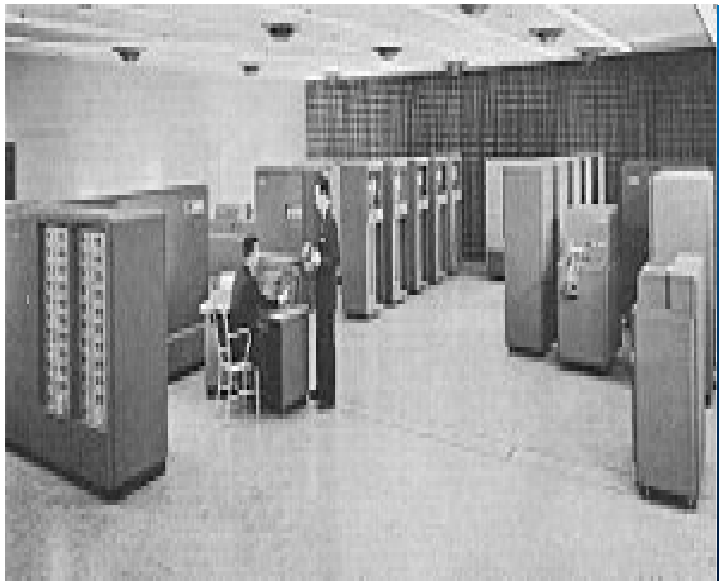
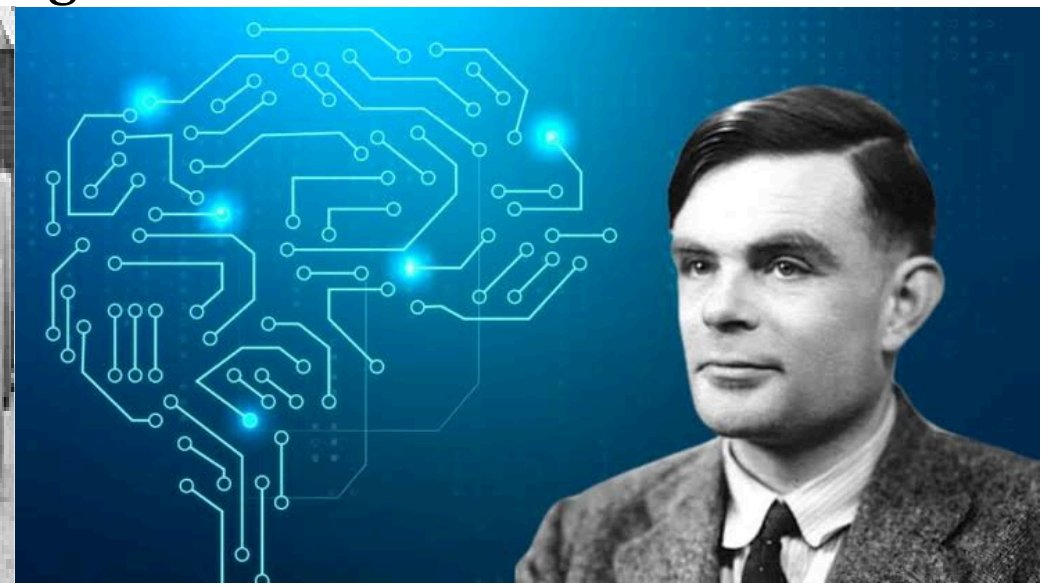
Artificial Intelligence

