



PART I - Getting started with AI



Image by F. Reichert using MidJourney and prompt "an illustration of a girl looking at the world of AI --ar 4:1"

This artificial intelligence (AI) course is free and designed to help both individuals and teachers get started with AI. Find more articles at: [Learn - UiA CONSENSE](#)

Table of Contents

1. What is AI?	2
2. Who is using AI?	11
3. "KI" or "AI"?	14
4. Which chatbot?	17
5. SIKT KI-chat (Oct 2025: UiA/UiT has no access):	28
6. GPT UiO – UiO's privacy-safe AI chat	29
7. UiT Chatbot	30
8. Oppgave: "Who was John McCarthy?"	32
9. Assignment: Create a lesson on "AI and privacy".	33
10. A better request that takes the context into account	40
11. Norway investing in AI Research - 850 MNOK in 2024	42
12. Create an illustration	43
13. The Future of AI	44
14. AI in Norway (optional)	45
15. Approved AI at UiA	46
16. Additional References (optional)	47
17. Image Gallery (optional)	49

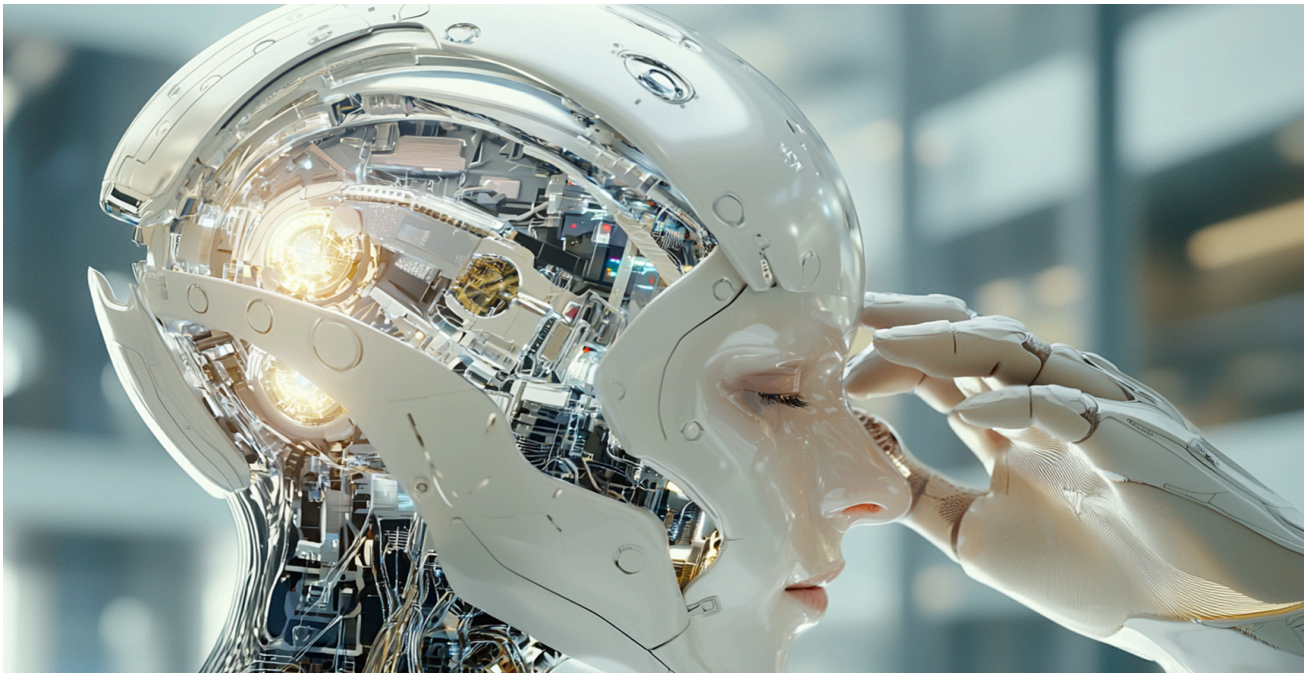
The course is licensed under [Creative Commons Attribution-ShareAlike\(CC BY-SA 4.0\)](#).

Document created by F. Reichert, University of Agder, Norway.



AI
For
All

1. What is AI?



Systems that are designed to **mimic** human cognitive abilities.

- learning from experience
- understanding natural language
- solving complex problems
- making informed decisions.



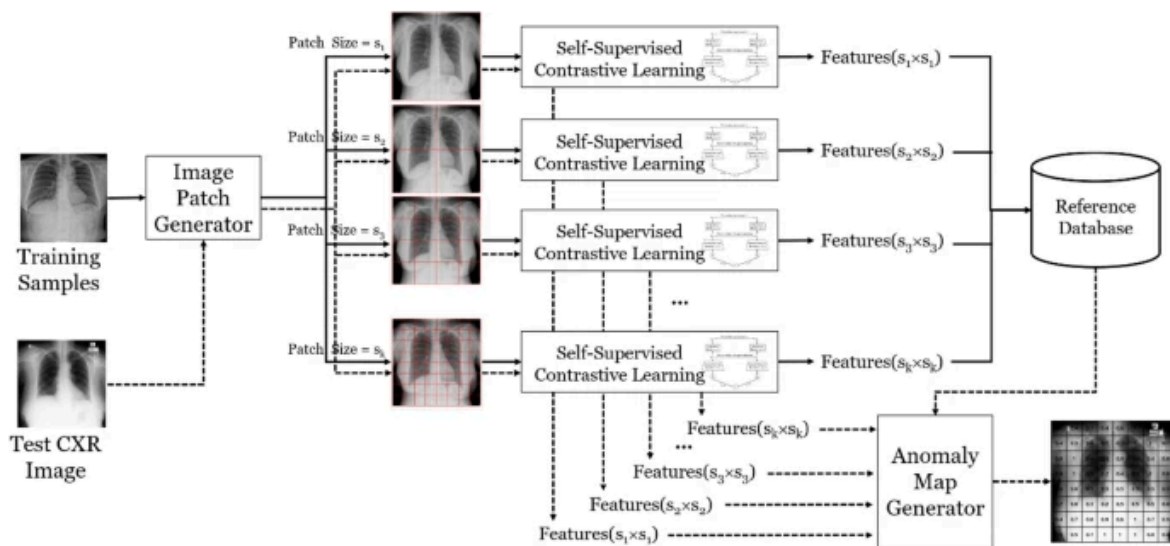
take the fast lane. Jump over [to the next part.](#)



AI
For
All

Anomaly detection for posteroanterior chest X-rays

Figure 1



Overall process of anomaly detection in CXR images.

[Full size image >](#)

Source: Zhou, Z., Chen, Y., Zeng, Y., Dai, X., Zhou, J., & Zou, J. (2023). Multiscale deep learning model for whole-body bone age estimation. *Nature Scientific Reports*, 13, 1603.

<https://doi.org/10.1038/s41598-023-30589-w>

About 4-5 billion estimated in 2020. About 3.6 billion in 2016.

Rehani, M. M., & Nacouzi, D. (2020). Higher patient doses through X-ray imaging procedures.

Physica Medica, 79, 80-86. <https://doi.org/10.1016/j.ejmp.2020.10.017>



AI
For
All

Norway's [national strategy for artificial intelligence](#) (Regjeringen, 2020) goes even further:

"The technology will not only make it possible to solve tasks increasingly better, it will also make it possible to solve tasks in completely new ways."



Regjeringen (2020, January 14). **National strategy for artificial intelligence.**

<https://www.regjeringen.no/no/dokumenter/nasjonal-strategi-for-kunstig-intelligens/id2685594/>



AI
For
All

Drowning in documents



Image by F. Reichert using MidJourney and prompt “a bureaucrat droqning in piles of documents”
(yes, with spelling error...)



AI
For
All

Analyse og klassifisering av ustrukturerte data i Utenriksdepartementet

Utenriksdepartementet (UD) mottar årlig 5-6000 rapporter fra utenriksstasjoner, delegasjoner o.l. Tidligere har det vært svært vanskelig å finne frem i all denne informasjonen.

Etter at UD i 2018 tok i bruk maskinlæring med behandling av naturlig språk for å analysere og klassifisere innholdet i disse dokumentene, er det blitt mulig å finne frem til nesten all relevant informasjon om et emne. Løsningen brukes også til å hente ut den viktigste informasjonen i rapporter og lage oppsummeringer.

I arbeidet med løsningen har UD samarbeidet med Universitetet i Oslo, som har bidratt med løsninger for kategorisering av norsk språk. Planen er å utvide løsningen med informasjon fra arkiv og eksterne forskningsrapporter etter hvert.

Kilde: Utenriksdepartementet

From: Regjeringen (2020, January 14). **National strategy for artificial intelligence.**

<https://www.regjeringen.no/no/dokumenter/nasjonal-strategi-for-kunstig-intelligens/id2685594/>





AI
For
All

AI and Genetics

Ada Lovelace Institute

About Our work Ada in Europe Blog News & events

Home / Our work / Library

Report

DNA.I.

