



Mahidol University
Faculty of Science

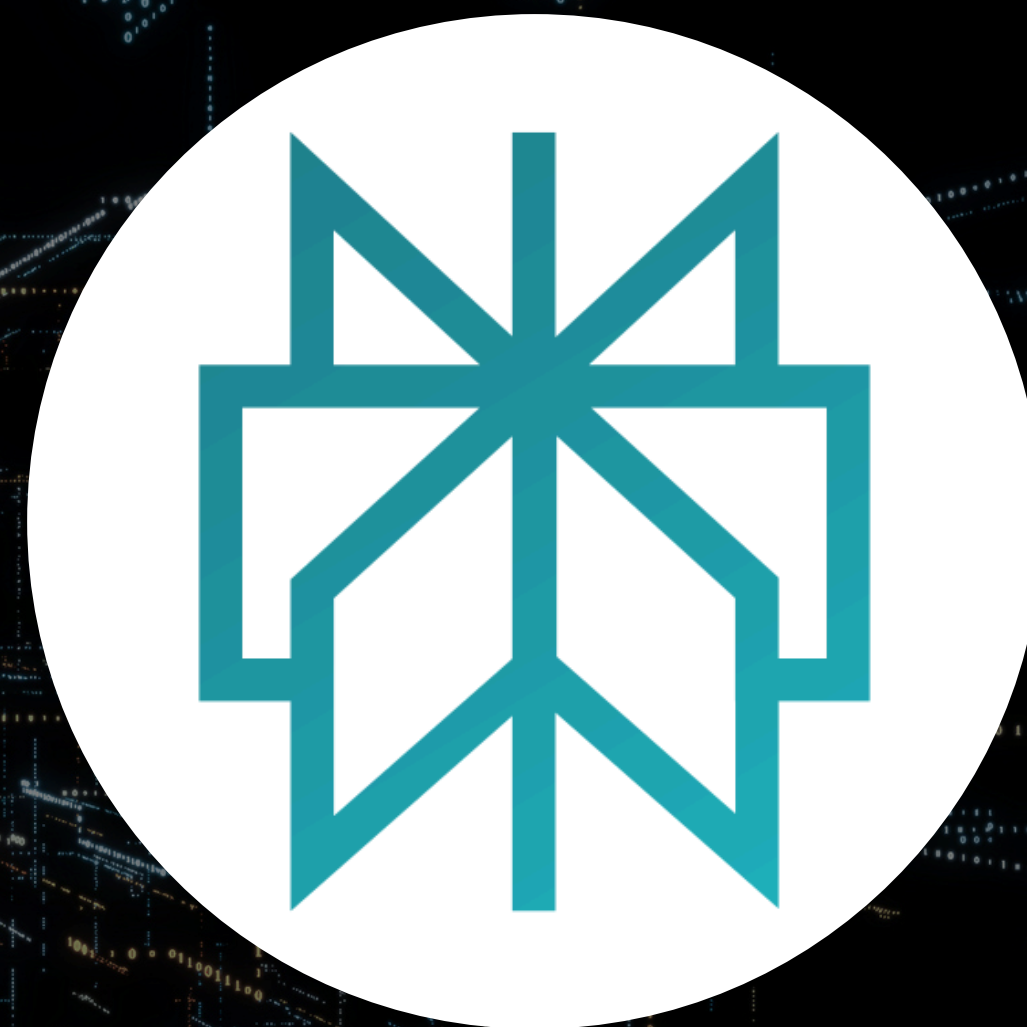
Stang Mongkolsuk Library
and Information Division



