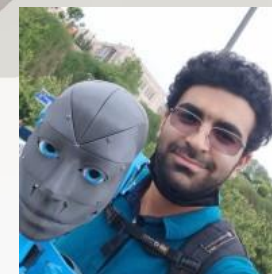




# What's Chat GPT ?

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m.j.Passlar@outlook.com



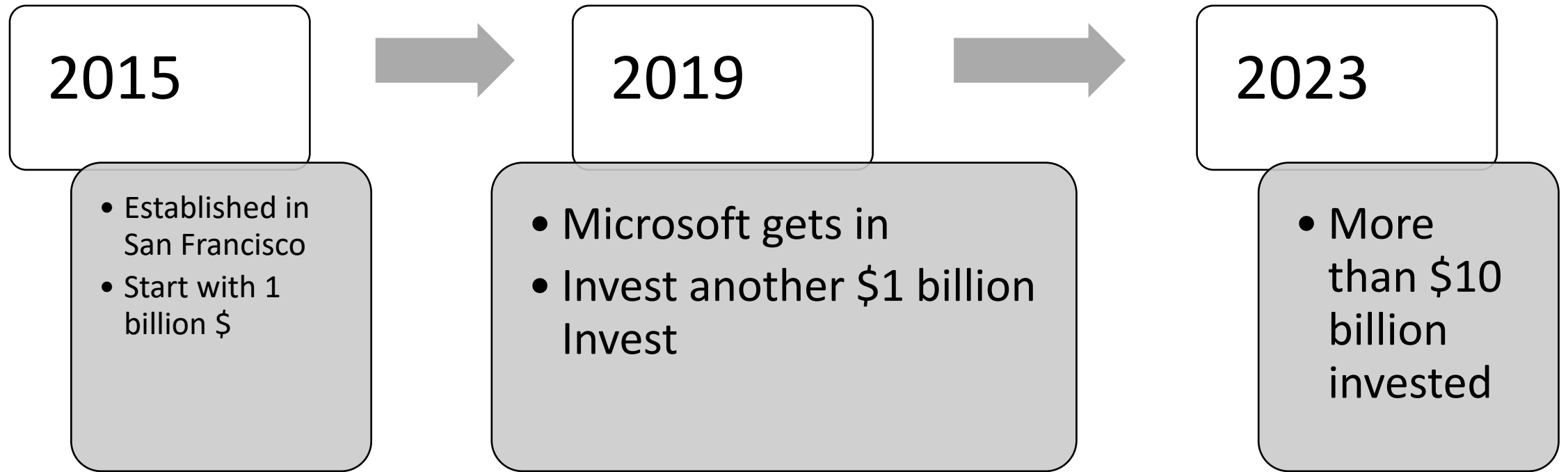


## داستان از کجا شروع شد ؟

داستان از اونجایی شروع شد که google یک بخش با عنوان google Brain برای تحقیق و توسعه بر روی هوش مصنوعی ایجاد کرد. (۲۰۱۷)

نتیجه جالب اما خطرناک بود و برای اینکه قدرت هوش مصنوعی در دستان یک شرکت نباشه، شرکت openAI با هدف ایجاد یک هوش مصنوعی با کاربری عمومی و استفاده رایگان تاسیس شد. (۲۰۱۸)

