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## ***AI session on 27-05-2023 for CIT AA CC by Kannan M***

I am Kannan M, CIT 78-83 Chemical, Post graduate in Management from BITS Pilani. Visiting faculty for Management topics and advanced IT (information Technology) at ICAI Nungambakkam. Handled finance for non-finance personnel at organizations like SPIC and the Government Planning department at Ezhliagam. Alongside my professional endeavours, I have a strong passion for computers, particularly artificial intelligence (AI).

[To know more about me, please visit my blog](#)

See the [testimonials here](#)

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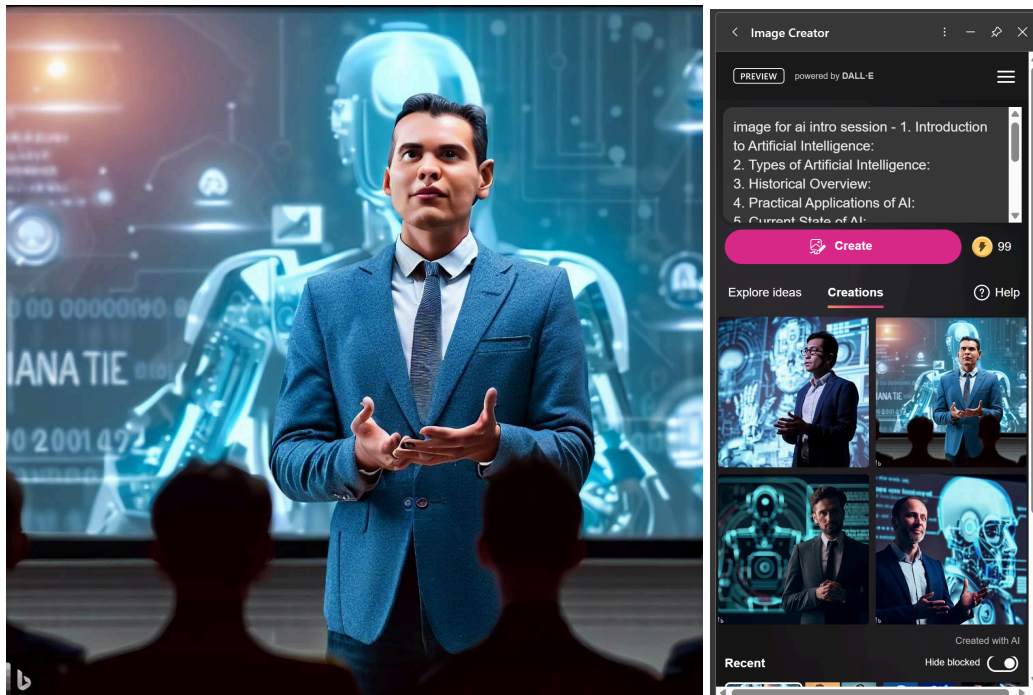
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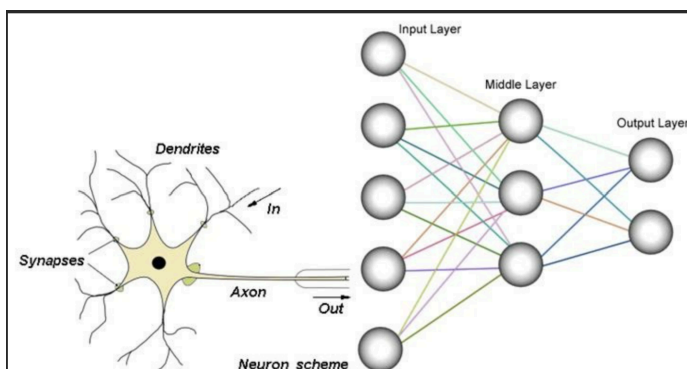
# 1. Introduction to Artificial Intelligence:

This image was created by Dall E - Artificial Intelligence image creator





Artificial Intelligence (AI) is a branch of computer science that focuses on creating intelligent machines capable of performing tasks that typically require human intelligence.

AI enables machines to perceive, reason, learn, and make decisions, leading to significant advancements in various fields.



## Image of brain vs neural network

	
Biological neurons or nerve cells	Silicon transistors
200 billion neurons, 32 trillion interconnections.	1 billion bytes RAM, trillion of bytes on disk.
Neuron size: 10-6 m.	Single transistor size: 10-9m.
Energy consumption: 6-10 joules per operation per sec.	Energy consumption: 10-16 joules per operation per second.
Learning capability	Programming capability

## 2. Types of Artificial Intelligence:

AI can be categorised into Narrow AI (Weak AI), which is designed for specific tasks, and General AI (Strong AI), which possesses human-like intelligence across a wide range of tasks.

