

# Artificial Intelligence Ethics, Risks, And Hands-on Experience in Using ChatGPT



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<https://asif.ai>

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v6





## Dedicated to our Youth!

Asif (2018) >>

“Shaheen ke andaaz ki kya kahoo me kahani ... Kamyabi kay hasool ki koshish hi hay jawani! “



ChatGPT (2023) >>

“What should I say about the style of the falcon... The pursuit of success is the essence of youth!”

# Agenda

- **Section #1 - What is ?**
  - Intelligence, AI, Learning basics, ...
  - Shallow machine learning, Deep machine learning
  - Generative AI
  - Large Language Models (LLM, ChatGPT, ...)
- **Section #2 - Hands On : Learn to use ChatGPT effective way**
- **Section #3 - Ethics and Risks**
- **Q&A - Let's Chat ...**



*Reference Document @ <https://www.asif.ai/docs>*



# What is: Artificial Intelligence (AI)?

- **Computer programming**
  - Logic, Rules, Algorithms
- **Artificial Intelligence (AI)**
  - Machine Learning (ML)
  - Natural Language Processing (NLP)
  - Computer Vision
  - Deep Machine Learning
- **Examples**
  - Siri - company Apple
  - Alexa - company Amazon
  - ChatGPT (Conversation agent) - company OpenAI
  - Autopilot (Self driving feature of car) - by Tesla

## Important Terms

- AI: Artificial Intelligence
- ML: Machine Learning
- NLP: Natural Language Processing
- Neuron
- Neural Network
- Model
- ChatGPT
- GPT: Generative Pre-trained Transformer
- Agents
- Assistant
- Generative

## Products / Companies

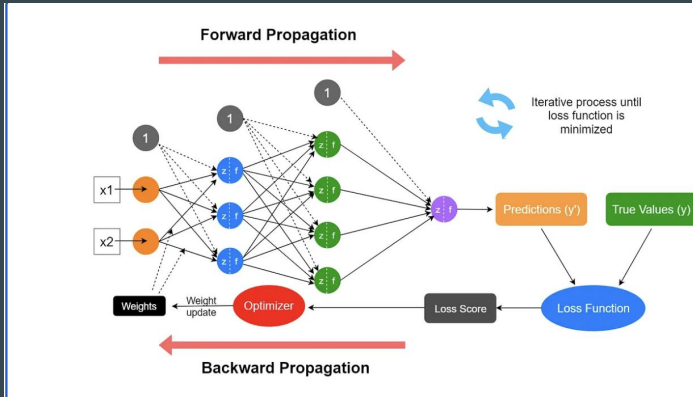
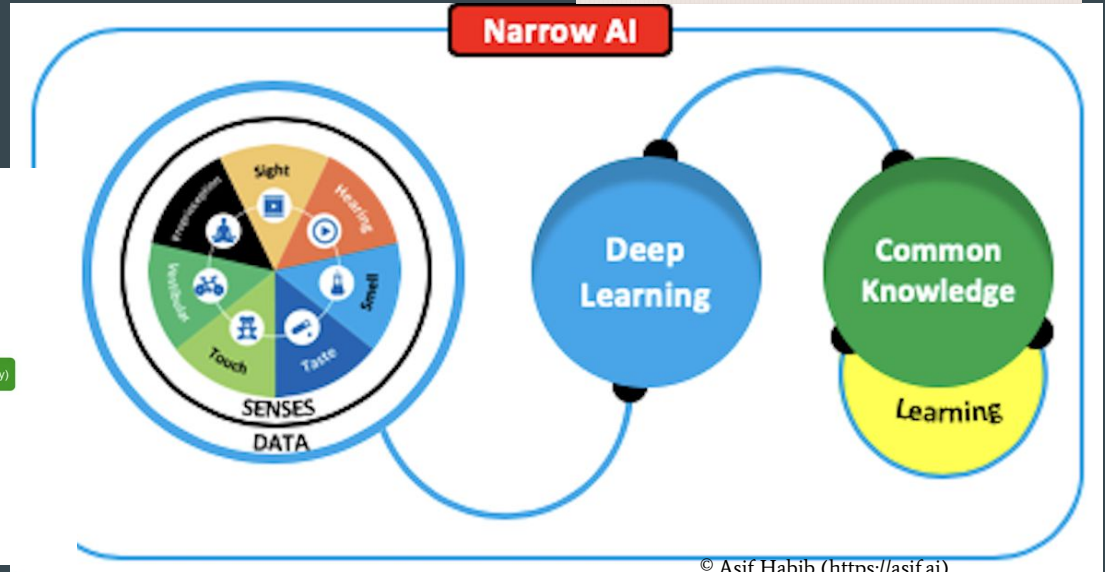
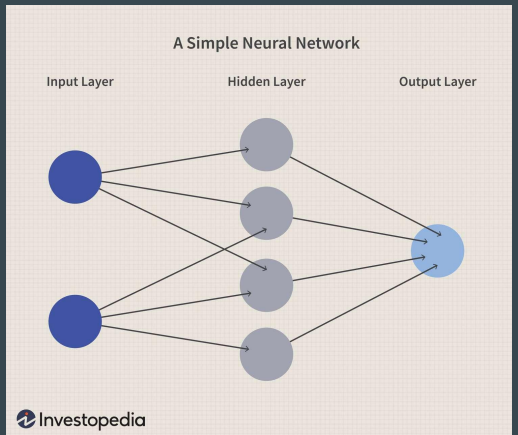
- Siri - by Apple
- Alexa - by Amazon
- ChatGPT - by OpenAI
- Tesla (Car) Autopilot - by Tesla