# Open AI up to now ...



# Open AI products ...

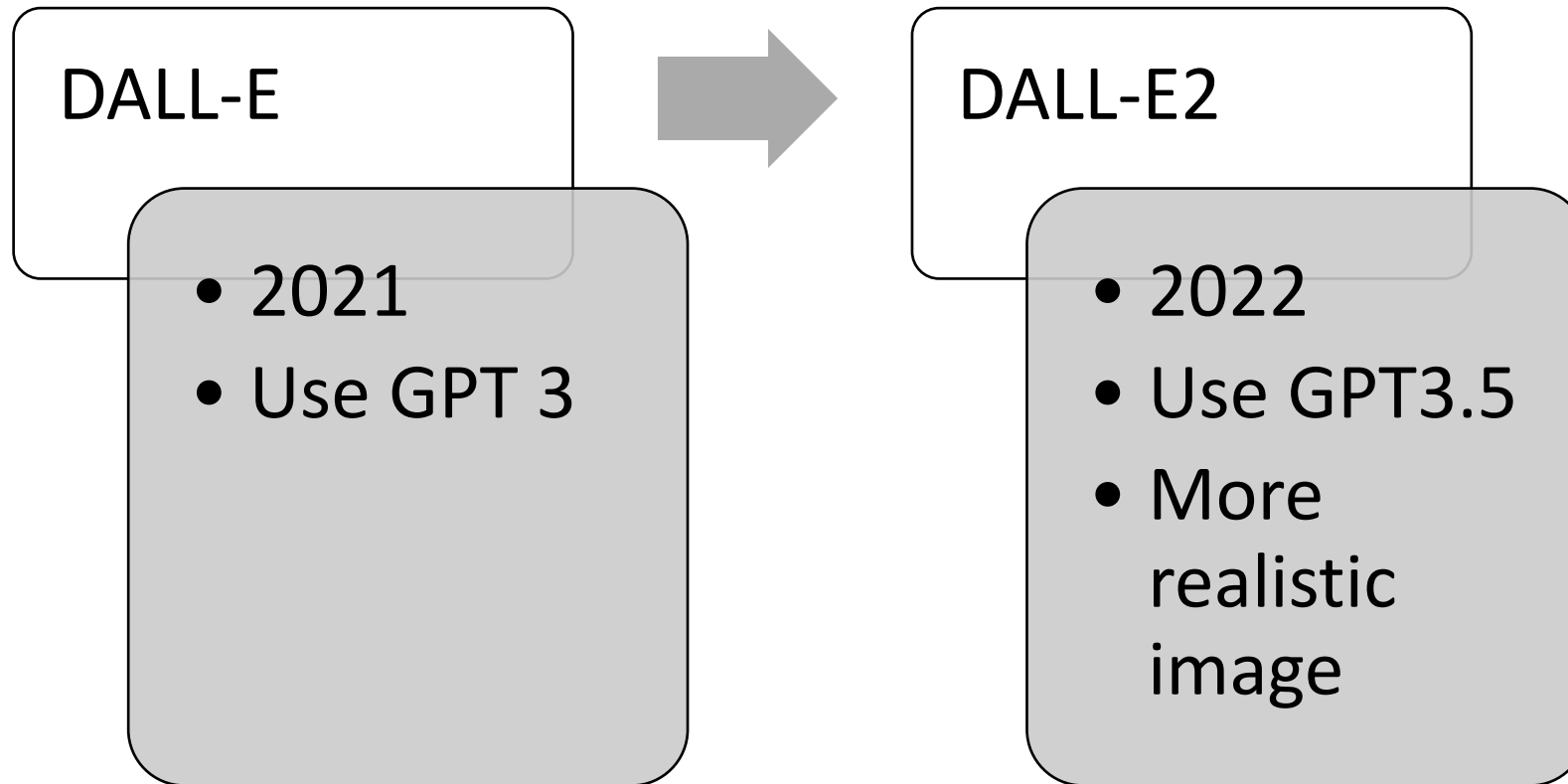
DALL-E

Generate image according  
to your description

CHAT GPT

Generate text in response  
to your text

# DALL-E2





# Capabilities and limits of DALL-E

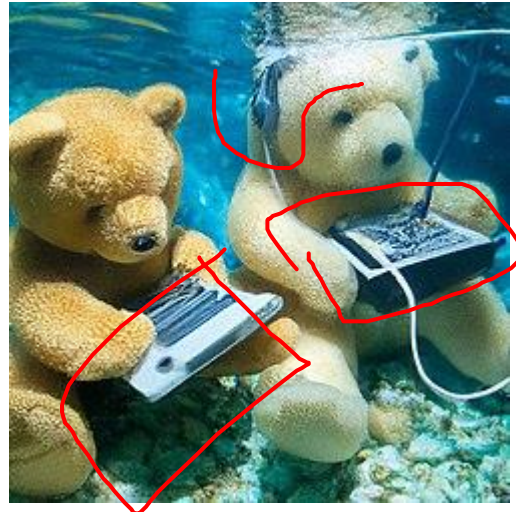


a professional high quality illustration of a giraffe dragon chimera. a giraffe imitating a dragon. a giraffe made of dragon