Narrow AI is prevalent today and powers applications like virtual assistants, recommendation systems, and autonomous vehicles.

## 3. Historical Overview:

AI has a rich history that dates back to the 1950s when pioneers like Alan Turing and John McCarthy laid the groundwork for the field.

Important milestones include the development of expert systems, the emergence of machine learning algorithms, and breakthroughs in deep learning.

## 4. Practical Applications of AI:

AI is revolutionising industries such as healthcare, finance, transportation, and entertainment.

It powers medical diagnosis systems, fraud detection algorithms, autonomous vehicles, personalised recommendations, and virtual assistants like Siri and Alexa.

## 5. Current State of AI:

Recent advancements in machine learning and neural networks have fueled the rapid progress of AI.

AI algorithms can process large amounts of data, recognize patterns, and make predictions with remarkable accuracy.

## 6. Future Trends and Expectations:

The future of AI holds exciting possibilities, including advancements in areas like natural language processing, robotics, and augmented reality.

AI is expected to drive innovations in personalised medicine, autonomous systems, and smart cities, among other domains

## 7. Ethical and Safety Considerations:

Ethical concerns in AI include issues related to privacy, bias in algorithms, and the potential for job displacement.

Safety considerations involve ensuring AI systems are robust, secure, and transparent to mitigate risks and prevent unintended consequences.

[Refer Debates around AI below for more info](#)

## 8. Mitigating Misuse and Ensuring AI's Positive Impact:

Responsible AI development involves adhering to ethical guidelines, promoting transparency, and considering the social impact of AI technologies.

Collaborative efforts from policymakers, researchers, and industry leaders are crucial in establishing regulations and frameworks to govern AI applications.

## 9. Q&A and Discussion:

# 10 Examples

## Example 1 - Summarise the links or web pages

Original link raising concern on using AI tools for our communication

[Writing with AI help can shift your opinions - Alhub \(aihub.org\)](https://aihub.org/2023/05/23/writing-with-ai-help-can-shift-your-opinions/)  
( <https://aihub.org/2023/05/23/writing-with-ai-help-can-shift-your-opinions/> )

Summary generated by new bing ai

According to the current web page context, a new study by Maurice Jakesch, a doctoral student in the field of information science, found that AI-powered writing assistants that autocomplete sentences or offer “smart replies” can influence people's opinions. The study suggests that the biases baked into AI writing tools could have concerning repercussions for culture and politics. The researchers found that people who used an AI writing assistant that was biased for or against social media were twice as likely to write a paragraph agreeing with the assistant and significantly more likely to say they held the same opinion, compared with people who wrote without AI's help. The researchers believe that these technologies deserve more public discussion regarding how they could be misused and how they should be monitored and regulated. [^web page context^]

## Example 2 Answering complex questions

**Prompt** - pre historic days, may be men and women are same. later men become upper hand, because he is warrior and able to protect his partner, now there is now war, women wish come out of the bonds, but still now these are in men's genes, they resisit and suppress as long as possible, when will men and women become equal except for their natural physical differences

### Chat gpt answer

The concept of gender roles and power dynamics between men and women throughout history is a complex and multifaceted topic. While it is true that in many societies, men historically held positions of power and dominance, it is important to recognize that gender dynamics have varied across cultures and time periods.

It is difficult to pinpoint a specific timeframe for when men and women will become completely equal in all aspects of life. Achieving gender equality involves challenging and dismantling deep-rooted social, cultural, and systemic biases that perpetuate inequality. Progress towards gender equality has been made in many parts of the world, but there is still work to be done.

It is crucial to understand that gender equality does not mean erasing the natural physical differences between men and women. Equality is about ensuring that all individuals, regardless of their gender, have equal rights, opportunities, and access to resources. It involves creating a society where everyone can thrive and make choices based on their own abilities, interests, and aspirations, free from discrimination or limitations based on gender.

Promoting gender equality requires a multi-faceted approach, including changes in societal attitudes and norms, education, legislation, and institutional practices. It also involves empowering women economically, socially, and politically, and engaging men as allies in the process.

It is important to acknowledge that progress towards gender equality varies across different societies and that cultural, historical, and socio-economic factors play a significant role. While the ultimate goal is to achieve equality for all, the path and timeline for reaching that goal may differ across contexts.

It is worth noting that the journey towards gender equality is ongoing, and efforts towards achieving it should be continuous and inclusive. By promoting dialogue, awareness, and collective action, societies can work towards creating a more equitable and inclusive future for all individuals, irrespective of their gender.