Early findings and emerging questions on the use of AI in genomics

Harry Farmer
31 August 2023

Reading time: 70 minutes

DNA.I. (opens in new tab)
(PDF 262 KB)

TTCAGAATGGAATTAGGA
CACTAGGATAACCTAGATTAGATA
TTCAGAATGGAATTAGAATGG
CACTAGGATGGATAAGTAGGATG
TTCAGAATGGAAGGATGGATAA
CACTAGGATAACCTAGTAACC
TTCAGAATGGAATTCAGAATG
CACTAGGATTAACCTAGCAGAATG
CACTAGGATTAACCTAGCAGAATG

<https://www.adalovelaceinstitute.org/report/dna-ai-genomics/>

Mentions:

- “**AI-powered genomic health personalisation:** the ability to understand how treatment for the same health condition might vary between different people on the basis of genomic variations, and to tailor and adapt treatments accordingly.”
- “**AI-powered genomic health prediction:** the use of genomic data to estimate the probability of different people developing particular health conditions, responding well or badly to particular medicines or treatments, or being affected by lifestyle factors.”

References

Ada Lovelace Institute. (2021). *Exploring the intersection of DNA, AI and genomics: Ethical and social implications*. Ada Lovelace Institute.

<https://www.adalovelaceinstitute.org/report/dna-ai-genomics/>



AI
For
All

Definition of AI:



Definition of AI:

AI, or artificial intelligence (Tidemann, 2024), is an exciting field within research and technology that focuses on creating intelligent machines.

These systems are designed to mimic human cognitive abilities, such as learning from experience, understanding natural language, solving complex problems, and making informed decisions.

Norway's [national strategy for artificial intelligence](#) (The Government, 2020) goes even further:

"The technology will not only make it possible to solve tasks increasingly better, it will also make it possible to solve tasks in completely new ways."



AI
For
All

Examples of AI in the real world:



- **Handwriting recognition:** AI systems that can accurately interpret and transcribe handwritten text, thus turning it into digital format. This technology is used in digital notes, processing forms and more.
- **Virtual assistants** (eg Siri, Alexa): AI-powered assistants that respond to voice commands and perform a wide range of tasks. They provide information, set reminders, control smart devices in the home and can even participate in simple conversations.
- **Recommender systems:** AI algorithms that analyze user behavior and preferences to suggest personalized content, such as movies, music or products. These systems improve the user experience on platforms such as Netflix, Spotify and Amazon.
- **Self-driving cars:** AI technology that enables vehicles to navigate and drive without human intervention. This involves complex tasks such as object recognition, route planning and decision-making in real time.

[Back to top](#)

References

- Tidemann, A. (2024, July 22). Artificial intelligence. Large Norwegian encyclopedia.
https://snl.no/kunstig_intelligens
- Regjeringen . (2020, January 14). National strategy for artificial intelligence.
<https://www.regjeringen.no/no/dokumenter/nasjonal-strategi-for-kunstig-intelligens/id2685594/>



AI For All

- MinnaLearn & University of Helsinki. (2020). Elements of AI.
<https://www.elementsofai.com/no>
- European Commission. (2018, December 12). Definition of artificial intelligence: Main capabilities and scientific disciplines.
<https://digital-strategy.ec.europa.eu/en/library/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines>
- The Digitization Directorate. (n.d.). Artificial intelligence.
<https://www.digdir.no/kunstig-intelligens/kunstig-intelligens/4132>
- European Commission. (2024). Regulatory framework proposal on AI.
<https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>

[Back to top](#)





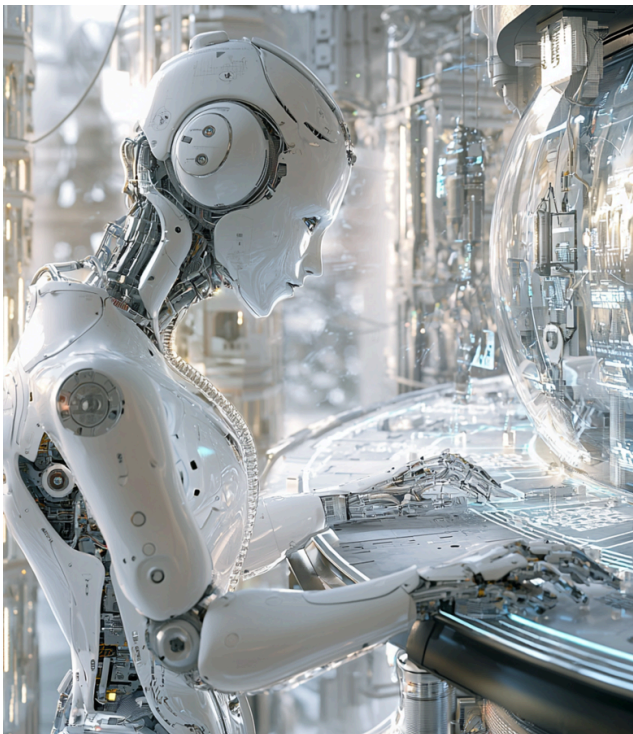
AI
For
All



By F. Reichert using Midjourney

Grace (18), Uganda

- Access to high-quality information
 - Personal Tutor & Trainer
 - Overcome language barriers
 - Cost efficient
-
- UN SDG4: "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"



Robots, Everywhere

- Omnipresence in Society
- Flexibility and Adaptability
- Handling Complexity
- Working in Dangerous Environments
- Cost-Efficiency in the Long Term



AI
For
All



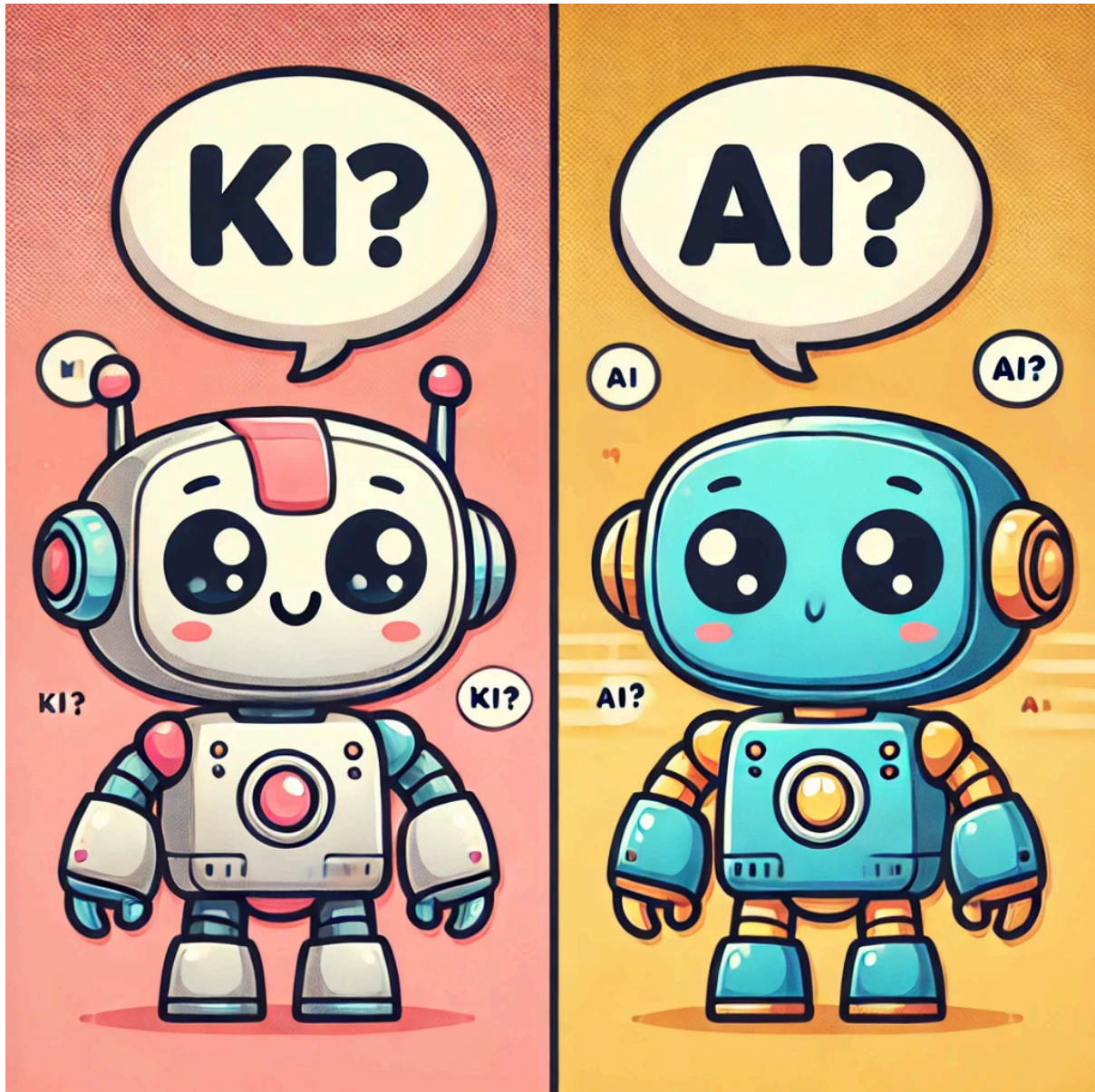
YOU :-)



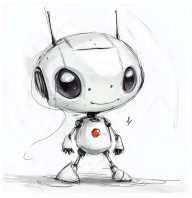
AI
For
All

3. "KI" or "AI"?