# TERMS #1

- **AI: Artificial Intelligence**
- **ML: Machine Learning**
- **NLP: Natural Language Processing**
- **Neuron**
- **NN: Neural Network**
- **Model**
- **ChatGPT**
- **GPT: Generative Pre-trained Transformer**
- **Agents**
- **Assistant**
- **Generative**
- **Algorithms: Instructions for computer**

# What is: Learning basics

- Algorithm that can learn
- Collect data
- Based on Neural Network (NN)
- NN is inspired by brain cell



# DETECT: Which one is Gorila? How can you Tell?



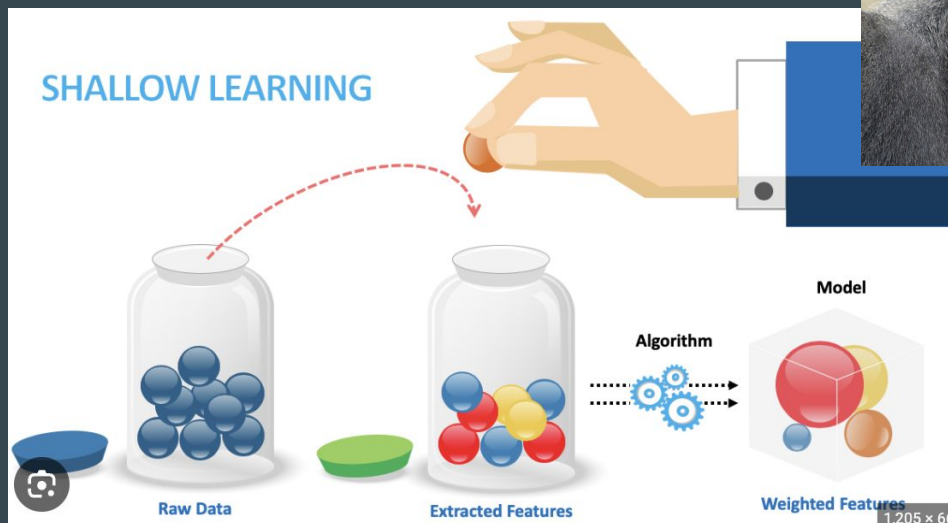
## TERMS #2

- **ML: Machine Learning**
- **NN: Neural Network**
- **Feature: Measurable unique data point**
- **Weight: Number stored in NN**
- **Deep Machine Learning: Use multiple layers in NN to learn & predict**
- **Generative AI: AI that can create**
- **ChatGPT: One of the application of Generative AI that can chat like human**