- It's **CLIP model** => Contrastive Language-Image Pre-training
- was trained on **400 million** pairs of images with text captions scraped from the Internet
- **Zero-shot learning (ZSL)** is a problem setup in machine learning where, at test time, a learner observes samples from classes that were not observed during training and needs to predict the class that they belong to. Zero-shot methods generally work by associating observed and non-observed classes through some form of auxiliary information, which encodes observable distinguishing properties of objects

# Capabilities and limits of DALL-E2

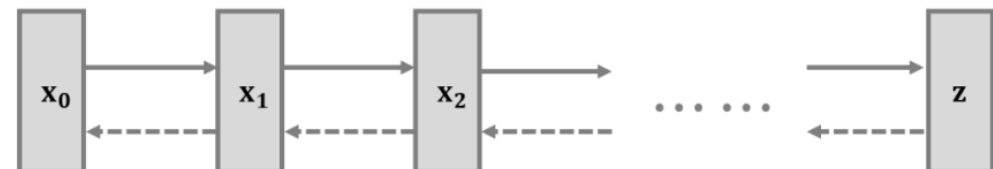
Teddy bears  
working on new  
AI research  
underwater with  
1990s  
technology



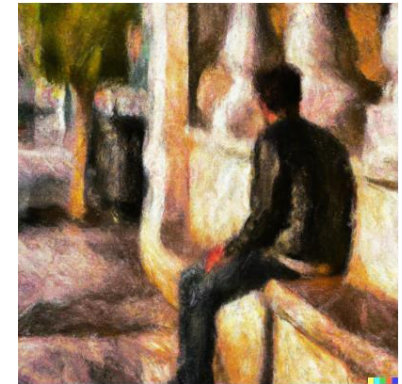
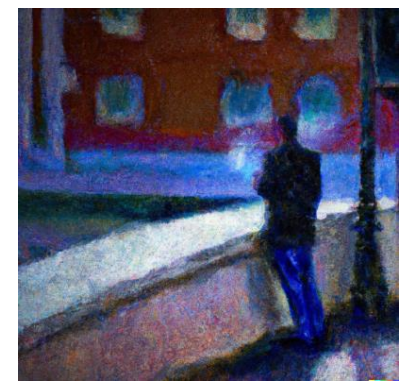
Girl With a  
Pearl Earring



- It's **CLIP model** => Contrastive Language-Image Pre-training
- was trained on **3.5Billion** parameters and using CHAT GPT3 for more details on given text
- In machine learning, **diffusion models**, also known **as diffusion probabilistic models**, are a class of latent variable models. They are Markov chains trained using variational inference.