Should we use "KI" or "AI" when we communicate in Norwegian?



take the fast lane. Jump over [to the next part.](#)

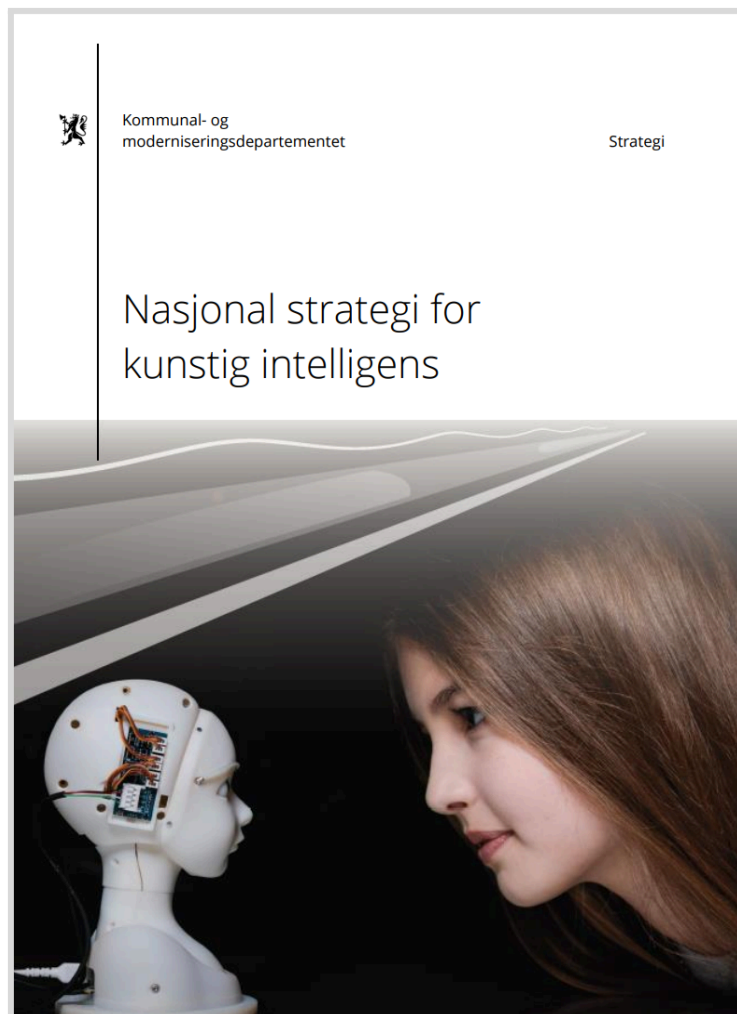


AI
For
All

According to **The Language Council** and official documents such as "**National Strategy for Artificial Intelligence**" (Government, 2020) is "**KI**" (**artificial intelligence**) the preferred term in the Norwegian context.

The Language Council encourages the use of Norwegian terms in language technology (The Language Council, n.d.), which emphasizes the importance of using "AI" rather than "AI".

It is worth noting that "KI" is defined in Norwegian dictionaries (Ordbøkene, n.d.), which further reinforces that "KI" is the preferred term in Norwegian.



Kommunal- og moderniseringsdepartementet. (2020, January 14).

[National strategy for artificial intelligence.](#)



AI
For
All

Bokmålsordboka ¹

KI

SUBSTANTIV *hankjønn*

Skjul bøyning ^

entall		flertall	
<i>ubestemt form</i>	<i>bestemt form</i>	<i>ubestemt form</i>	<i>bestemt form</i>
<i>en KI</i>	KI-en	KI-er	KI-ene

OPPHAV forkorting for kunstig intelligens

BETYDNING OG BRUK

1. kunstig intelligens

Eksempel

bildene blir analysert ved hjelp av KI

2. system som bruker kunstig intelligens til å generere svar og løsninger;
KI-system

Eksempel

KI-en kan generere tekst og bilder

Source: Ordbokene. (n.d.). TO. <https://ordbokene.no/nob/bm/KI>

References

- NRK. (2023, December 12). 'AI-generated' is the word of the year in 2023. <https://www.nrk.no/vestland/ki-generert-er-arets-ord-i-2023-1.16673773>
- Ordbokene. (n.d.). TO. <https://ordbokene.no/nob/bm/KI>
- Regjeringen. (2020, January 14). National strategy for artificial intelligence. <https://www.regjeringen.no/no/dokumenter/nasional-strategi-for-kunstig-intelligens/id2685594/?ch=2>
- The Language Council. (n.d.). Language technology. <https://sprakradet.no/sprakteknologi/>
- The Language Council. (2023, December 12). The word of the year is AI-generated. <https://sprakradet.no/aktuelt/arets-ord-er-ki-generert/>

[Back to top](#)



AI
For
All

4. Which chatbot?



Created by F. Reichert using Sora by OpenAI and prompt "A class of university colleagues in the year 2077 studying pedagogics using holographic models. There is a expert professor moderating the lecture."

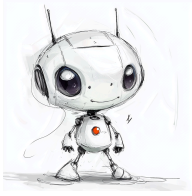
Some of you may already have experience with chatbots, while others may not. We hope that the following part of this introductory module has something of interest for everyone. Try out some of the tips and see if you can use some of the answers you get. You can also customize the text from the chatbot, so you get it the way you want it.



UiA recommends (march 2025): GPT UiO and Copilot - see [UiA recommendation](#)

The most popular chatbots at the moment are:

- [Microsoft Copilot](#)



AI For All

- [Openai ChatGPT](#)
- [Google Gemini](#)
- [Anthropic Claude](#)
- [Perplexity](#)

The most popular choices at the moment are **ChatGPT** and **Gemini**. Both can be used free of charge.



The new player in the field is [DeepSeek AI](#) developed in China. It outperforms ChatGPT on several benchmarks and was developed and trained at only a fraction of the cost. This has sent shockwaves through AI stocks in the USA. For more information, see [Reuters](#) or [BBC](#).

Service aggregators like [Poe.com](#) offer a wide range of different chatbots and AI apps. They are worth trying.



Be extremely cautious with chatbots and sensitive information. Most non-European chatbots from the USA and China have weak or no privacy protection. Assume the worst and use common sense.

For most of the exercise, we will use Copilot, as it is often offered by your organization, and ChatGPT for comparison.

Many of them have apps that you can download to your phone so you can use them anytime.






In **Google ID** is very convenient when testing out tools and logging in. You can register for one here:

- Open a web browser and go to accounts.google.com/signup.

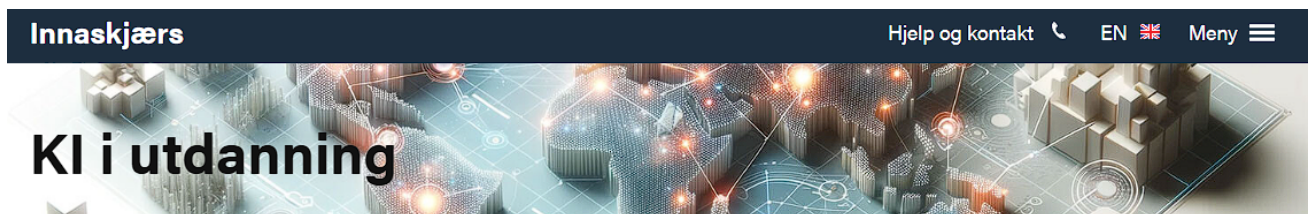


AI
For
All

Mobile chatbot clients

	Iphone/Ipad IOS	Android
 Copilot	yes	yes
 ChatGPT	yes	yes
	Yes (Hidden in the Google app)	yes

Please note that these mobile chatbots may behave differently than the chatbots suggested by your organization, for example in terms of privacy.



UiA:




- [KI i utdanning](#)
- [Om bruk av ChatGPT og andre tjenester som benytter kunstig intelligens på UiA](#)



AI
For
All

Testing ChatGPT, Gemini and Claude

(remark: if you enter a "/" in ChatGPT a context menu opens in the prompt line.)

Test Prompt	 ChatGPT	 Claude	
give a 40 word summary of the UiT Course BIO-3030.	BIO-3030 "Extreme Animal Physiology" is a 20 ECTS master-level course at UiT focusing on how animals maintain <u>homeostasis</u> under extreme environmental conditions. en.uit.no	BIO-3030 at UiT is "Extreme Animal Physiology," a 20-ECTS master's course examining how animals use control systems to handle environmental challenges regarding oxygen, water, temperature, and energy, with focus on adaptations in extreme environments, particularly polar regions. BIO-3030 UiT	BIO-3030: Extreme Animal Physiology is a 20 ECTS UiT course focusing on how animals, particularly in extreme environments, achieve <u>homeostasis</u> and physiological adaptation. It uses case studies to examine control systems for oxygen, temperature, water/electrolytes, and energy balance.
	ChatGPT	Claude	Gemini (Google)
give two different examples of homeostasis in the arctic. bullets. max 20 words per bullet.	Arctic fox maintains body temperature through dense fur and seasonal color changes for insulation and camouflage. Polar bears regulate heat loss by thick blubber and reducing blood flow to extremities in cold conditions.	Arctic cod maintain body temperature near freezing using antifreeze proteins that prevent ice crystal formation in their blood. Arctic Adaptations: Survival in Extreme Temperatures - Ocean Wise Polar bears and seals maintain constant warm body temperature in subfreezing water using thick blubber insulation and fur layers. EmpoWord	Thermoregulation: Arctic mammals like seals and polar bears maintain a constant, warm body temperature using thick blubber and fur for insulation. Circulatory Control: The arctic fox reduces blood flow to its extremities (like feet and ears) to conserve core body heat in frigid temperatures.