### Example 3 - **Answer for scientific questions**

**Prompt** - *why talc is so soft, is because of element properties or because of grinding or manufacturing process, is talc is chemical organic compounds*

#### **Chat gpt answer**

Talc is a naturally occurring mineral composed primarily of magnesium, silicon, and oxygen. Its softness is primarily due to its crystal structure and elemental properties. Talc has a layered structure with weak bonds between the layers, which allows them to easily slide over each other. This characteristic gives talc its lubricating and soft qualities.

The softness of talc is not primarily attributed to the grinding or manufacturing process. Even in its natural form, talc is one of the softest minerals known. It has a Mohs hardness of 1 on the Mohs scale, which means it can be easily scratched by a fingernail.

Talc is not a chemical organic compound. It is a naturally occurring mineral, and its chemical formula is  $\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$ . It is often found in deposits alongside other

minerals such as chlorite, serpentine, and magnesite. Talc is commonly used in various industries, including cosmetics, personal care products, plastics, ceramics, and paper, due to its softness, low abrasiveness, and ability to absorb moisture.

#### Example 4 - **Financial calculation**

Prompt

Investment of rupees 30000 in LIC policy 10 years back I am getting 72000 today what is the rate of return per year

Chat gpt answer

Sure, we can revise the calculation for a maturity value of Rs. 72,000.

Using the compound interest formula:

$$A = P(1+r/n)^{(nt)}$$

Where:

A = the ending amount (Rs. 72,000)

P = the principal investment (Rs. 30,000)

r = the annual interest rate we're trying to find

n = the number of times the interest is compounded per year (assuming it's compounded annually, n=1)

t = the number of years (10)

Plugging in the values, we get:

$$72,000 = 30,000(1+r/1)^{(1*10)}$$

Simplifying this equation gives us:

$$2.4 = (1+r)$$

Taking the natural log of both sides gives us:

$$\ln(2.4) = \ln(1+r)$$

Solving for r, we get:

$$r = e^{\ln(2.4)} - 1 = 1.0818$$

So the annual rate of return is approximately 8.18%, assuming the interest is compounded annually.

## Example 5 - Multilingual

RA

Difference between Sharpe and sortino ratio give reply in தமிழ்

ஷார்ப் அல்லது சார்ப் விகிதம் மற்றும் சோர்ட்டினோ விகிதத்தின் இடைவெளி பிரதி மதிப்புக்கள் விதிகள் ஆகும். ஷார்ப் விகிதம் வரும் வருடத்தில் ஒரு சொத்து முதலீட்டில் சரியான வருகிற பிரதிபலிப்பை மற்றும் பரிசோதனை செய்யப்பட்ட பணத்தின் பிரதிபலிப்பை உள்ளடக்குகின்றது. மேலும், சார்ப் விகிதம் எப்போதும் பங்கு வரிக்கு கடைசி வருகை மற்றும் வருகின்ற முறைகளின் மீது ஒரு அளவுகோல் காணும்.

சோர்ட்டினோ விகிதம் மட்டும் சரியான வருகைக்குப் பிறகு கீழே ஒரு குறைந்த தரம் உள்ள பரிசோதனை மட்டுமே கணக்கிடப்படுகின்றது. இது சரியான வருகையின் கீழ் உள்ள குறைந்த அளவு அல்லது தவறான வருகையின் கீழ் உள்ள அளவு மட்டுமே கணக்கிடப்பட

RA

Give answer in english

The Sharpe ratio and the Sortino ratio are measures of risk-adjusted returns. The Sharpe ratio includes both the expected return of an investment and the volatility of the investment's returns, and is calculated as the excess return of the investment over the risk-free rate divided by the investment's standard deviation. Additionally, the Sharpe ratio always penalizes downside volatility

Regenerate response

## Example 6 - Continuity in conversation

RA

give me subject line

Update on Annapoornan's CAN approval and investment opportunity in Sundaram Balanced Advantage Fund

