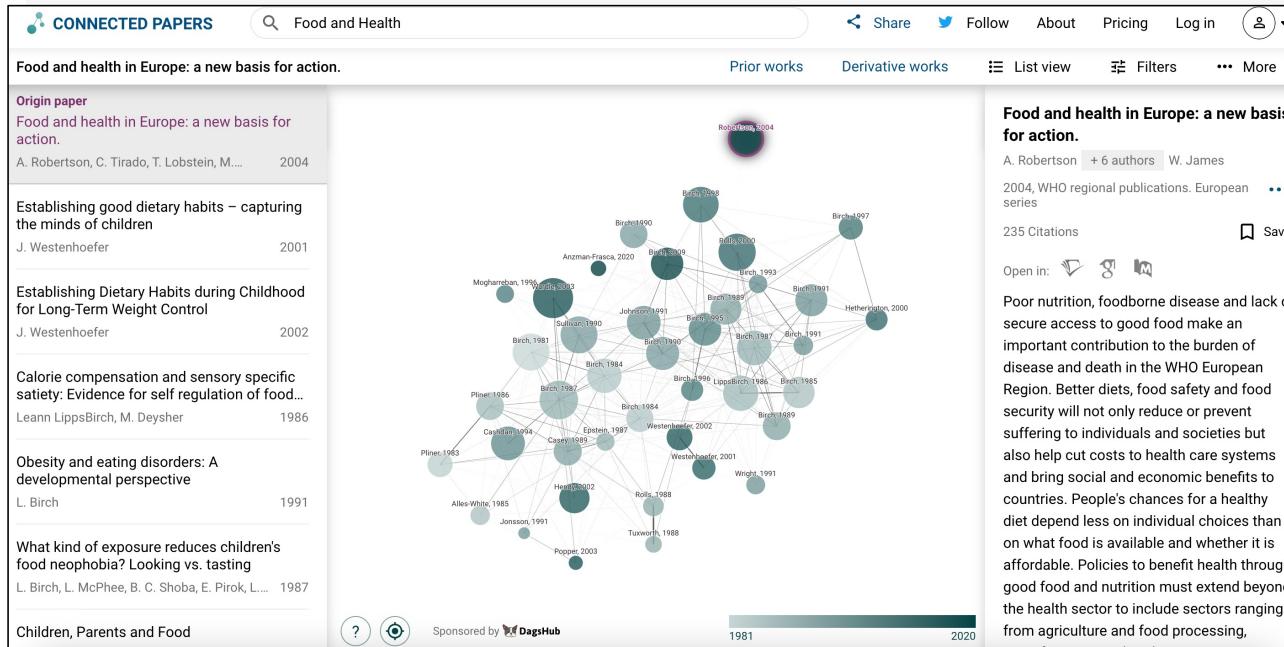


This tool creates visual maps of research topics based on AI analysis of scholarly articles. These maps can reveal under-explored areas within the topic.



CONNECTED PAPERS

# Connected Papers



Free tool that allows you to visually explore the relationships between different research papers. Creates a network graph where each node represents a paper and the edges between nodes represent citations. Helpful way to find new papers that are related to the research you are already familiar with.

# Question & Answer





# TERIMA KASIH

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Kerana Tuhan untuk Manusia