Stang Library Training
Information skills for you

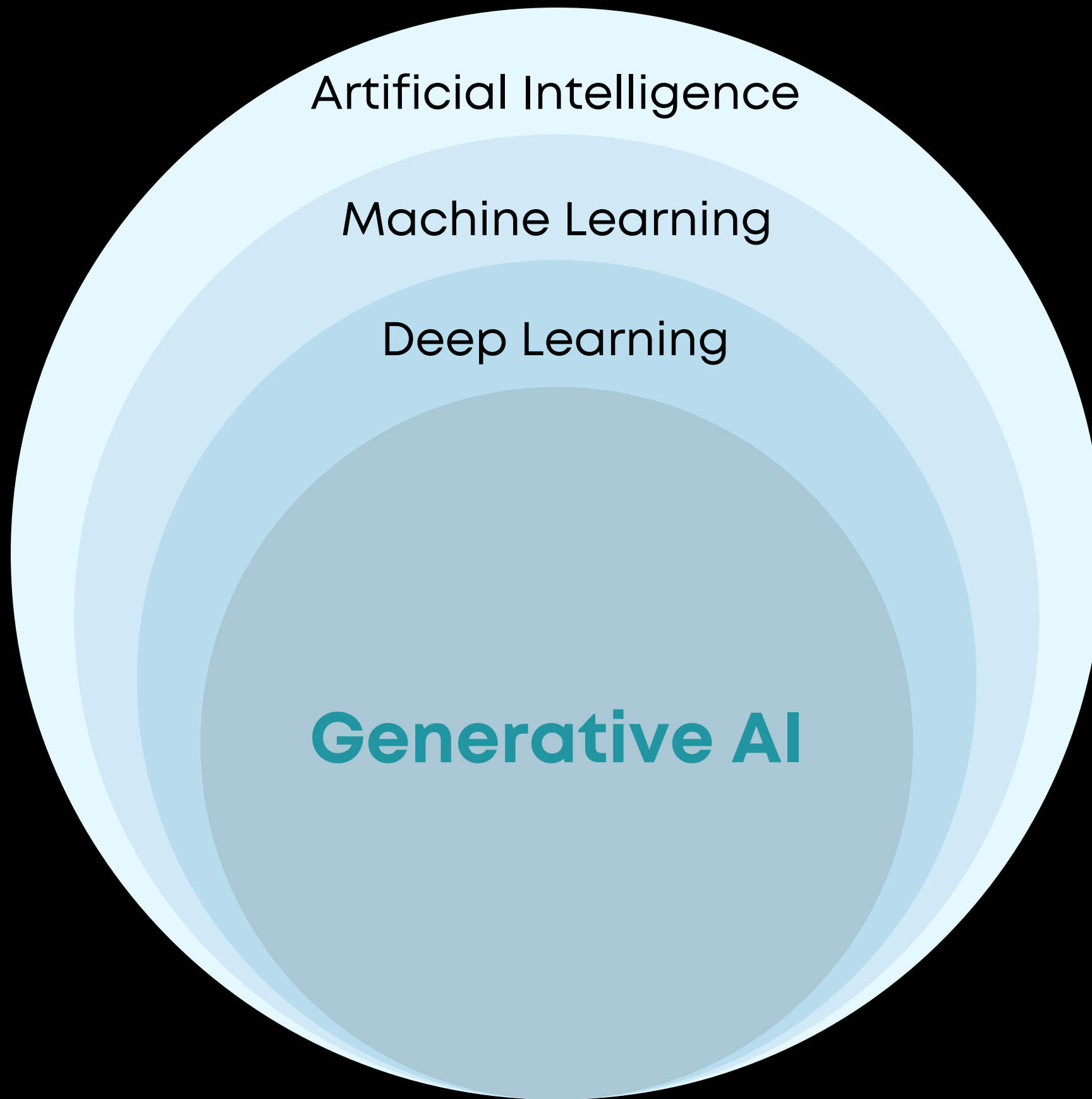
Generative AI with Perplexity

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20 November 2024

Stang Mongkolsuk Library & Information Division
Faculty of Science Mahidol University



Artificial Intelligence

A science devoted to making machines think and act like humans.

Machine Learning

Focuses on enabling computers to perform tasks without explicit programming.

Deep Learning

A subset of machine learning based on artificial neural networks.

Generative AI

Generate brand-new, unique artifacts that resemble but don't repeat the original data.

What is Generative AI?

Generative AI refers to AI techniques that learn a representation of artifacts from data, and use it to **generate brand-new, unique artifacts that resemble but don't repeat the original data**. These artifacts can serve benign or nefarious purposes. Generative AI can produce totally novel content (including text, images, video, audio, structures), computer code, synthetic data, workflows and models of physical objects. Generative AI also can be used in art, drug discovery or material design.