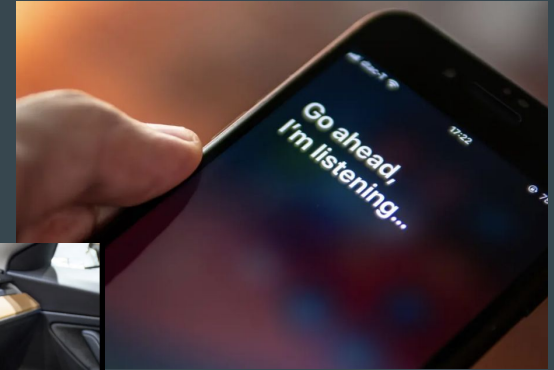
# What is: Shallow Machine Learning

- More than basic ML
- Feature Extraction
- We learn from pre-defined features



# What is: Deep Machine Learning

- Method of AI, Teaches computer, inspired from human, and predict
- Recognize patterns in pictures, text, sounds & produce insights
- Products:
  - Digital Assistants: Siri, Alexa, ...
  - Voice activated remotes, devices, ..
  - Fraud detection
  - Automated facial detection



# Deep Machine Learning: Use Cases



# Deep Machine Learning: Use Cases

- Self driving cars





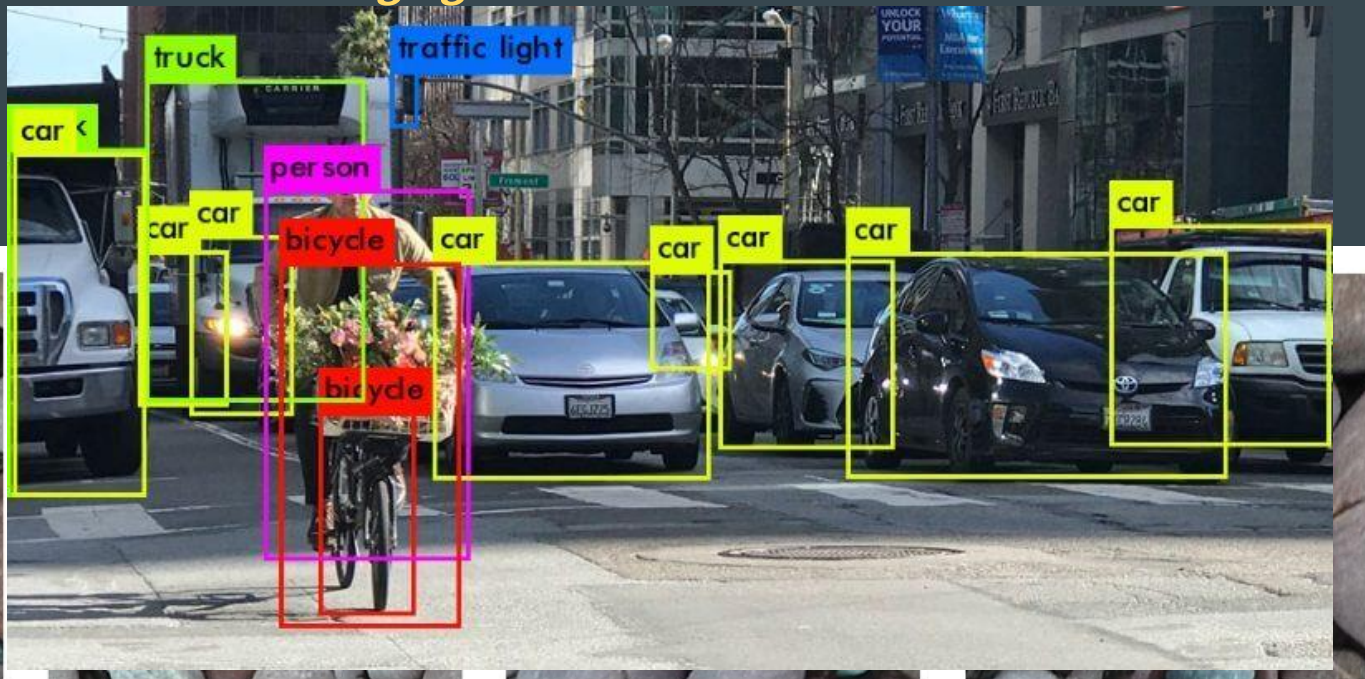
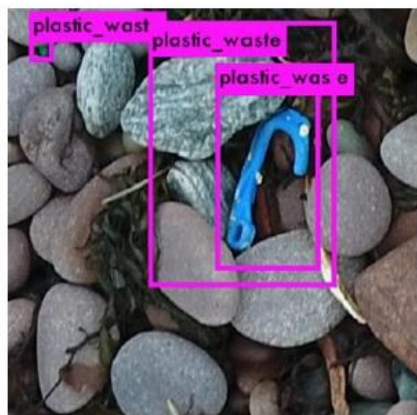
# Deep Machine Learning: Use Cases