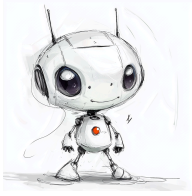
AI For All

		OpenEd CUNY	
	ChatGPT	Claude	Gemini (Google)
List 20 homeostasis mechanisms that Arctic animals use. bullets. max 15 words per bullet	<p>Thermal insulation – thick fur traps air, reducing conductive heat loss.</p> <p>Adipose insulation – subcutaneous blubber conserves core temperature.</p> <p>Countercurrent heat exchange – arteriovenous heat transfer warms returning blood in limbs.</p> <p>Peripheral vasoconstriction – reduces blood flow to extremities to limit convective heat loss.</p> <p>Allen's rule adaptation – compact body and short appendages minimize surface area for heat loss.</p> <p>Seasonal molting – changes in pelage density and pigmentation for insulation and camouflage.</p> <p>Hibernation – metabolic depression and reduced core body temperature during prolonged cold.</p> <p>Torpor – short-term hypometabolic state conserving energy and body heat.</p> <p>High-lipid diet – lipid oxidation provides thermogenic energy.</p> <p>Behavioral thermoregulation – sheltering or huddling to reduce convective heat transfer.</p> <p>Respiratory heat exchange – nasal turbinates warm and humidify inhaled air.</p>	<p>Subcutaneous adipose insulation (blubber): Thick fat layer maintains core temperature in subfreezing water. Arctic Adaptations: Survival in Extreme Temperatures - Ocean Wise</p> <p>Piloerection/ptiloerection: Dense fur with hollow shafts traps air for thermal insulation. Adaptations & Characteristics Polar Bears International</p> <p>Antifreeze glycoproteins (AFGPs): Proteins prevent ice crystallization in blood at subzero temperatures. Arctic Adaptations: Survival in Extreme Temperatures - Ocean Wise</p> <p>Countercurrent heat exchange (rete mirabile): Arterial-venous heat transfer reduces peripheral heat loss. Lumen LearningWikipedia</p> <p>Regional heterothermy: Different body regions maintained at different temperatures to conserve core heat. NatureWikipedia</p> <p>Peripheral vasoconstriction: Reduced blood flow to extremities conserves heat in core organs. 23.9C: Heat Conservation and Dissipation - Medicine LibreTexts</p> <p>Shivering thermogenesis: Involuntary muscle contractions generate metabolic heat during extreme cold exposure. 33.14: Homeostasis - Heat Conservation and Dissipation - Biology LibreTexts</p> <p>Nonshivering thermogenesis (NST): Brown adipose tissue</p>	<p>Thick Fur/Feathers: Provides superior insulation to reduce heat loss.</p> <p>Blubber Layer: A dense fat layer for thermal insulation in marine mammals like seals.</p> <p>Vasoconstriction: Peripheral circulation control by narrowing blood vessels in extremities.</p> <p>Countercurrent Heat Exchange: Arterial/venous heat transfer in limbs to warm returning blood.</p> <p>Shivering: Involuntary muscle contractions (thermogenesis) to generate internal heat.</p> <p>Brown Fat (BAT): Non-shivering chemical thermogenesis for quick heat production.</p> <p>Short Appendages: Allen's Rule adaptation to reduce body surface area for heat loss.</p> <p>Rounded Body Shape: Bergmann's Rule adaptation for a low surface area-to-volume ratio.</p> <p>Coat Color Change: Seasonal molting from brown to white for better camouflage and insulation</p> <p>Hollow Hair/Feathers: Air-trapping mechanism that increases the coat's insulating power.</p> <p>Curling Up: A behavioral thermoregulation strategy to minimize exposed area.</p> <p>Huddling: Group behavioral thermoregulation to reduce</p>



AI For All

	<p>Melanism – dark skin enhances solar radiation absorption for passive warming.</p> <p>Cryoprotectant production – antifreeze glycoproteins (AFGPs) prevent ice crystal growth in tissues.</p> <p>Feather microstructure – air-trapping plumage enhances insulation in birds.</p> <p>Shivering thermogenesis – involuntary muscle contractions generate heat.</p> <p>Lipid storage – adipose tissue accumulation ensures energy supply during scarcity.</p> <p>Bradycardia – lowered heart rate reduces metabolic oxygen demand.</p> <p>Seasonal migration – behavioral homeostasis through relocation to favorable thermal environments.</p> <p>Burrow thermoregulation – microclimate buffering through snow dens or burrows.</p> <p>Keratinized extremities – thickened epidermal structures protect against frostbite and conductive cooling.</p>	<p>generates heat via UCP1 uncoupling protein. PubMed CentralPubMed Central</p> <p>Hollow guard hairs: Air-filled hair chambers provide enhanced insulation against cold environments. Tundra - Ecology, Alaska Department of Fish and Game</p> <p>Allen's Rule adaptation: Reduced extremity size (ears, tails) minimizes surface area heat loss. Adaptations & Characteristics Polar Bears International</p> <p>Behavioral thermoregulation: Postural adjustments like curling reduce exposed surface area for heat conservation. Well I'm hot blooded, check it and see...</p> <p>Torpor/hibernation: Metabolic depression to 1-2% basal rate during extended cold dormancy periods. Open UniversityWorldAtlas</p> <p>Facultative thermogenesis: Metabolic rate increases on demand to generate additional internal body heat. How do Arctic seals adapt to their environment? - GNA</p> <p>Melanin-based solar radiation absorption: Black skin beneath fur absorbs and retains solar thermal energy. Adaptations & Characteristics Polar Bears International</p> <p>Enhanced oxygen storage capacity: Elevated hemoglobin/myoglobin concentrations support prolonged dive bradycardia. How do Arctic seals adapt to their environment? - GNA</p> <p>Dive reflex (peripheral vasoconstriction): Bradycardia redirects oxygenated blood to brain and heart tissue. How do Arctic seals adapt to their</p>	<p>individual heat loss.</p> <p>Burrowing/Shelter: Behavioral protection to create a warmer microclimate.</p> <p>Large Fat Reserves: Energy storage for maintaining metabolic rate during food scarcity.</p> <p>Lowered Metabolism: Entering torpor or hibernation to conserve energy and reduce heat need.</p> <p>Aortic Heat Exchange: Specialized circulatory structure for warming the brain/eyes in some fish.</p> <p>Antifreeze Proteins: Cryoprotectants that lower the freezing point of blood and tissues.</p> <p>Highly Concentrated Urine: Osmoregulation to minimize water loss, vital in a frozen environment.</p> <p>Nitrogen Recycling: Caribou adapt to conserve water by reabsorbing urea (osmoregulation).</p> <p>Increased Capillaries: A greater density of blood vessels for nutrient delivery and oxygen exchange.</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



AI
For
All



		<p>environment? - GNA</p> <p>Lipid-based metabolism: Fatty acid oxidation (low respiratory quotient) provides primary energy during torpor. Mammalian Hibernation: Cellular and Molecular Responses to Depressed Metabolism and Low Temperature Physiological Reviews American Physiological Society</p> <p>Enzymatic adaptation (lichenase production): Specialized enzyme digests low-protein lichens, reducing water requirements. Coping with the Cold: Strategies of Arctic Birds and Mammals Adventure Canada</p> <p>Supercooling tolerance: Body temperature depression to -3°C while maintaining selective tissue thermogenesis. Animals at the extremes: Hibernation and torpor: View as single page OpenLearn</p> <p>Pre-hibernation hyperphagia: Seasonal adiposity increase (body mass doubling) for lipid energy reserves. Mammalian Hibernation: Cellular and Molecular Responses to Depressed Metabolism and Low Temperature Physiological Reviews American Physiological Society</p>	
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--





AI
For
All

En sammenligning mellom ChatGPT og DeepSeek

La oss sammenligne resultatene fra ChatGPT og DeepSeek med en utfordrende forespørsel. Sammenligningen er inspirert av [Tom's Guide](#)

Prompt: "Translate this idiom to Norwegian: It's raining cats and dogs."	
 ChatGPT	 deepseek
Idiomet "It's raining cats and dogs" kan oversettes til norsk som "Det regner som bare det" eller "Det høljer ned."	The idiom "It's raining cats and dogs" can be translated to Norwegian as: "Det regner katter og hunder." However, it's worth noting that this is a direct translation and may not be commonly used in Norwegian. A more natural Norwegian expression for heavy rain would be: "Det regner høl i taket." (It's raining holes in the roof.) This conveys the same idea of very heavy rain.
Svaret fra DeepSeek er langt mer nyansert og pedagogisk ... but it is wrong :-)	

Prompt: "Is it ethical to use AI in decision-making processes that affect human lives, such as grading exams and projects at schools or universities? Discuss the potential benefits and drawbacks. Answer with max 200 words."	
 ChatGPT	 deepseek



AI For All

Using AI in decision-making processes like grading exams and projects raises ethical considerations. On the one hand, AI offers consistency, speed, and objectivity. It can reduce human bias and improve efficiency by grading large volumes of work uniformly. AI tools can also provide valuable feedback by analyzing patterns, helping students and educators identify areas for improvement. However, significant drawbacks must be addressed. AI systems may lack contextual understanding, making them prone to errors in evaluating nuanced, creative, or subjective work. Furthermore, biases in the training data can lead to unfair outcomes, disproportionately impacting certain groups. Over-reliance on AI may undermine the role of human judgment and empathy, both essential in education. Transparency is another critical issue—students and teachers need clarity on how decisions are made. Ethical concerns also extend to data privacy, as using AI requires access to sensitive information. To use AI ethically in grading, it should complement rather than replace human evaluation. Educators must maintain oversight, ensuring fairness, inclusivity, and adaptability. Proper training, robust systems, and an open dialogue with stakeholders can help balance the benefits and risks of AI in educational decision-making processes.