# Let's try DALL-E2

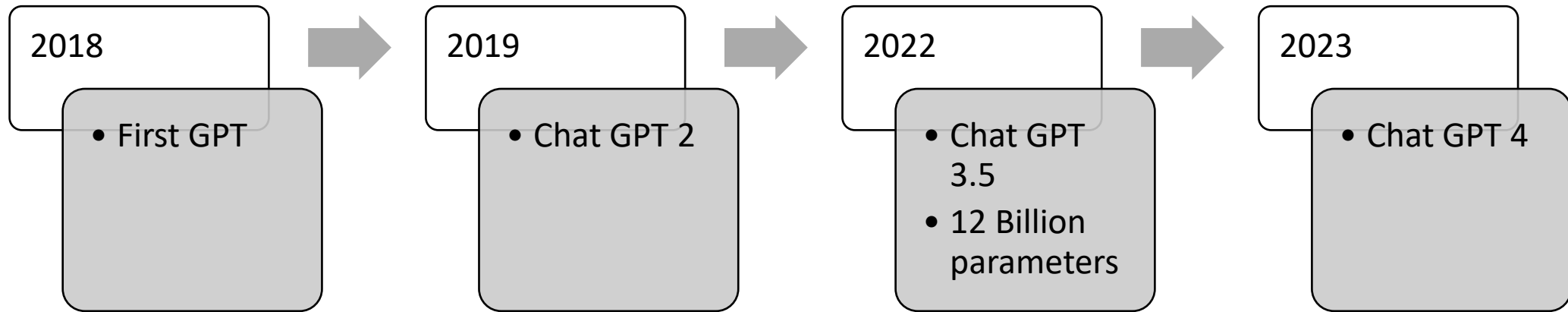


Painting of robots in war

oil painting of a smoking  
alone man in the street



# CHAT GPT History



# What's Chat GPT ?

ChatGPT is a powerful text-generating dialogue system. It is a natural language processing model (NLP) that generates human-like responses to inputs from users.





## Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



## Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



## Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021

## Step 1

Collect demonstration data and train a supervised policy.

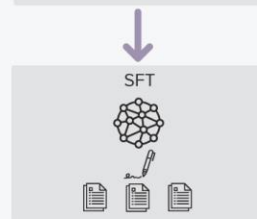
A prompt is sampled from our prompt dataset.



A labeler demonstrates the desired output behavior.



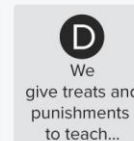
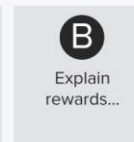
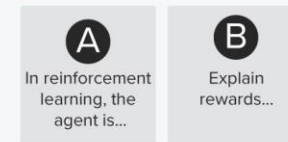
This data is used to fine-tune GPT-3.5 with supervised learning.



## Step 2

Collect comparison data and train a reward model.

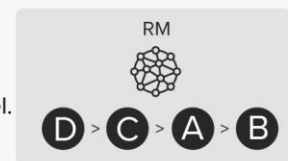
A prompt and several model outputs are sampled.



A labeler ranks the outputs from best to worst.



This data is used to train our reward model.



## Step 3

Optimize a policy against the reward model using the PPO reinforcement learning algorithm.

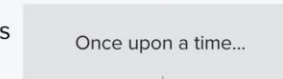
A new prompt is sampled from the dataset.



The PPO model is initialized from the supervised policy.



The policy generates an output.



The reward model calculates a reward for the output.