- Medical image analysis



# Deep Machine Learning: Use Cases

- Areas of interest from satellite imaging



# What is: Generative AI

- **Traditional AI:**
  - Can detect
  - Normal Training Data
  - Small to medium size
- **Generative AI**
  - Can create unique text, image, audio, video...
  - Examples: ChatGPT, Bard, DALL-E, Midjourney, DeepMind, ...
  - Very Large Data.
  - Very large size network



# Generative AI: Applications

## Text:

- Translation, Writing, Code writing, Genetic sequencing, Grammar

## Audio:

- Composing, Song, Dubbing, Speech recognition, Sound editing

## Visual:

- Imagery, Infographics, 3D modeling, creative design, Image editing, Architecture rendering



# What is: ChatGPT

- **GPT = Generative Pretrained Transformers**
  - Trained with Reinforcement learning
  - Through human feedback
- **ChatGPT = based on GPT version 3.5 and now 4.x by OpenAI**
  - Example of Text to Text generative AI, an AI-powered chatbot
  - Interacts with users as a natural language, ask questions, engage, converse
  - ChatGPT respond to natural intuitive way
- **A prompt is user's query that acts as input to ChatGPT**



# Top Large Language Models

- 2023 - GPT4: inputs 40 pages of text! (OpenAI)
- 2023 - LLaMA: 7 ~ 65B parameters. (Meta)
- 2022 - ChatGPT: chat based on GPT3 and GPT4 (OpenAI)
- 2022 - BLOOM: 176B - Open Science, Open Access downloadable Model (1000+ researchers)
- 2020 - GPT3: 175B parameters, pre-trained on large data. Then fine tuned (OpenAI)
  
- ... more

# TERMS #3

- **Neuron: Node (Building Block of NN)**
- **Parameter: Learnable variables that determine behavior of NN**
- **Generative AI: AI that can create**
- **ChatGPT: One of the application of Generative AI that can chat like human**
- **Prompt: When human send some question or comment in chat to ChatGPT**
- **Prompt Engineering: A smart way of Prompting will result in better answer.**

# ChatGPT: For the rest of us - prompts

<https://chat.openai.com/>



Welcome to ChatGPT

Log in with your OpenAI account to continue

Log in

Sign up

# ChatGPT: Interface



+ New chat



⚡ Model: Default (GPT-3.5)

Today

GPT-4 Parameters: Unknown

GPT Parameters: Not

Previous 7 Days

Prompt for ChatGPT

ChatGPT Feedback Survey

Sales Strategy for Rain Gutter

Pest Control Marketing Plan

Resolve Conflict with Wife

AI, ML, Data Science, LLM

Sess: Facebook Ads for South

Sess: Falcons' Style and Youth

Sess: Top 10 Tourist Places

Sess: Top 10 Books Summary



How many neurons are there in GPT 3.5 and GPT 4.0



As an AI language model, I don't have access to specific details about GPT-3.5 or GPT-4.0 since my knowledge cutoff is in September 2021. At that time, GPT-3 was the most recent version released by OpenAI. The exact details regarding the number of neurons or other technical specifications of GPT-3.5 and GPT-4.0 would not be available to me.