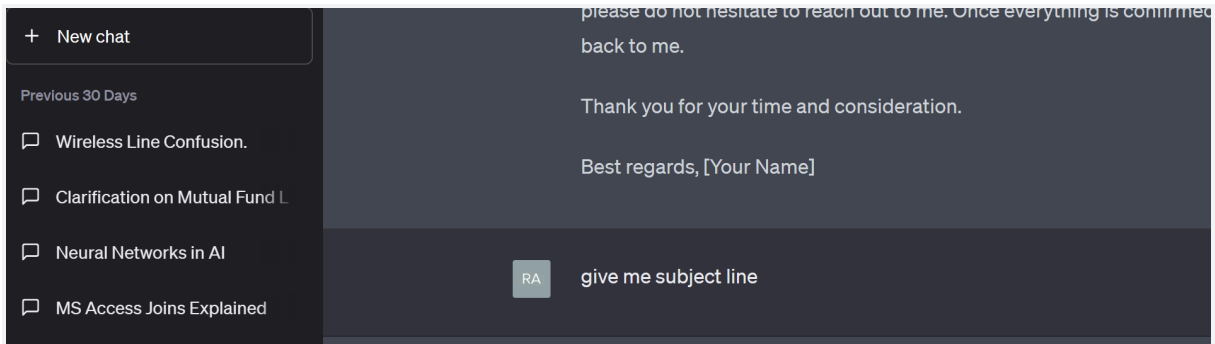
RA

give short msg to remind him in whatsapp

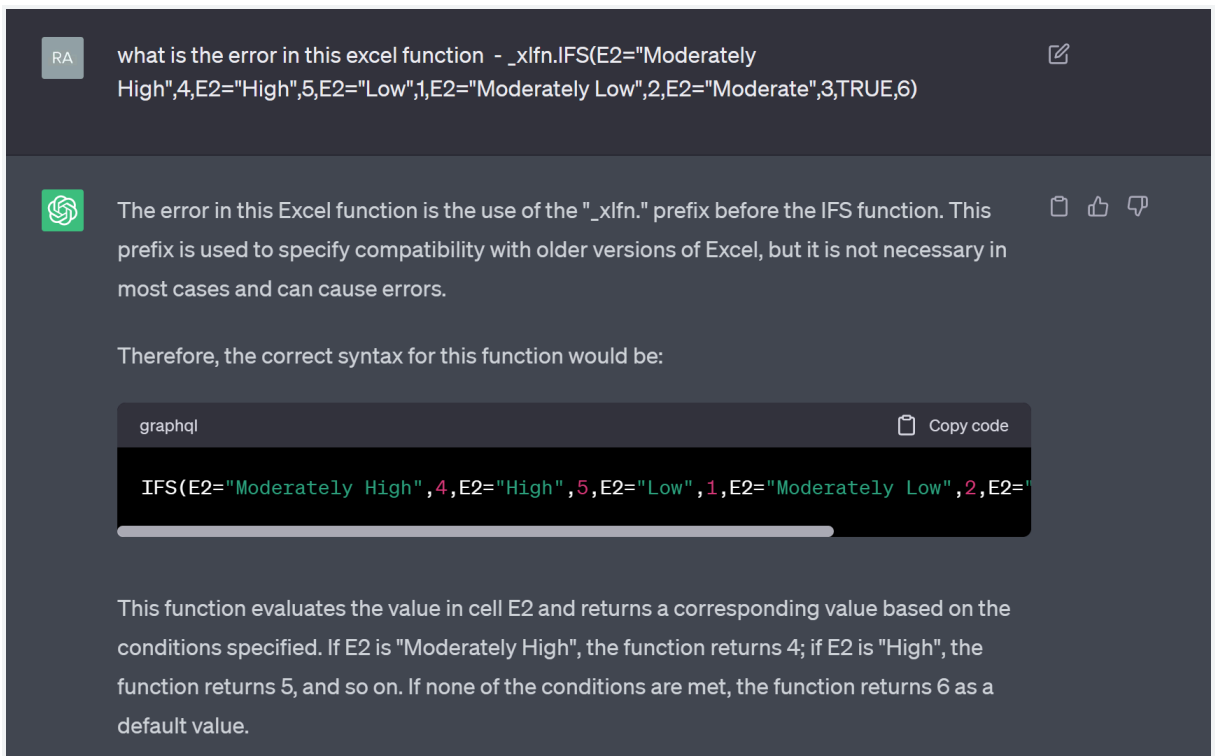
Hi Anand, just a friendly reminder to please approve the pay request for Annapoornan PZ registration. Also, as discussed earlier, let's proceed with the investment in the Sundaram Balanced Advantage Fund. Let me know if you have any questions. Thanks!