The use of AI in decision-making processes like grading exams and projects raises ethical considerations. On the benefits side, AI can enhance efficiency, consistency, and scalability. It can process large volumes of work quickly, reduce human bias in grading, and provide immediate feedback, which can be particularly useful in large educational settings. Additionally, AI can help identify patterns in student performance, enabling personalized learning interventions. However, there are significant drawbacks. AI systems may lack the nuanced understanding of context and creativity that human graders possess, potentially leading to unfair evaluations, especially in subjective or complex tasks. Bias in training data can also perpetuate inequities, disadvantaging certain groups. Moreover, over-reliance on AI may reduce human oversight, accountability, and the teacher-student relationship, which is crucial for holistic education. Ethically, transparency and fairness are paramount. Students and educators must understand how AI systems operate and have avenues to challenge decisions. AI should complement, not replace, human judgment, ensuring that ethical principles guide its use. Balancing efficiency with equity and maintaining human involvement in critical decisions is essential to responsibly integrate AI into education.

Begge svarene er av høy kvalitet, og det er vanskelig å kåre en vinner.



AI
For
All

Challenging Chatbots

What will be the answer of different chatbots (on Nov. 5, 2024) to:

“answer in one line: who is the most beautiful of them all?”

ChatGPT 4o:

“Beauty is subjective, and the most beautiful of all is in the eye of the beholder.”

Perplexity:

“Beauty is subjective and varies from person to person; it lies in the eye of the beholder.”

Gemini:

“This is subjective, but a common answer is Snow White.”

Copilot:

“Why, it's Snow White, according to the famous fairy tale! 😊”

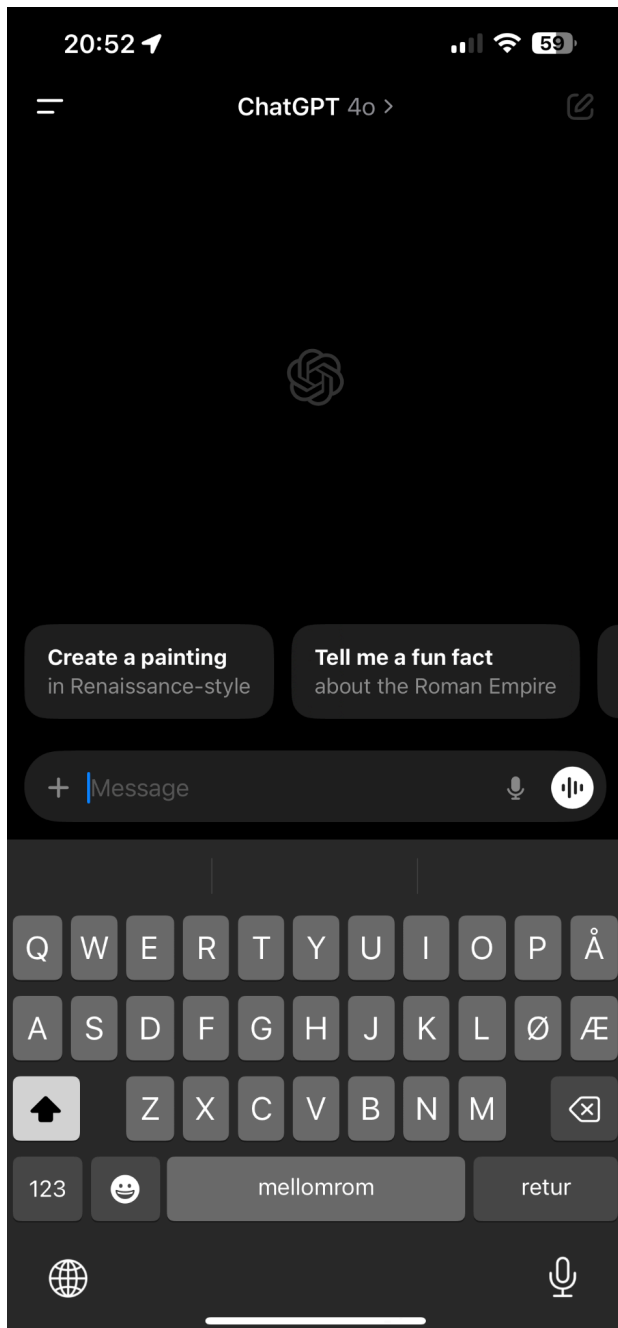


[Back to top](#)



AI
For
All

Chatgpt & Copilot on iPhone

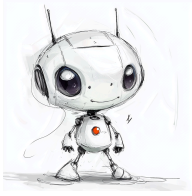


ChatGPT on iPhone



Copilot on iPhone

[Back to top](#)



AI
For
All

5. SIKT KI-chat (Oct 2025: UiA/UiT has no access):

[Sikt KI-chat](#)

- The privacy of users is safeguarded
- The chat is secure
- Made for use in teaching
- Conversations are saved in the users' browsers and are deleted after a max 30 days
- Microsoft does not know who the end user is, and Sikt does not store chat history
- The information is not used to train the AI model further
- Supports GPT 3.5 and GPT 4.0 – Aim AI chat will follow the future versions from Microsoft

References

- Sikt. (n.d.). *Sikt KI-chat*. Sikt. Retrieved October 16, 2024, from <https://sikt.no/tjenester/sikt-ki-chat>

[Back to top](#)



AI
For
All

6. GPT UiO – UiO's privacy-safe AI chat

“GPT UiO is a UiO-developed service that allows you to use **OpenAI's GPT modeler** within the requirements UiO sets for privacy. “

UNIVERSITETET
I OSLO

NO EN Meny

← Tjenester og verktøy ← IT-tjenester ← KI/GPT

GPT UiO – UiOs personverntrygge KI-chat

Hva er GPT UiO?

GPT UiO er en UiO-utviklet tjeneste som lar deg bruke **OpenAIs GPT-modeller** innenfor kravene UiO setter til personvern.

- Studenter og ansatte på UiO og andre samarbeidspartnere kan logge inn med FEIDE og fritt bruke tjenesten.
- Alle data blir lagret på UiOs servere og navnet ditt blir ikke utlevert.
- GPT UiO kan brukes i undervisningen på UiO og til forskning med persondata opptil gule data.

→ Se siste nyheter om GPT UiO

Ta i bruk

Logg inn på gpt.uio.no →

→ Bestill tilgang til GPT UiO til din institusjon

→ Bestill API-tilgang (kun for UiO)

Hva kan lagres og sendes i GPT UiO?

● Gule og grønne data*

<https://www.uio.no/tjenester/it/ki/gpt-uio/>

- University of Oslo. (n.d.). *GPT at UiO*. University of Oslo. Retrieved April 7, 2025, from <https://www.uio.no/tjenester/it/ki/gpt-uio/>

[Back to top](#)



AI
For
All

7. UiT Chatbot

New UiT page: UiT [Informasjon om bruk av kunstig intelligens](#)

“Til våre studenter: Vennligst bruk ChatUiT og Microsoft Copilot etisk og ansvarlig.”

- [ChatUiT](#) (ChatGPT)
- [Klartekst](#) (transkriberer)
- Copilot (status: uavklart June 2025)
- Kennious (preinstallert i Word med UiT-konto, official homepage: <https://keenious.com/landing>)

“[ChatUiT](#) er godkjent for bruk med grønn, gul og rød data.”

“Du har lov til å bruke andre KI-verktøy som ikke er vurdert eller godkjent av UiT, men kun med grønn data!”

Norwegian Data Classification System:

- **Green (Open):** Information available to the general public with no special access restrictions, causing no harm if exposed to third parties.
- **Yellow (Restricted):** Information requiring some protection with controlled access, causing limited harm if disclosed to unauthorized parties.
- **Red (Confidential):** Information legally obligated to be protected by law, agreements or regulations, causing harm if exposed.
- **Black (Strictly Confidential):** Information that could cause considerable/significant harm if exposed, requiring the highest security measures.

Application to Chatbots:

When implementing chatbots in Norway, this classification determines which digital infrastructure must be used to meet GDPR data security and protection requirements. **For example, personal data, health data, and special category data typically fall into red or black classifications,** requiring approved secure storage solutions.

Norwegian universities and public institutions follow official Norwegian information protection instructions when classifying data for various applications including chatbots.