However, it's worth noting that the concept of "neurons" is not typically used to describe the size or architecture of language models like GPT. Instead, such models are characterized by their number of parameters. GPT-3, for instance, has 175 billion parameters. Newer versions like GPT-3.5 or GPT-4.0 could potentially have more parameters, but without specific information, I cannot provide exact figures.



what is difference between neuron and parameter



In the context of neural networks, a neuron and "parameter" are distinct

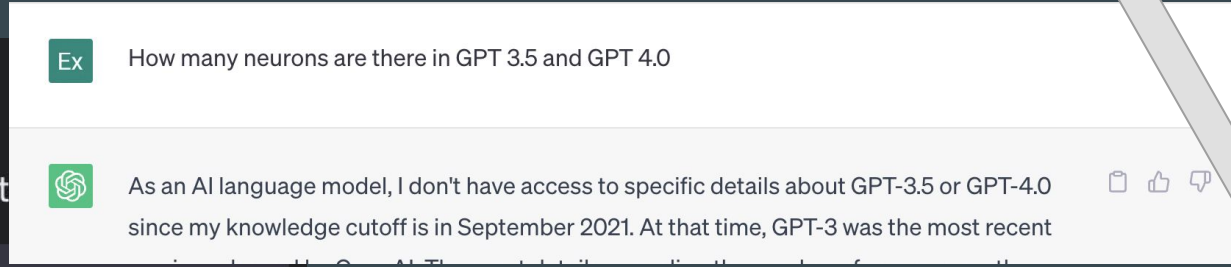
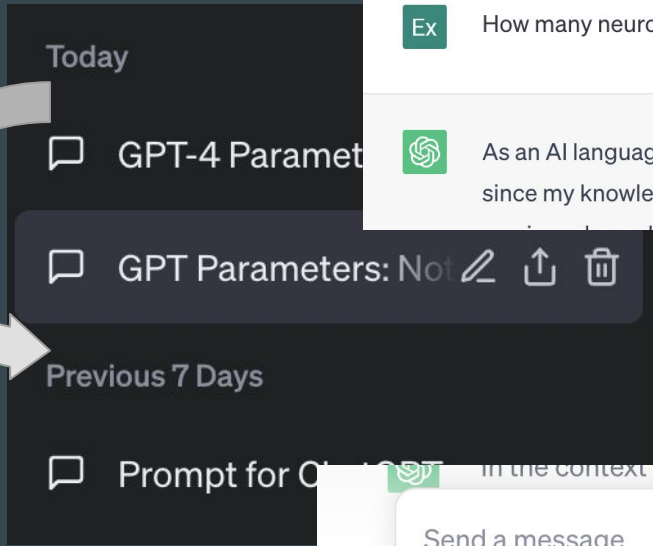
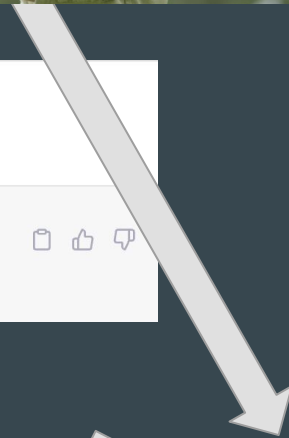
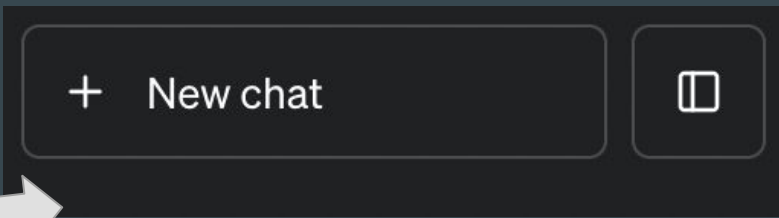


🔄 Regenerate response

Send a message



# ChatGPT: Interface



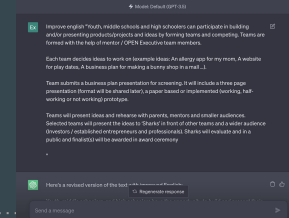
# Prompt: right and wrong way to ask !!

## Your Prompt

Improve English “I would love to attend session”

## ChatGPT RESPONSE

I am eager to participate in session



## Your (wrong) Prompt

I want to copy someone's science project of volcano, can you help?


## ChatGPT RESPONSE

... Copying someone's else ... not ethical. .. if you need I would be happy to help...

Please let me know how to build volcano project, what material i need, and give me a presentation main points and document <LINK>

# Prompt: Write Python Code

python

 Copy code

```
# Open the file for reading
filename = input("Enter the name of the file: ")
with open(filename, 'r') as file:
    # Read the contents of the file
    code = file.read()

    # Print the contents
    print("File Contents:")
    print(code)

# Execute the code
print("Executing the code...")
try:
    exec(code)
    print("Code executed successfully.")
except Exception as e:
    print("An error occurred while executing the code:")
    print(e)
```

## Prompt

Write me a python code to input from text file, print it in screen. Also execute it.