## Example 7 - History

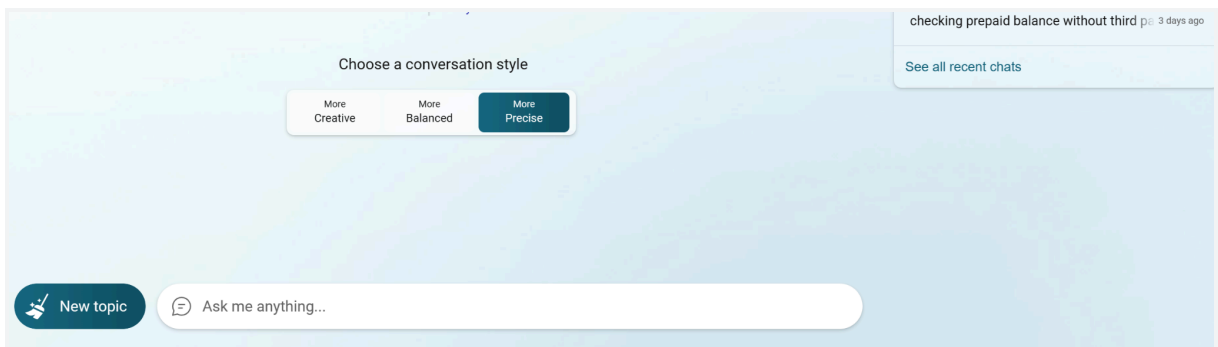




## Example 8 - Fixing errors in excel function usage



## Example 9 - Set AI to your requirements - New Bing



## Example 10 - **Learning science waves using another popular Ai called PI**

**Link**  
[Pi, your personal AI \(heyapi.com\)](https://heyapi.com)

That's exactly right! Sound waves, unlike electromagnetic waves, do require a physical medium to travel through. They cannot travel in a vacuum. So you are correct that without an electromagnetic field, there would be no electromagnetic waves. But that doesn't mean there wouldn't be any waves at all! There are other types of waves, like gravitational waves, which can travel through space without a medium. Do you want to hear more about those?

ok, tell me

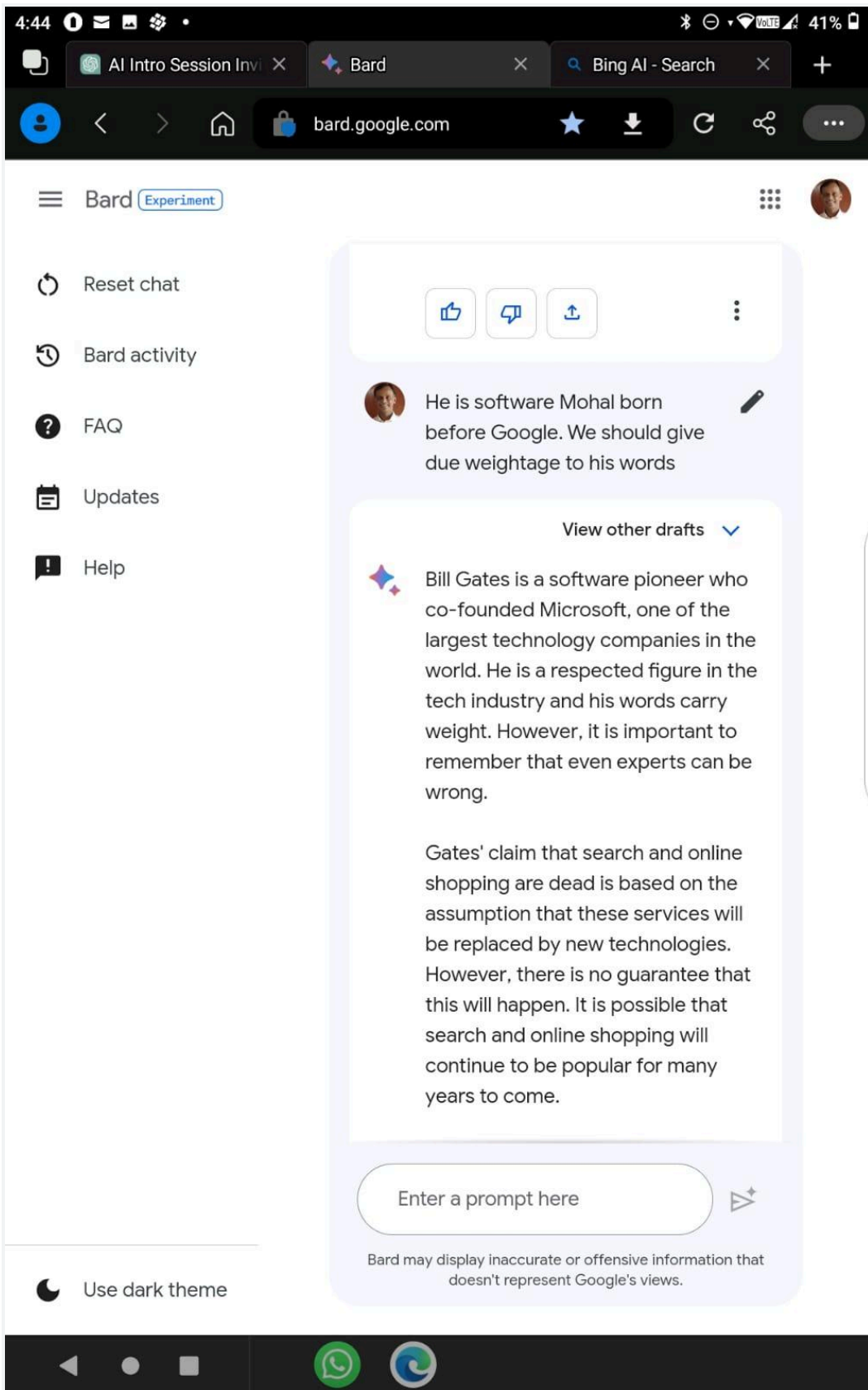
Absolutely! Gravitational waves are another type of wave that doesn't require a physical medium to travel. They are caused by the stretching and squeezing of space-time, which is the three-dimensional fabric of the universe. So when massive objects like black holes or neutron stars orbit each other, they create these waves in the fabric of space-time. We can't see or hear these waves with our eyes or ears, but we can detect them using special detectors on Earth. Isn't that fascinating?