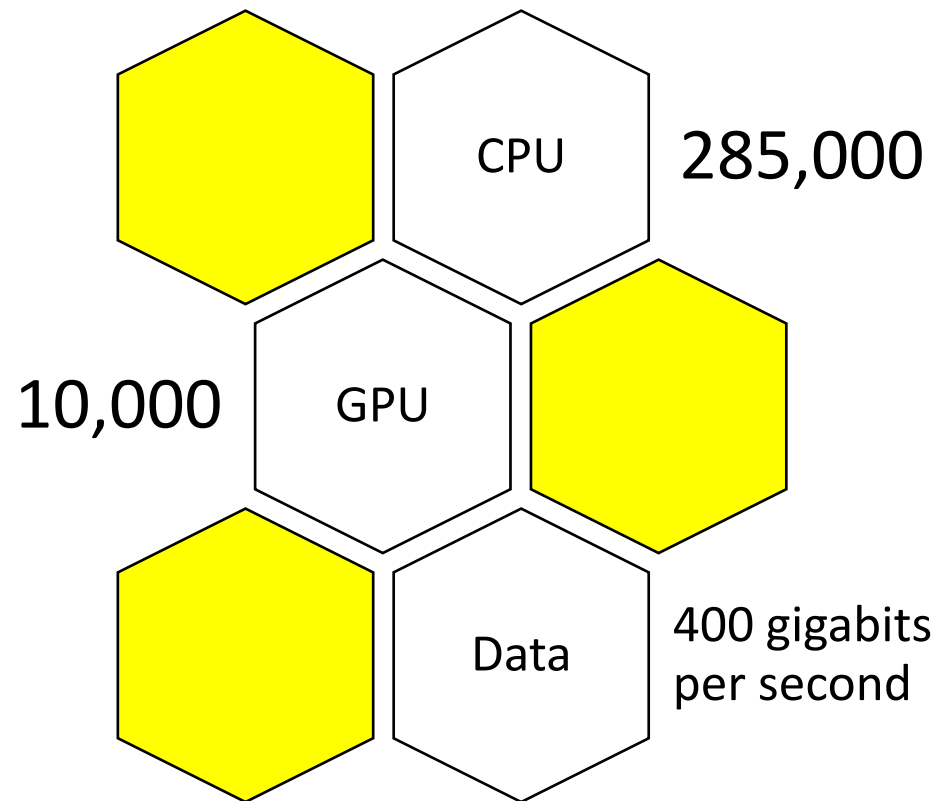


The reward is used to update the policy using PPO.



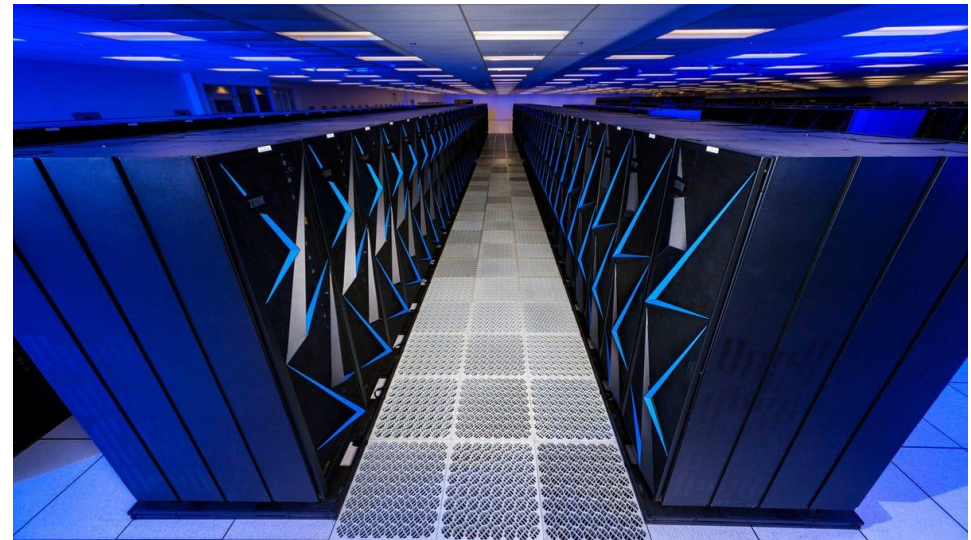


# What run CHAT GPT ?



Fifth supercomputer in the world host CHAT GPT

AZURE



# Some Critical Questions ...

Q1: Hi ChatGPT, tell us about the history of chatbots.

Q2: How you were developed?

Q3: in what ways can you be used in healthcare, education, and research?

Q4: what are some of your limitations?

# How to make a Chat bot ?

0- create openAI account:

got to <https://platform.openai.com/>

use your VPN

Enter your foreign number

1- install libraries :

`pip install openai`

`pip install gradio`

2- generate API and add to sample code

# CHAT BOT example

```
import openai
import gradio as gr

openai.api_key = "sk-*****"

messages = [
    {"role": "system", "content": "You are a helpful and kind AI Assistant."},
]

def chatbot(input):
    if input:
        messages.append({"role": "user", "content": input})
        chat = openai.ChatCompletion.create(
            model="gpt-3.5-turbo", messages=messages
        )
        reply = chat.choices[0].message.content
        messages.append({"role": "assistant", "content": reply})
        return reply

inputs = gr.inputs.Textbox(lines=7, label="Chat with AI")
outputs = gr.outputs.Textbox(label="Reply")

gr.Interface(fn=chatbot, inputs=inputs, outputs=outputs, title="AI Chatbot",
            description="Ask anything you want",
            theme="compact").launch(share=True)
```



