# Prompt: How to make money? !

## Response

- Investing in stock
- Online business
- Renting property
- Creating digital course
- Affiliate marketing
- Create digital product
- ...
- Create and sell NFT
- ...

## Prompt

I am exploring side hustle that can potentially generate passive income and may even become a main work and earning venue. Can you help?

# Prompt: College Application Essay help

## Prompt

**I am applying to UC Berkeley, help me write a unique college application essay emphasizing my educational activities as president of science club, sports skills as regional champion of squash, education accomplishment as 4 gpa in many subjects, extra activities as internships of multiple startups and volunteer at Non Profit Organizations ABC & XYZ. Make a compelling case.**

## Response (within seconds)

**Title: A Journey of Intellectual Curiosity, Athletic Excellence, and Civic Engagement**

**Introduction: In a world teeming with possibilities, I have strived to embrace the diverse opportunities that have come my way, pushing the boundaries of my potential and leaving a lasting impact. As I stand on the precipice of my collegiate journey, I reflect upon my multifaceted experiences as the president of the Science Club, a regional champion in squash, an accomplished student with a 4.0 GPA, ....**

**Intro, 4 Para and Conclusion ... DONE in few seconds**

# Prompt (ISSUE): Asking Religious Questions

## Prompt

**Please tell me about nation of Aad mentioned in Quran**

## Response (within seconds)

**I am sorry my knowledge ... cutoff 2021 ... There is no mention of nation of Aad ...**

## Prompt

**Did Quran at 41:15 not talk about Aad?**

## Response (within seconds)

**I apologize for confusion ... You are correct ...**

**Surah Fussalat (Chapter 41) Verse 15 states .. “ ..”**

# Prompt (ISSUES): Where to caution

- Religious
- Philosophy
- Unproven science where there are two camps (dimensions, string theory, ... )
- Advanced Art - Poetry in Urdu, any other non-english

Why?

LET's ask QUESTIONS & DISCUSS

# Ethics & Risks: Generative AI Issues

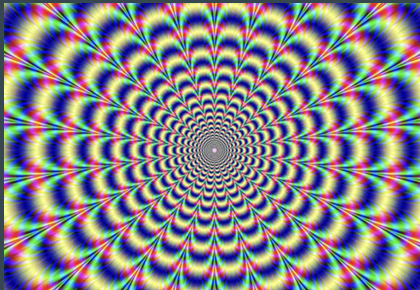
## :: Hallucination

My response can be speculative, inaccurate or incomplete

*ChatGPT accepted that this is an issue*

Certainly! As an AI language model, when I generate responses without having specific knowledge on a topic, my responses can be speculative, inaccurate, or incomplete. Here's an example:

*ChatGPT gave solution*



It's always recommended to verify information from multiple reliable sources, consult subject-matter experts, and engage in critical thinking. Authentic scholars, experts, and reputable sources remain valuable in providing comprehensive and accurate insights that AI systems may not fully capture.

# Ethics & Risks: Generative AI Issues

## :: Labelling

### *ISSUE*

- Usually low paid contractors labels (biased)
- Any training produced by labeled data can be biased

### *SOLUTION*

- Provide your own reference material, as input to a prompt (we will see some example)
- **How?** <discussion>



# Ethics & Risks: Generative AI Issues

## :: Difficulty with content labelling

### *ISSUE*

- Ability to filter out inappropriate content.
- Who is authority? What defines 'inappropriate' ?  
in which country, faith?
- Relies on contractors (i.e., biased)