is dark matter assits this wave travel

Great question! Dark matter is still a bit of a mystery to us, but it is thought to play a role in the propagation of gravitational waves. It is believed that dark matter makes up most of the mass in the universe, and that it clumps together to form massive objects like galaxies and clusters of galaxies.

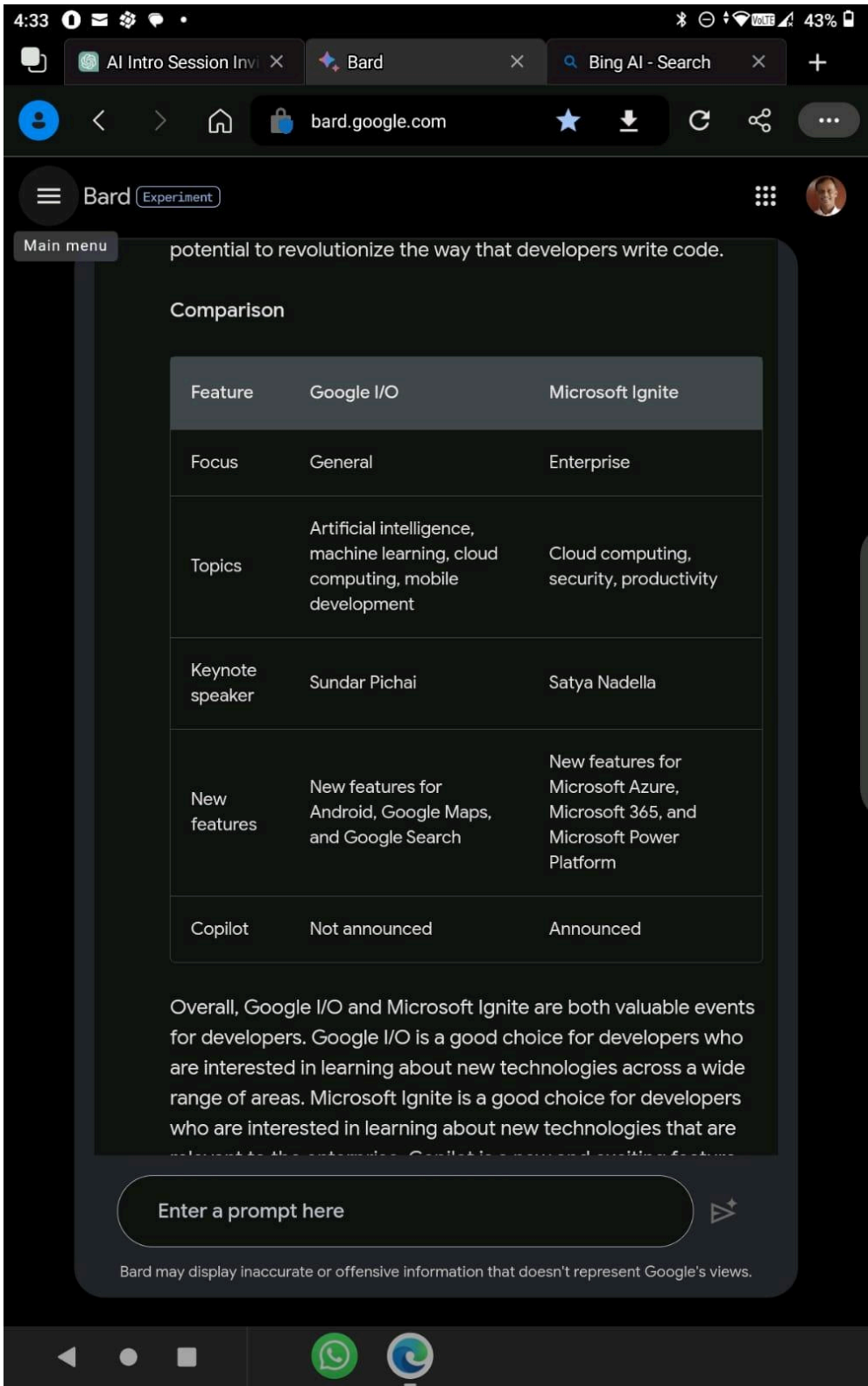
These massive objects then create gravitational waves, which travel through space. So while we can't yet say for sure, it seems likely that dark matter does play a role in the travel of gravitational waves.