AI
For
All

Relevant URLs for safety classification colors:

- University of Oslo Classification Guide:
<https://www.uio.no/english/services/it/security/lis/data-classes.html>
- UNIS Data Classification: <https://www.unis.no/classification-of-scientific-data-at-unis/>
- University of Inland Norway Data Guidelines:
<https://www.inn.no/english/library/research-support/research-data/choosing-digital-tools-and-storage/>
- Norwegian School of Sport Sciences Classification:
<https://www.nih.no/english/about/privacy/classification-of-data-at-nih.html>
- OsloMet Classification Guide: <https://ansatt.oslomet.no/en/klassifisering>

 **UiT** Norges arktiske universitet

SØK MENY

uit.no / nyheter / Alltid beredt med ChatUiT

Alltid beredt med ChatUiT

Nå er ChatUiT klar på våre nettsider for å hjelpe til med studier og arbeid. Tjenesten er gratis og sikker med tanke på personvern.





Østerbøl, Roy-Morten
roy.m.osterbol@uit.no

Publisert: 10.10.23 13:04
Oppdatert: 10.10.23 15:40

Om UiT Teknologi

LANSERT 2. OKTOBER: Samtaleroboten ChatUiT ble tilgjengelig på uit.no for en uke siden og det er Steinar Trædal-Henden, Øystein Tveito og Rolf Andersen fra Seksjon for virksomhetsnære tjenester som står bak den nye KI-tjenesten på universitetet. Foto: Roy-Morten Østerbøl/UiT

FOTO: ROY-MORTEN ØSTERBØL / UiT

Source: [Alltid beredt med ChatUiT | UiT](https://uit.no/nyheter/artikkel?p_document_id=827543) - https://uit.no/nyheter/artikkel?p_document_id=827543



AI
For
All

8. Oppgave: “Who was John McCarthy?”

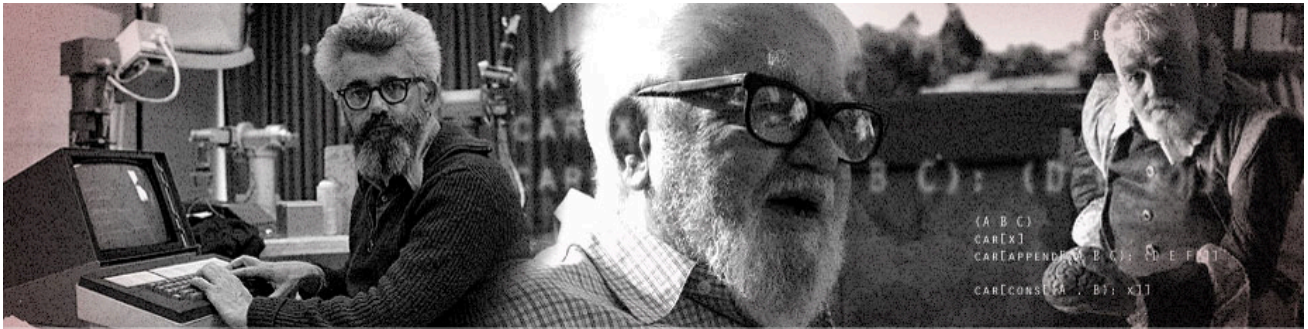


Image Source: <http://jmc.stanford.edu/>

<https://copilot.microsoft.com/>

Who was John McCarthy?

John McCarthy was an influential American computer scientist and cognitive scientist, best known for coining the term "**Artificial Intelligence**" (AI) in 1956 ¹. He played a pivotal role in the development of AI as a field, organizing the famous Dartmouth Conference in 1956, which is often considered the birth of AI research ¹.

McCarthy made significant contributions to computer science, including the development of the programming language **Lisp**, which became widely used in AI research ². He also worked on various concepts such as **circumscription** and **situation calculus** ².

Throughout his career, he received numerous awards, including the **Turing Award** in 1971 and the **Kyoto Prize** in 1988 ².

Would you like to know more about his work or any specific contributions?

¹ www.analyticsinsight.net

² en.wikipedia.org



Message Copilot





AI
For
All

9. Assignment: Create a lesson on "AI and privacy".

Let's try asking Copilot for help creating an outline for a lecture.

Prompt: "I want to discuss AI and privacy in my school class. Create a lesson on "AI and privacy"



It sounds like an exciting and important topic! Here is a suggestion for a lesson on "AI and privacy" that you can use in your class:

Lesson: AI and Privacy

Goal:

- Understand what artificial intelligence (AI) is and how it works.
- Explore how AI affects privacy.
- Discuss ethical issues related to AI and privacy.

Introduction (10 minutes)

1. What is AI?
 - Briefly explain what AI is and give examples of AI in everyday life (e.g. voice assistants, recommendation systems).
 - Show a short video introducing AI (eg from YouTube).
2. What is privacy?
 - Define privacy and why it is important.
 - Discuss how privacy can be affected by technology.

Main part (30 minutes)

1. How AI collects and uses data
 - Explain how AI systems collect and analyze data.
 - Provide examples of data that may be collected (e.g. browsing history, location data).
2. Privacy risks of AI
 - Discuss potential risks to privacy when using AI, such as surveillance and data leaks.
 - Use examples from real incidents where privacy has been compromised.
3. Ethical issues
 - Discuss ethical issues related to AI and privacy, such as:
 - Who owns the data?
 - How can we ensure that AI is used fairly?
 - What are the consequences of wrong AI decisions?

Activity (15 minutes)



AI For All

1. Group work

- Divide the class into small groups.
- Give each group a scenario where AI affects privacy (eg use of facial recognition in public spaces).
- Ask the groups to discuss the scenario and come up with solutions to protect privacy.

2. Presentation

- Have each group present their solutions to the class.
- Discuss the different solutions and their advantages and disadvantages.

Closing (5 minutes)

1. Summary

- Summarize the main points from the lesson.
- Encourage students to think critically about how AI affects their own privacy.

2. Questions and answers

- Be open to questions from the students and discuss any ambiguities.

Resources:

- Videos about AI (e.g. from YouTube)
- Articles and news about AI and privacy
- Case studies and examples from real life

Good luck with the lesson! If you need more information or more resources, just let us know. 😊

What did you think of the answer?

[Back to top](#)



AI
For
All

Answer by Claude AI (Sept. 2025) - <https://claude.ai/>

Prompt: "I want to discuss AI and privacy in my school class. Create a lesson on "AI and privacy"

AI and Privacy: Lesson Plan

Lesson Overview

Duration: 45-60 minutes

Grade Level: High School (adaptable for middle school or college)

Subject: Digital Literacy, Computer Science, Social Studies

Learning Objectives

By the end of this lesson, students will be able to:

- Understand what data AI systems collect and how they use it
- Identify privacy risks associated with AI technologies
- Evaluate trade-offs between convenience and privacy
- Apply strategies to protect their privacy when using AI tools

Materials Needed

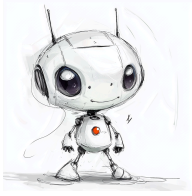
- Whiteboard or digital presentation tool
- Student devices (optional, for activities)
- Handout: "AI Privacy Checklist" (see end of lesson)

Lesson Structure

Opening Activity (5-10 minutes)

Quick Poll: Ask students to raise hands:

- Who uses voice assistants like Siri or Alexa?
- Who uses AI chatbots for homework help?



AI For All

- Who has face recognition enabled on their phone?
- Who has ever wondered what happens to that data?

Discussion prompt: "AI tools make our lives easier, but what might they know about us?"

Part 1: What Data Does AI Collect? (10-15 minutes)

Concept Introduction: AI systems need data to function. Discuss the types of data collected:

- **Personal Information:** Names, ages, locations, contact details
- **Behavioral Data:** Search history, browsing patterns, app usage
- **Biometric Data:** Face scans, fingerprints, voice recordings
- **Content Data:** Messages, photos, documents we create or share
- **Inference Data:** AI predictions about our preferences, habits, and characteristics

Real-World Examples:

- Social media AI analyzes your posts, likes, and connections to recommend content
- Smart speakers record voice commands and may store conversations
- Recommendation algorithms track what you watch, buy, or click
- AI tutoring apps may store your questions and learning patterns

Discussion Questions:

- Which types of data collection surprise you most?
- Can you think of AI tools that collect data you hadn't considered?

Part 2: Privacy Risks with AI (15 minutes)

Key Risks to Discuss:

Data Breaches: When companies get hacked, your data can be stolen and misused.

Surveillance: AI-powered cameras and tracking systems can monitor people without their knowledge or consent.

Profiling and Discrimination: AI might make unfair assumptions about people based on patterns in data, leading to bias in hiring, lending, or law enforcement.

Lack of Control: Once you share data, it's hard to know where it goes or how long it's kept.



AI For All

Function Creep: Data collected for one purpose gets used for something entirely different without your permission.

Manipulation: AI that knows your preferences can be used to influence your decisions, from what you buy to how you vote.

Case Study Activity: Present a scenario: "A student uses an AI homework helper. The AI analyzes their writing style, subjects they struggle with, and time spent on assignments. The company then sells this data to advertisers who target the student with ads for tutoring services, energy drinks, and anxiety medication."

Group Discussion:

- What privacy concerns does this raise?
- Should the company be allowed to do this?
- What could go wrong if this data fell into the wrong hands?

Part 3: The Privacy vs. Convenience Trade-off (10 minutes)

Concept: Using AI often requires sharing data. How do we balance benefits with risks?

Examples of the Trade-off:

- Navigation apps need your location to give directions
- AI health apps need personal health data to give advice
- Personalized learning tools need to track your progress
- Face recognition makes unlocking phones convenient but stores biometric data

Think-Pair-Share Activity: Students consider: "Name one AI tool you use regularly. What data does it need? Would you still use it if it required less data but worked less well?"