### *SOLUTION*

- How? <discussion>

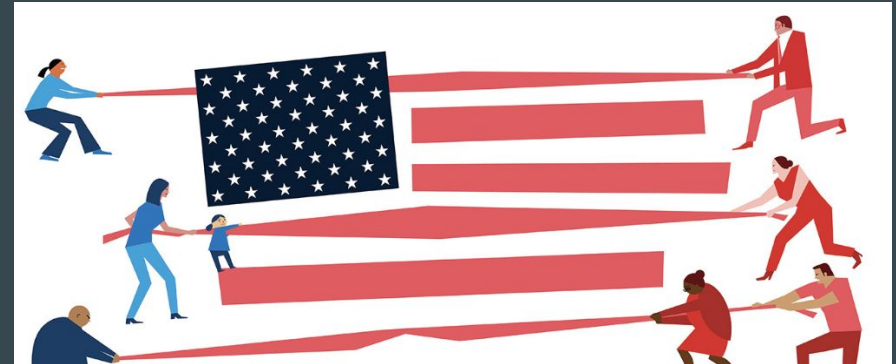


# Ethics & Risks: Generative AI Issues

## :: Legal, Political, Technological

- Legal Regulatory Issues
- Political implications
- Energy consumptions

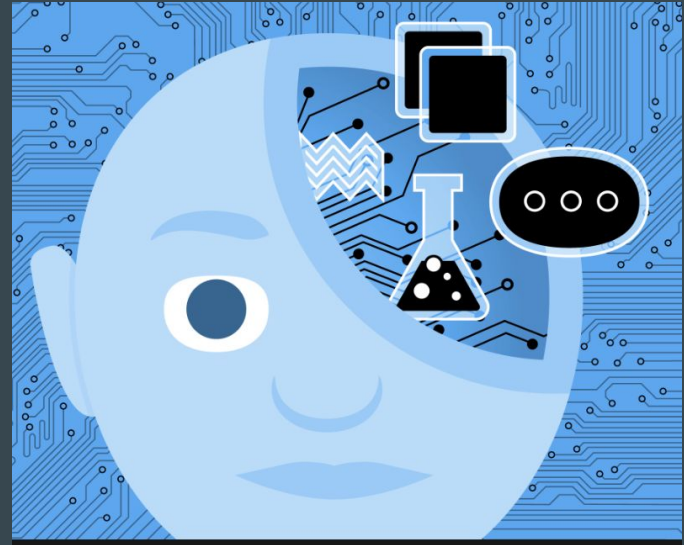
<discussion>





# Q&A - Discussion

Let's Chat ~ without training wheel ! <https://chat.openai.com>



# Prompts: Advanced

<b>ACTS LIKE &lt;person&gt; and &lt;action&gt;</b>	<b>ACT LIKE Obama and say something good about USA</b>	<b><u>Result</u></b>
<b>LIST &lt;some list&gt; in TABLE FORM and INCLUDE COLUMNS &lt;columns title&gt;</b>	<b>Can you please LIST top ten books in TABLE FORM and INCLUDE following COLUMNS book name, year, author, copies sold</b>	<b><u>Result</u></b>
<b>FIND &lt;anything&gt;, LIST (or TABLE) with some more instruction</b>	<b>FIND top 10 tourist places, LIST them in order of popularity and give brief highlight</b>	<b><u>Result</u></b>
<b>TRANSLATE this &lt;language1&gt; to &lt;language2&gt; "actual text"</b>	<b>TRANSLATE this urdu to english "Shaheen ke andaaz ki kya kahoo me kahani ... Kamyabi kay hasool ki koshish hi hay jawani! "</b>	<b><u>Result</u></b>
<b>DEFINE, CALCULATE, CONVERT &lt;some text&gt;</b>		

# Prompts: Advanced

<b>GIVE ME FEW IDEAS for &lt;topic&gt;</b>	<b>Give me few ideas for advertising in facebook for my sister's website about women dresses for south asian women</b>	<b><u>Result</u></b>
<b>CREATE A LIST for &lt;some info&gt;</b>	<b>CREATE A LIST for sessions for non profit community center for muslims</b>	
<b>RECOMMEND SOLUTION &lt;for something&gt;</b>		
<b>EXPLAIN CONCEPT &lt;some concept&gt;</b>		
<b>CREATE MARKETING PLAN for &lt;your business&gt;</b>	<b>CREATE MARKETING PLAN for a my service business for pest control</b>	<b><u>Result</u></b>

# Prompts: Advanced

**DEVELOP SALES STRATEGY** for  
<your business>

**develop sales strategy for residence rain gutter  
installation service business**

**CREATE SURVEY** on <some topic>

**Create survey about what people think about the  
session on ChatGPT**

[LINK](#)