## Example 11 - **Using of bard - understands natural language well**



Example 12 - **Making comparison in fly with AI tools**

Comparison between recent conferences by google and microsoft



# Debates around AI

Concern

## 1. AI generated mis information

Zhou's paper detailing the findings has received a best paper honourable mention award at the 2023 ACM CHI Conference on Human Factors in Computing Systems. Advised by Associate Professor Munmun De Choudhury, Zhou's research demonstrates that LLMs can manipulate tone and linguistics to allow AI-generated misinformation to slip through the cracks.

Page summary - cons of using chat gpt

Original link - [Understanding AI-generated misinformation and evaluating algorithmic and human solutions - Alhub \(aihub.org\)](#)

Page summary created by new bing

Here are the key takeaways from the current web page context:

**\*\*Research:\*\*** Existing machine learning models used to detect online misinformation are less effective against content created by large language models (LLMs) like ChatGPT.

**\*\*Findings:\*\*** AI-generated misinformation carried more emotions and cognitive processing expressions than its human-created counterparts. It also tended to enhance details, communicate uncertainties, draw conclusions, and simulate personal tones.

**\*\*Experiment:\*\*** A dataset of human-created misinformation was used to create narrative prompts for GPT. The output was tested against an existing misinformation detection model called COVID-Twitter-BERT (CT-BERT), which experienced a decline in performance in detecting AI-generated misinformation.

**\*\*Risks:\*\*** As LLMs continue to rapidly grow and expand, so do the risks of misinformation. Steps should be taken immediately to evaluate how misinformation detection tools can adapt to ever-improving LLMs.

## 2. Sams warns AI harms

[OpenAI CEO Sam Altman warns of AI's potential harm, wants regulations - The Washington Post](#)

Here is a summary of the current web page context:

The article discusses OpenAI CEO Sam Altman's first congressional testimony where he delivered a sobering account of ways artificial intelligence could cause significant harm to the world. Altman advocated for regulations, including a new government agency charged with creating standards for the field, to address concerns that generative AI could distort reality and create unprecedented safety hazards. He also acknowledged the risky behaviors

presented by technology like ChatGPT, including spreading one-on-one interactive disinformation and emotional manipulation.

### 3. Writing with AI help can shift your opinions

4. **Bias and Discrimination:** AI systems can inherit and perpetuate biases present in the data they are trained on. If the training data contains biases related to gender, race, or other factors, the AI system may unintentionally exhibit biased behavior or discriminatory outcomes.