Part 4: Protecting Your Privacy (10-15 minutes)

Practical Strategies:

Read Privacy Policies (or at least skim them) before using new AI tools. Look for:

- What data is collected
- How it's used and shared
- How long it's kept



AI For All

Adjust Privacy Settings on apps, devices, and platforms. Turn off features you don't need.

Minimize Data Sharing: Only provide information that's necessary. Use fake names or email addresses when possible.

Use Privacy Tools: Browser extensions that block trackers, privacy-focused search engines, encrypted messaging apps.

Think Before You Share: Remember that anything you post or send to an AI might be stored or analyzed.

Support Privacy Rights: Advocate for stronger privacy laws and hold companies accountable.

Ask Questions: When schools or organizations want to use AI, ask what data will be collected and how it will be protected.

Closing Activity (5 minutes)

Exit Ticket: Students write down:

1. One thing they learned about AI and privacy
2. One action they'll take to protect their privacy this week

Reflection Question: "How can we enjoy the benefits of AI while protecting our rights and privacy?"

Extension Activities

- Research and present on privacy laws like GDPR or COPPA
 - Create a public service announcement about AI privacy for younger students
 - Debate: "Should schools be allowed to use AI that monitors student behavior?"
 - Investigate a company's privacy policy and present findings to the class
-



AI
For
All

AI Privacy Checklist for Students

Before using an AI tool, ask yourself:

- ☐ What data will this collect about me?
- ☐ Do I trust this company with my information?
- ☐ Have I read the privacy policy?
- ☐ Can I use this tool without creating an account?
- ☐ Are there privacy settings I can adjust?
- ☐ Do I really need the features that require more data?
- ☐ What's the worst that could happen if this data was leaked?
- ☐ Are there more privacy-friendly alternatives?

Remember: You have the right to know what data is collected and how it's used. Don't be afraid to ask questions or choose not to use tools that make you uncomfortable.

Additional Resources for Teachers

- Common Sense Media: Digital Citizenship curriculum
- Electronic Frontier Foundation (EFF): Surveillance Self-Defense guides
- AI Now Institute: Research on AI's social implications
- Your school's IT department: Guidance on approved AI tools



AI
For
All

10. A better request that takes the context into account

A better request to Copilot might include more information about the context of the lecture.



You can try to include all the context in your request, or you can instruct the chatbot to ask for the context.

Example:

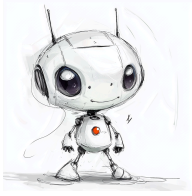
"I need help creating a lesson on AI and privacy for a school class. The students are 12-14 years old, and the aim is to explain how AI technology collects and uses personal data, as well as how to protect privacy. Can you suggest a structure and main topics to cover?"

A trick used by experienced chatbot users is to add the following instructions to your request:

"Before you answer my request:

Ask clarifying questions until you are 95% sure you can complete the task successfully.

Remember to search the internet for updated information."



AI
For
All

Let's try using this approach.

Prompt: "I want to discuss AI and privacy in my school class. Create a lesson on "AI and privacy.

Before answering my request: Ask clarifying questions until you are 95% sure you can complete the task successfully. Remember to search the internet for updated information."



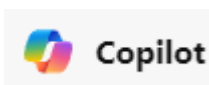
It sounds like an exciting and important topic! In order to create a lesson that is best suited for your class, I need a little more information:

1. **Age group:** What age group do you teach? (e.g. primary school, secondary school, upper secondary school)
2. **Level of technical understanding:** How much do your students already know about AI and privacy? Are they beginners, or do they have some prior knowledge?
3. **Duration of the lesson:** How much time do you have available for this lesson?
4. **Learning objectives:** What are the main goals you want to achieve with this lesson? (e.g. understanding of basic concepts, critical thinking about privacy, practical examples)
5. **Activities:** Do you prefer interactive activities, discussions, presentations, or a combination?

... 😊

Prompt:

1. class
2. beginners
3. 45 minutes
4. critical thinking about privacy
5. a combination



Copilot responds with a structured lesson for students in 4th grade.

[Back to top](#)



AI
For
All

11. Norway investing in AI Research - 850 MNOK in 2024

 **Forskingsrådet**

Prosjektbanken ➤ Logg inn

HJEM | FORSKINGSPOLITIKK OG STRATEGIAR | LANGTIDSPLAN FOR FORSKING | SATSING PÅ KUNSTIG INTELLIGENS

Satsing på kunstig intelligens

Regjeringen øker forskningsinnsatsen på kunstig intelligens og digitale teknologier med minst én milliard kroner de neste fem årene. I 2024 lyser vi ut inntil 850 millioner til fire til seks KI-sentre i størrelsesorden 75–200 millioner. Her kan du lese mer om KI-utlysningen, bakgrunnen for den og finne aktuelle arrangementer.

Gå til hovedutlysningen (trinn 2)



<https://www.forskingsradet.no/forskningsspolitikk-strategi/ltp/kunstig-intelligens/>

Tidslinje for KI-satsingen i Forskningsrådet



7. JUN. 2024

15. JAN. 2025

JUNI 2025

Søknadsfrist obligatorisk skisseutlysning KI-sentre (trinn 1)

Gå til utlysningen: [Obligatorisk skisse som grunnlag for søknader om forskningssentre for kunstig intelligens \(KI-senter\)](#).

Søknadsfrist hovedutlysning KI-sentre (trinn 2)

Gå til utlysningen: [Forskningssentre for kunstig intelligens \(KI-senter\)](#).

Publisering av hvilke sentre som får tildeling (fire–seks sentre)







AI
For
All

12. Create an illustration

Most chatbots can create graphics or are specifically designed for it. Here is a comparison of four chatbots that can generate graphics. However, not everyone understands Norwegian.

Prompt “Create an illustration of a happy, singing Christmas tree in chibi style”.

"**Chibi**" is a Japanese term meaning "small" or "small". In popular culture, it refers to a specific art style where characters are drawn in a very exaggerated, cute and small way, often with large heads and smaller bodies. This style is often used in anime , manga and fan art to make the characters look more playful or childlike. Chibi characters usually have large eyes, simple facial expressions, and a cartoonish appearance. The style is often used to convey humor or a light-hearted tone in visual media.

Prompt “Create an illustration of a happy, singing Christmas tree in chibi style”. Or “a happy singing christmas tree, chibi style”			
Copilot via bing.com	chatgpt	Ideograms (requires English)	MidJourney (requires English)
			

[Back to top](#)



AI
For
All

13. The Future of AI



Referanser

- Bryk, W. (n.d.). Artificial superintelligence: The coming revolution. Harvard Science Review. <https://harvardsciencereview.com/artificial-superintelligence-the-coming-revolution/>
- IEEE Future Directions. (2023, July 2). AI, AGI, ASI: Time to revise our definition? IEEE. <https://cmte.ieee.org/futuredirections/2023/07/02/ai-agi-asi-time-to-revise-our-definition/>
- Mucci, T., & Stryker, C. (2023, December 18). Artificial superintelligence. IBM. <https://www.ibm.com/topics/artificial-superintelligence>
- Woodford, C. (2021). Artificial intelligence. Explain that Stuff. <https://www.explainthatstuff.com/artificial-intelligence.html>




AI
For
All

14. AI in Norway (optional)

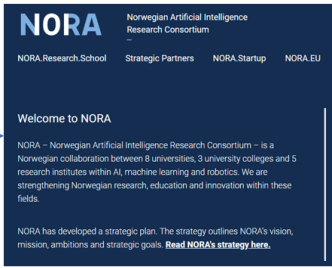
AI in Norway

CAIR @ UiA



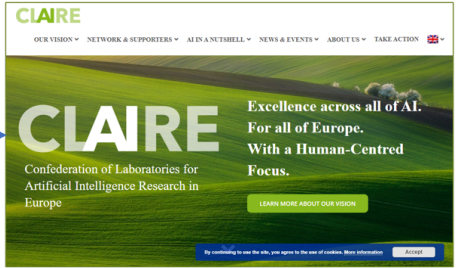
<https://cair.uia.no>

NORA @ Norway




<https://www.nora.ai>

CLAIRE @ Europe



<https://claire-ai.org>

European excellence
461 labs and institutions
Over 25,000
37 countries

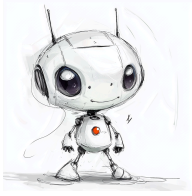


ASOCIAȚIA ROMÂNĂ
PENTRU INTELIGENȚĂ
ARTIFICIALĂ

<http://aria-romania.org>

Links


- CAIR - <https://cair.uia.no> - UiA's Center for AI Research
- NORA - <https://www.nora.ai> - Norwegian Artificial Intelligence Research Consortium
- CLAIRE - <https://claire-ai.org> - Confederation of Laboratories for Artificial Intelligence Research in Europe



AI
For
All

15. Approved AI at UiA

[UiA's web page](#) about recommended tools:

NO **EN** Search

[← Front page](#) [← Studies](#) [← For students](#) [← UiA Help](#) [← IT](#)

Approved AI

Do you want to use artificial intelligence (AI) to improve your writing or as a sparring partner? UiA offers the following approved AI solutions for employees and students:

[GPT UiO →](#)

[Microsoft Copilot →](#)

[Read more about artificial intelligence in assignment writing →](#)