Source: <https://www.gartner.com/en/information-technology/glossary/generative-ai>

50 National AI Strategies - The 2020 AI Strategy Landscape

50 National Artificial Intelligence Policies as at February 2020.

HOLONIQ. GLOBAL INTELLIGENCE Holon IQ

Global AI Strategy Landscape

50 National Artificial Intelligence Policies as at February 2020.

Argentina Drafting the "National Plan of Artificial Intelligence". Falls under the Innovative Argentina 2030 Plan and the 2030 Digital Agenda.	Australia November 2019, AI Roadmap focused on specialization in health, infrastructure and natural resources. Planning for an additional 161,000 AI specialists by 2030.	Austria June 2019, 'Artificial Intelligence Mission Austria 2030 (AIM AT 2030)'. Outlines seven fields for which AI will be critical.	Belgium March 2019, 'AI 4 Belgium' launched and includes seven major objectives.	Brazil Consultation period ended January 2020. Building a network of eight research facilities focused on artificial intelligence.
Canada 2017 federal budget announced five-year, \$125m plan. Led by CIFAR. Research and talent focus. First National AI Strategy.	Chile Expected April 2020. Ministry of Science, Technology, Knowledge, and Innovation created a committee of 10 experts to develop.	China July 2017, China launched the most comprehensive AI strategy globally with 2030 targets for a \$11 TRM AI industry.	Colombia November 2019, first draft issued for 'National Policy for Digital Transformation'. Medellín to become an AI & Robotics Centre of Excellence.	Czech Republic May 2019, 'National Artificial Intelligence Strategy of the Czech Republic' was launched.
Denmark March 2019, Denmark announced the 'National Strategy for Artificial Intelligence' with four key objectives.	Estonia - Krotts Strategy May 2019, Estonian AI experts, led by government CIO produced a roadmap, later adopted as the Estonian National AI Strategy in July 2019.	Finland June 2019, 'Leading the Way into the Age of Artificial Intelligence' identified 11 key actions following May 2017 Steering Group announcement.	France €1.5 billion plan announced in 2018 influenced by the 'Vilani Report' to transform France into a global leader in AI.	Germany €3 billion plan announced Nov 2018 with a dedicated AI strategy to make Germany & Europe a global leader in AI.
Hungary October 2019, Hungary announced an AI Action Plan, the first pillar of a national AI strategy, expected in 2020.	India June 2018 working paper on using AI to ensure social growth, inclusion and positioning the country as a leader in AI.	Indonesia Indonesia Artificial Intelligence Society (IAIS) inaugurated under Smart Indonesia in October 2019. National Strategy expected in 2020.	Ireland Irish Economic Development Agency led process. AI Master program launched in 2018 and is 100% industry driven.	Israel Innovation Authority, tasked with AI policies, has warned that a strategy is needed to prevent falling behind.
Italy March 2018, AGID released a White Paper called "AI at the service of citizens," which was edited by the AI Task Force.	Japan March 2017, Japan's AI policy, the 'Artificial Intelligence Technology Strategy', was announced second only to Canada with 'Society 5.0'.	Kenya January 2018, government announced task force to create a five-year strategy on national use of emerging technologies.	Lithuania April 2019, Artificial Intelligence Strategy announced "to modernize and expand the current AI ecosystem and ensure that the nation is ready".	Luxembourg May 2019, launched 'Artificial Intelligence: a strategic vision for Luxembourg'.
Malaysia 2018, Malaysia revealed a National Artificial Intelligence Framework expanding the National Big Data Analytics Framework.	Malta October 2019, 'A Strategy and Vision for Artificial Intelligence in Malta 2030' Malta.ai launched and aspiring to be the 'Ultimate AI Launchpad'.	Mexico June 2018, 'Towards an AI Strategy in Mexico: Harnessing the AI Revolution', serves as a foundation for building full AI strategy.	Netherlands November 2018, AINED published a roadmap for developing a full national strategy.	New Zealand May 2018, AI Forum of New Zealand, released 'Artificial Intelligence: Shaping a Future New Zealand'.
Norway January 2020, Norway issued its National Strategy for Artificial Intelligence.	Pakistan Presidential Initiative for Artificial Intelligence launched December 2018, focused on training beginners in AI and advanced technology.	Philippines Nov 2019, AIM, Abaitiz School of Innovation, Technology and Entrepreneurship (ASITE) appointed to craft an AI roadmap.	Poland November 2019, 'Assumptions for the AI strategy in Poland' as an action plan towards developing an AI strategy.	Portugal February 2019, 'AI Portugal 2030', seeks strengthen economic growth, scientific excellence, and human development using with AI.
Qatar October 2019, National AI Strategy as a blueprint produced by Qatar Computing Research Institute (QCRI).	Russia October 2019, Russia published its National Strategy for the Development of Artificial Intelligence by 2030.	Saudi Arabia September 2019, Royal decree to establish an AI center, to align with the Kingdom's Vision 2030 program.	Singapore May 2017, AI Singapore is a five-year, S\$150 million national program launched in to enhance Singapore's capabilities in AI.	South Africa Intsimbi Future Production Technologies Initiative" launched in 2018 with aim to advancing manufacturing sector.
South Korea May 2018, five-year AI development plan launched with \$195B budget.	Spain March 2019, the Spanish Ministry of Science, Innovation and Universities launched the RDI Strategy in Artificial Intelligence.	Sweden National Approach for Artificial Intelligence launched in May 2018.	Switzerland An Artificial Intelligence (AI) expert group has published its recommendations for a Swiss AI strategy.	Thailand Thailand's Digital Economy and Society (DES) Ministry has drafted the country's first artificial intelligence (AI) ethics guidelines.
Tunisia AI Task Force and Steering Committee to develop a national AI strategy. The strategy was scheduled to be published in the first quarter of 2019.	United Arab Emirates October 2017 announced strategy. First country to create a Ministry of AI and first in the Middle East to launch an AI strategy.	United Kingdom April 2018, 'Sector Deal' announced. \$1.24B funding as part of the UK's larger industrial strategy.	United States of America February 2019 by Executive Order to promote and protect AI technology. AI.gov launched Mar 2019. Followed by the National Artificial Intelligence Research and Development Strategic Plan.	Vietnam Ministry of Information and Communications developing a broad AI strategy.