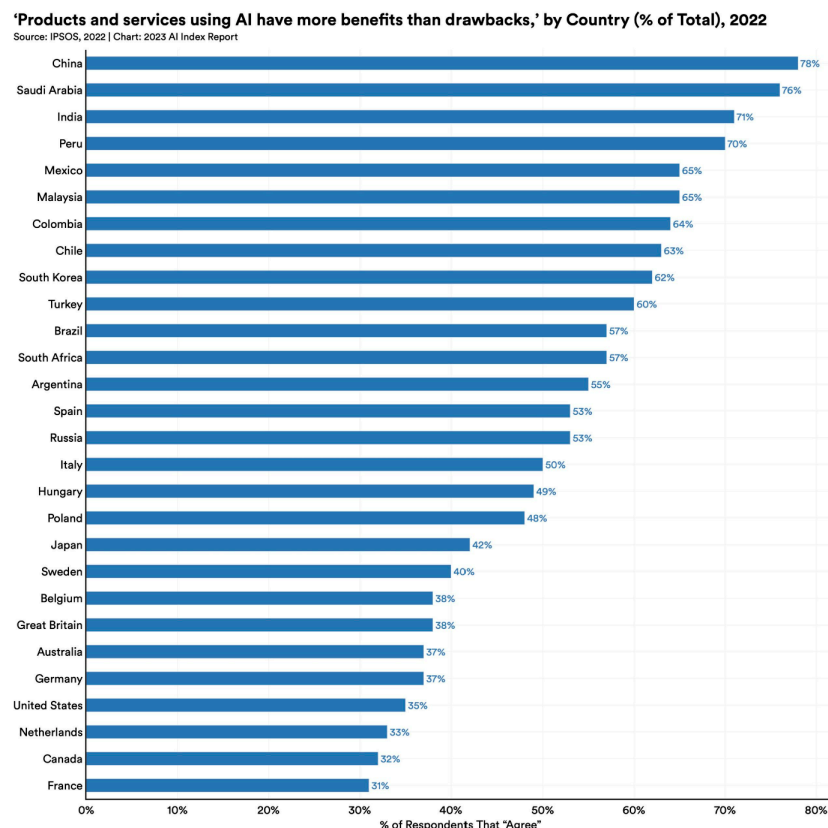
### 5. Beware of apps

[ChatGPT Scams Are Infiltrating Apple's App Store and Google Play | WIRED](#)

## 11. Closing

Like fellow indian, let us believe AI is good for human kind

Source : [AI Index Report 2023 – Artificial Intelligence Index \(stanford.edu\)](#)



***Remember, AI is not just a technology; it is a collective endeavour. Together, we can navigate the complexities, address the concerns, and harness the immense power of AI to create a better tomorrow.***

Thank you for attending the session. ***If you have any further questions or need clarification about AI, advice on university courses, Microsoft Office tools (including Excel, Google Sheets, advanced concepts in Power BI, and Google Studio), management consultation, personal finance management (including tax planning), or if you are interested in arranging a session for school or college students, please feel free to reach out to me.*** I am here to provide guidance and support. One session is not sufficient to answer all your questions, so let's continue the conversation. You can connect with me to schedule an exclusive one-on-one session tailored to your specific needs. Let's explore the possibilities together!

Your feedback is valuable to me, and I would appreciate it if you could take a moment to provide your input. Please click on the link below to access the feedback form and rate the session on a scale of 1 to 10:

**Feedback form:**

[Feedback Form](#)

([https://docs.google.com/forms/d/e/1FAIpQLSd\\_kEycj6k3GDq632LRB13H5oMeCVceoB4Fy25QpbGc\\_E32eQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSd_kEycj6k3GDq632LRB13H5oMeCVceoB4Fy25QpbGc_E32eQ/viewform?usp=sf_link))

Feel free to share this document with others if you find it helpful:

[Session Document](#) (

[https://docs.google.com/document/d/1SYAqYOm1JG-HBMGcy2CXzlj\\_-VM0ZZinjcprz5BbFy8/edit?usp=sharing](https://docs.google.com/document/d/1SYAqYOm1JG-HBMGcy2CXzlj_-VM0ZZinjcprz5BbFy8/edit?usp=sharing) )

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Thank you once again for your participation, and I look forward to connecting with you and sharing my knowledge and expertise.

## 12 Further reads

Additionally, for further study and exploration, I recommend the following resources:

- [Elements of AI](https://www.elementsofai.com/): Register for this free online course offered by the University of Helsinki. It provides a comprehensive introduction to AI. ( <https://www.elementsofai.com/> )
- [AI Hub](https://aihub.org/): Explore AI Hub, a platform that offers a wide range of AI resources, including articles, tutorials, datasets, and tools. ( <https://aihub.org/> )

Links for in-depth coverage of AI introduction:

- "Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig (Book): This comprehensive book provides a detailed overview of AI concepts, techniques, and applications. You can find it at: <https://aima.cs.berkeley.edu/>
- "Artificial Intelligence: Foundations of Computational Agents" by David L. Poole and Alan K. Mackworth (Book): This textbook covers AI fundamentals and practical examples. You can find it at: <http://artint.info/>
- "Deep Learning" by Ian Goodfellow, Yoshua Bengio, and Aaron Courville (Book): This book focuses on deep learning techniques, a subfield of AI. You can find it at: <http://www.deeplearningbook.org/>

These resources delve into AI concepts, algorithms, and applications, providing in-depth knowledge for your session.

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