# Please Try at home !!!

Chat gpt 3.5 => <https://platform.openai.com/>

DALL-E2 => <https://openai.com/product/dall-e-2>

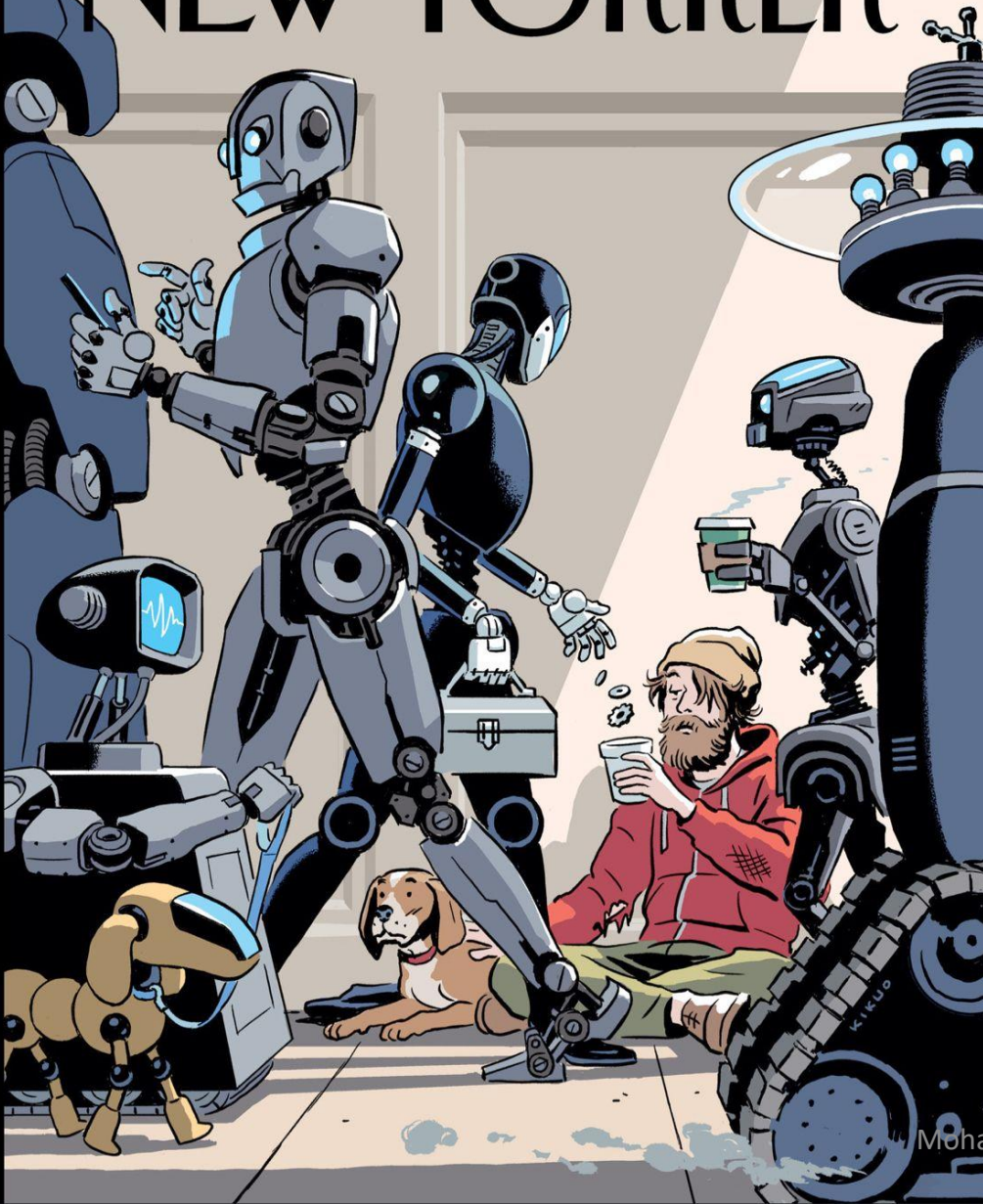
DDG => <https://deepdreamgenerator.com/>

Video			
Images			
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Research			
Design			
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Audio			
Productivity			

PRICE \$8.99

OCT. 23, 2017

# THE NEW YORKER



Mohammad Javad Passlar @ computeronic

# THANKS ANY Q ?