Source: HoloniQ and source government strategy and policy papers. www.holoniq.com

Source: <https://www.holoniq.com/notes/50-national-ai-strategies-the-2020-ai-strategy-landscape>

Thailand National AI Strategy

แผนปฏิบัติการด้านปัญญาประดิษฐ์แห่งชาติ เพื่อการพัฒนาประเทศไทย เพื่อการพัฒนาประเทศไทย (พ.ศ. 2565-2570)



Mahidol University Announcement about AI

ประกาศมหาวิทยาลัยมหิดล เรื่อง หลักการใช้เครื่องมือทางปัญญาประดิษฐ์ในการจัดการเรียนการสอน (27 พ.ย. 66)



ประกาศมหาวิทยาลัยมหิดล
เรื่อง หลักการและแนวปฏิบัติในการใช้เครื่องมือทางปัญญาประดิษฐ์ในการจัดการเรียนการสอน
มหาวิทยาลัยมหิดล พ.ศ. ๒๕๖๖

เพื่อให้การใช้เครื่องมือทางปัญญาประดิษฐ์ (Artificial Intelligence: AI) ในการจัดการเรียนการสอน
ของมหาวิทยาลัยมหิดล เป็นไปด้วยความเรียบร้อยและมีประสิทธิภาพ

อาศัยอำนาจตามความในมาตรา ๓๔ แห่งพระราชบัญญัติมหาวิทยาลัยมหิดล พ.ศ. ๒๕๕๐
อธิการบดีจึงออกประกาศไว้ดังนี้

ข้อ ๑ ในประกาศนี้

“เครื่องมือทางปัญญาประดิษฐ์” หมายความว่า เทคโนโลยีที่ถูกออกแบบและพัฒนาให้เครื่องจักร
หรือระบบคอมพิวเตอร์มีความชาญฉลาด สามารถคิด คำนวณ วิเคราะห์ เรียนรู้และตัดสินใจ โดยมีความสามารถเสมือน
หรือมากกว่ามนุษย์ สามารถเรียนรู้ พัฒนา และปรับปรุงกระบวนการทำงานเพื่อเพิ่มศักยภาพของปัญญาประดิษฐ์ได้
เช่น การจดจำคำพูด การแปลภาษา แชทบอท การโต้ตอบอัตโนมัติ ระบบอัตโนมัติที่ใช้หุ่นยนต์ทำงาน ฯลฯ

ข้อ ๒ มหาวิทยาลัยมหิดลสนับสนุนให้อาจารย์และนักศึกษาใช้เครื่องมือทางปัญญาประดิษฐ์
ในการเรียนการสอน โดยปรับกิจกรรมการเรียนการสอน การประเมินผล รวมถึงการทำงานต่าง ๆ ให้เหมาะสม
กับการใช้เครื่องมือทางปัญญาประดิษฐ์อย่างสร้างสรรค์และถูกหลักจริยธรรมทางวิชาการ บนพื้นฐานความรู้
ความเข้าใจและมีความรับผิดชอบต่อสังคม ตามหลักการดังนี้