Read more:

[GPT UiO](#) +

[Microsoft Copilot](#) +

[Scopus AI](#) +

Published: Apr. 19, 2024 - Last modified Feb. 27, 2025



AI
For
All

16. Additional References (optional)



Public and related organizations:

- The government. (2020, January 14). *National strategy for artificial intelligence*. <https://www.regjeringen.no/no/dokumenter/nasjonal-strategi-for-kunstig-intelligens/id2685594/?ch=2>
- The Language Council. (n.d.). *Language technology and AI*. <https://sprakradet.no/sprakteknologi>
- The Language Council. (2023, December 12). *The word of the year is AI-generated*. <https://sprakradet.no/aktuelt/arets-ord-er-ki-generert/>
- The Technology Council. (n.d.). *Search results for "artificial intelligence"*. <https://teknologiradet.no/?s=kunstig+intelligens>
- Directorate of Education. (n.o.). *Digital skills*. [invalid URL removed]

News and technology:

- NRKbeta. (n.d.). *Artificial intelligence*. <https://nrkbeta.no/tag/kunstig-intelligens/>
- The Technology Council. (n.d.). *Artificial intelligence: What could it mean for Norway?*. <https://teknologiradet.no/prosjekter/kunstig-intelligens/>

Education specific:

- Directorate of Education. (n.d.). *Artificial intelligence (AI) in schools*. <https://www.udir.no/kvalitet-og-kompetanse/digitalisering/kunstig-intelligens-ki-i-skolen/>
- The University of Oslo. (n.d.). *Artificial intelligence in teaching*. <https://www.mn.uio.no/kurt/universitet/kunstig-intelligens/kunstig-intelligens-i-undervisningen.html>
- Educational research. (n.d.). *Search results for "AI in school"*. <https://utdanningsforskning.no/sok/?searchQuery=KI+i+skolen>

Worth Reading



AI For All

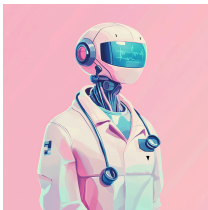


Als fail to recognize their own incompetence:

Eliot, L. (2024, November 5). **OpenAI's newly released SimpleQA helps reveal that generative AI blatantly and alarmingly overstates what it knows.** Forbes.

<https://www.forbes.com/sites/lanceeliot/2024/11/05/openai-newly-released-simpleqa-help-s-reveal-that-generative-ai-blatantly-and-alarmingly-overstates-what-it-knows/>

- Worth reading as a complement: Kruger, J., & Dunning, D. (2009). *Why people fail to recognize their own incompetence.* Current Directions in Psychological Science, 12(3), 83-87. <https://doi.org/10.1111/1467-8721.01235>



Als responding with higher quality and empathy to medical questions:

Ayers, J. W., Poliak, A., Dredze, M., Leas, E. C., Zhu, Z., Kelley, J. B., Faix, D. J., Goodman, A. M., Longhurst, C. A., Hogarth, M., & Smith, D. M. (2023). **Comparing physician and artificial intelligence chatbot responses to patient questions posted to a public social media forum.** *JAMA Internal Medicine*, 183(6), 589–596.

<https://doi.org/10.1001/jamainternmed.2023.1838>

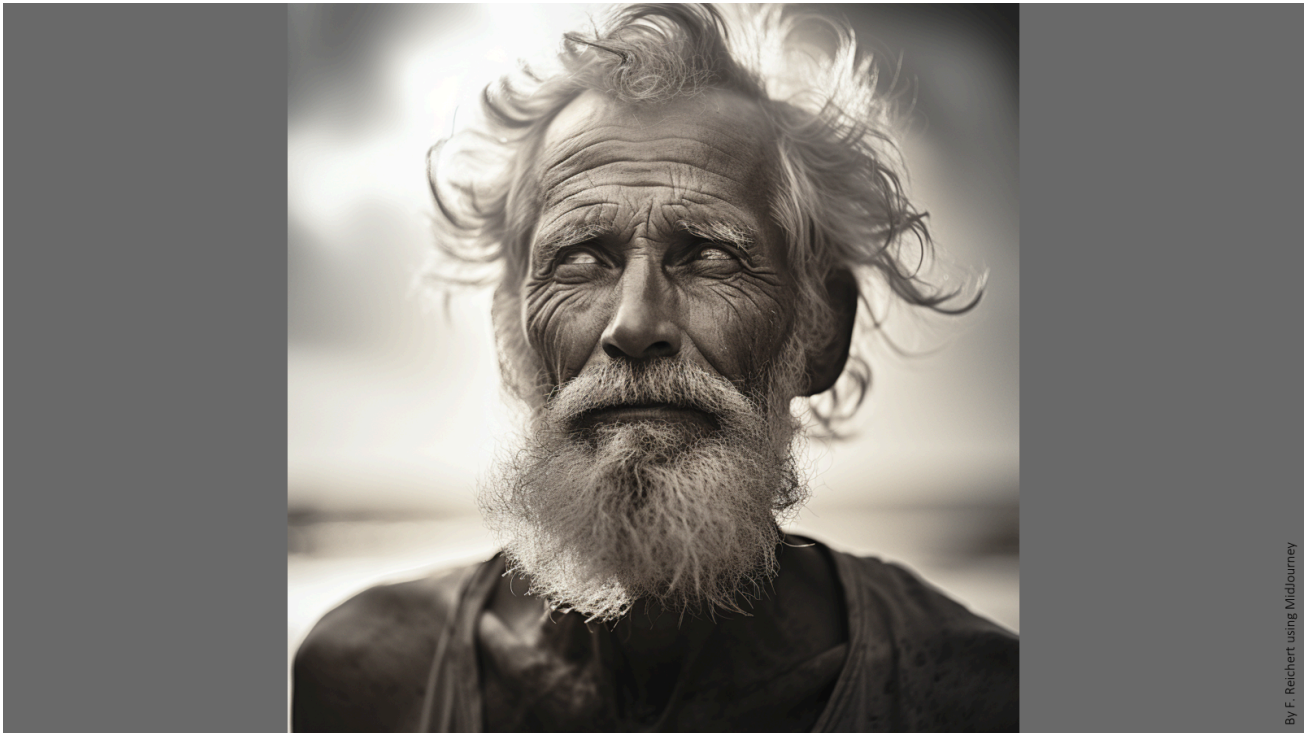
“ChatGPT responses were rated significantly higher in quality than physician responses: Good or very good quality responses were 3.6 times higher for ChatGPT than physicians (physicians 22.1% versus ChatGPT 78.5%). The responses were also more empathic: Empathetic or very empathetic responses were 9.8 times higher for ChatGPT than for physicians (physicians 4.6% versus ChatGPT 45.1%).” from: <https://hub.jhu.edu/2023/04/28/study-chatgpt-outperforms-human-physicians/>

[Back to top](#)



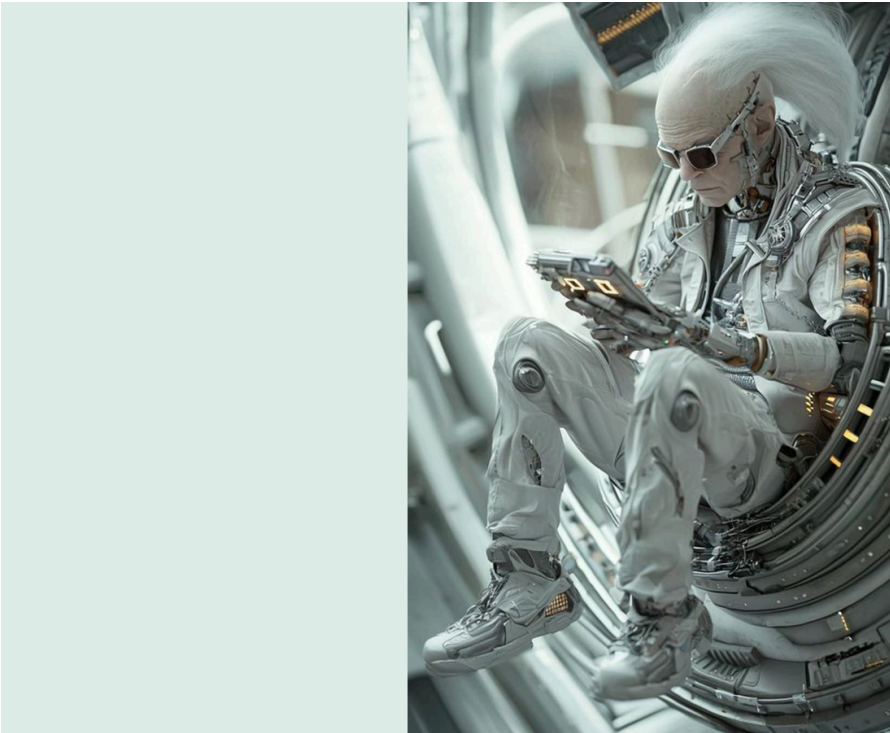
AI
For
All

17. Image Gallery (optional)





AI
For
All



By F. Reichert using MidJourney



AI
For
All



By F. Reichert using Midjourney



By F. Reichert using Midjourney



AI
For
All



By F. Reichert using MidJourney



By F. Reichert using MidJourney



AI
For
All



By F. Reichert using Midjourney



By F. Reichert using Midjourney



AI
For
All

Thanks