Perplexity

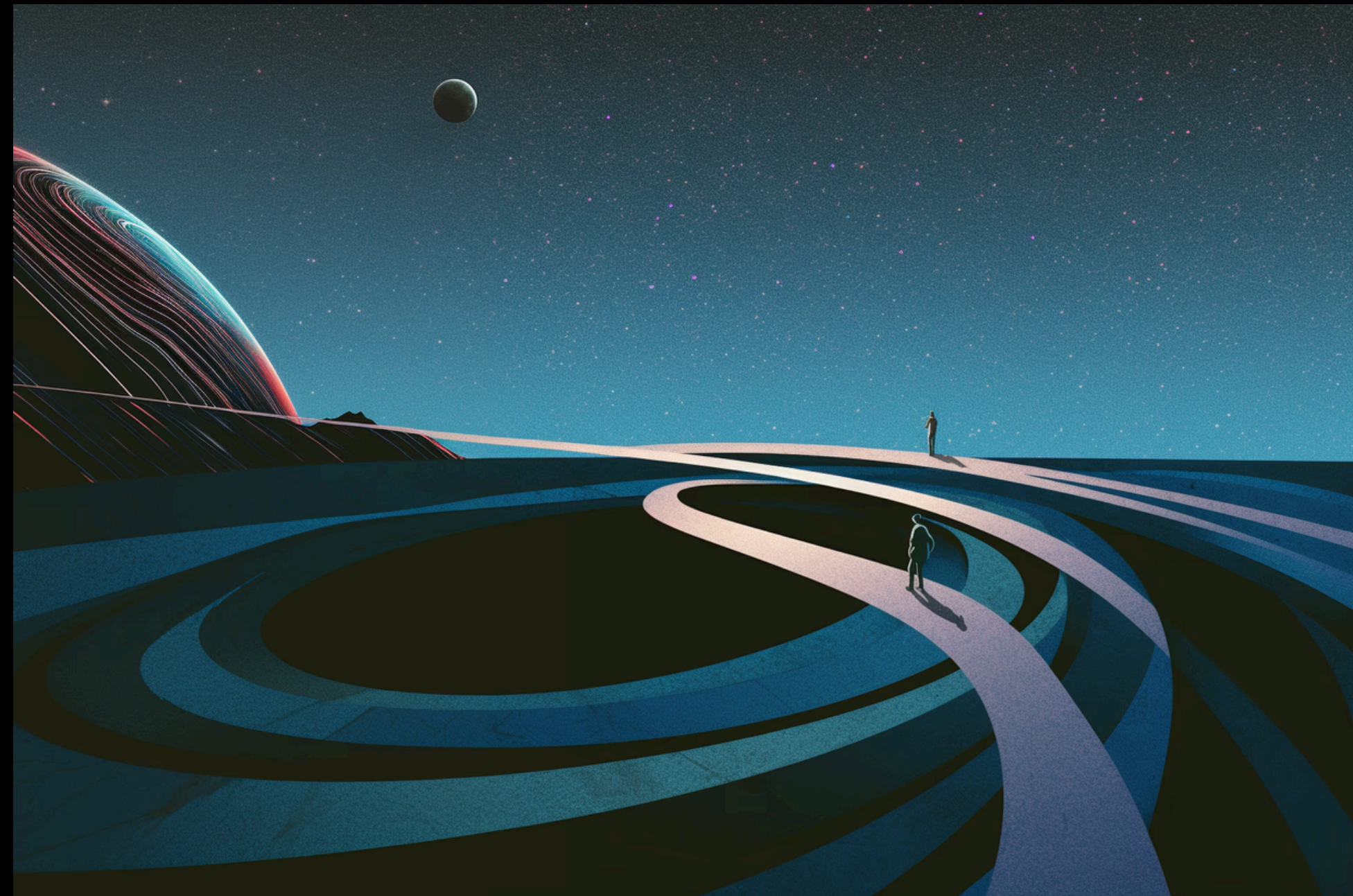


Perplexity is a free **AI search engine** designed to revolutionize the way you discover information. Ask any question, and it searches the internet to give you an accessible, conversational, and verifiable answer.

Since: 7 December 2022

Website: <https://www.perplexity.ai/>

Android & iOS: [Perplexity](#)



Updated: 20/11/2024

How does Perplexity work?

Example

For instance, if you ask, “What are the health benefits of yoga?”

Perplexity will:

- Scan health and fitness websites, medical journals, and yoga blogs
- Compile key facts into a helpful overview
- Provide a clear, concise answer with citations

Source: <https://www.perplexity.ai/hub/faq/how-does-perplexity-work>

Skip the links

Get a single, comprehensive answer that summarizes everything you need to know.

Real-time information

Data is pulled from the internet the moment you ask a question, so information is always up-to-date.

Reliable sources

Every answer is backed by citations from trusted news outlets, academic papers, and established blogs.

Search like never before

Whether you're researching for professional projects, seeking answers to everyday questions, or exploring new topics to broaden your understanding.

Source: <https://www.perplexity.ai/hub/faq/what-is-perplexity>

Google vs Perplexity

Search Engine



	Company
	Launch
	Device
	Price

Google, LLC

Perplexity AI, Inc.

27 September 1998

7 December 2022

Web / Android / iOS

Web / Android / iOS

Free

Free/Paid

Why Choose Perplexity?

Feature	Perplexity AI	Google Search
Search Style	Conversational, context-driven	Traditional list-based search
Content Generation	Yes, generates diverse content	No, primarily sources existing content
User Interaction	Highly interactive with follow-up capabilities	Limited interactivity
Data Sources	Uses advanced models with real-time indexing	Extensive database with comprehensive indexing
Personalization	Tailored based on user interaction	Personalized based on history
Ads in Results	None	Frequent ads at the top of results

Perplexity Blog

<https://www.perplexity.ai/hub>



Shop like a Pro

Perplexity's new AI-powered shopping assistant

[READ MORE](#)



Why we're experimenting with advertising

Nov 12, 2024



Introducing the Election Information Hub

Nov 1, 2024



About the Dow Jones lawsuit

Oct 24, 2024

Perplexity User Interface

Know it all

The image shows a screenshot of the Perplexity AI user interface. At the top, there is a search bar with the placeholder text "Search anything...". Below the search bar, there are several interactive elements: a "Focus" button with a hamburger menu icon, an "Attach" button with a plus icon, and a dark button labeled "Attach images, text, or PDFs." with a right-pointing arrow. To the right of these buttons is a "Pro" toggle switch and a right-pointing arrow. Below the "Focus" button, a menu is open, listing six search categories: "Web" (Search across the entire internet), "Academic" (Search for published academic papers), "Math" (Solve equations and find numerical answers), "Writing" (Generate text or chat without searching the web), "Video" (Discover and watch videos), and "Social" (Search for discussions and opinions). To the right of the menu, there is a grey "Extension" button with a close icon (X).

Search anything...

☰ Focus ⊕ Attach → Attach images, text, or PDFs. ● Pro →

- Web**
Search across the entire internet
- Academic**
Search for published academic papers
- Math**
Solve equations and find numerical answers
- Writing**
Generate text or chat without searching the web
- Video**
Discover and watch videos
- Social**
Search for discussions and opinions

Extension ×

Perplexity Free & Perplexity Pro

Standard

Start for free, no credit card needed.

Free

Forever

Continue with Free

- ✓ Unlimited Quick searches
- ✓ 3 Pro Searches per day
- ✓ Standard Perplexity AI Model optimized for speed and quality
- ✓ Create a profile to personalize your answers

Professional

Unlock the full capabilities of Perplexity and enjoy new perks as they are added.

\$20

Monthly

Continue with Pro

- ✓ Unlimited Quick searches
- ✓ 300+ Pro searches per day
- ✓ Select your preferred AI Model. Choose from GPT-4o, Claude-3, Sonar Large (LLama 3.1), and more
- ✓ Upload and analyze unlimited files
- ✓ Visualize answers using Playground AI, DALL-E, SDXL, and more
- ✓ Get \$5/month in API credits

Yes/No Question

- 1 Are dolphins fish?
- 2 Is Bangkok the Capital in Thailand?

Simple Question

- 1 How many district in Bangkok?
- 2 Where is Faculty of Science, Mahidol University?

Complicated Question

- 1 When did Thailand join ASEAN?
What kind of cooperation with ASEAN?

Summary/Analysis Content

- 1 Please, paraphrase this Abstract.
- 2 Please, design storyboard for Library Tours.

Limitations of Perplexity



Accuracy and Reliability Issues

- Hallucination
- Outdated Information

Limited Capabilities

- Multimodal Understanding
- Depth of Analysis

Search and Data Limitations

- Narrow Searching
- Bias Towards Certain Sources

Output Quality

- Inconsistent Responses
- Short Responses
- Limited Formatting Options

Practical and Ethical Concerns

- Plagiarism Accusations
- Lack of Clinical Validation