Going back to 1930



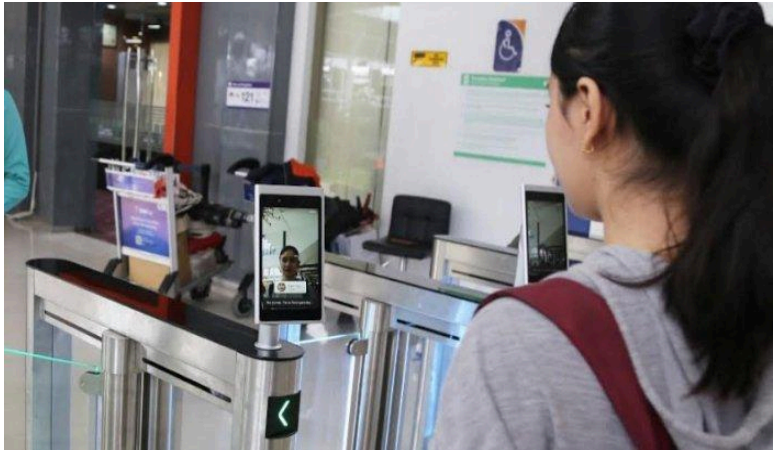


Going back to recent years

Geoffrey Hinton (Godfather of AI)


VS Computer
VS
Martin-Bot
250
sergiovillagra
750
sergiovillagra Won!
by checkmate
Chess.com

CHESS AI




stonks


MD7I


MUNGKINKAH
KAU MAMPIR
@tantowijilang
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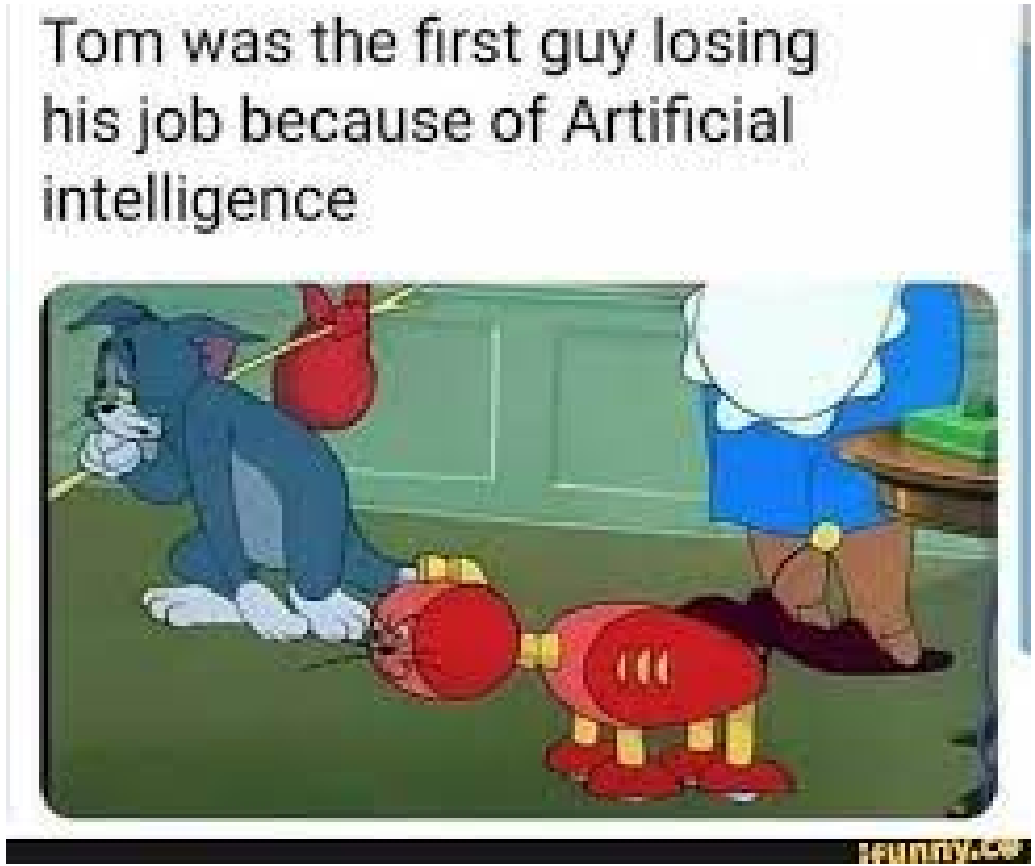
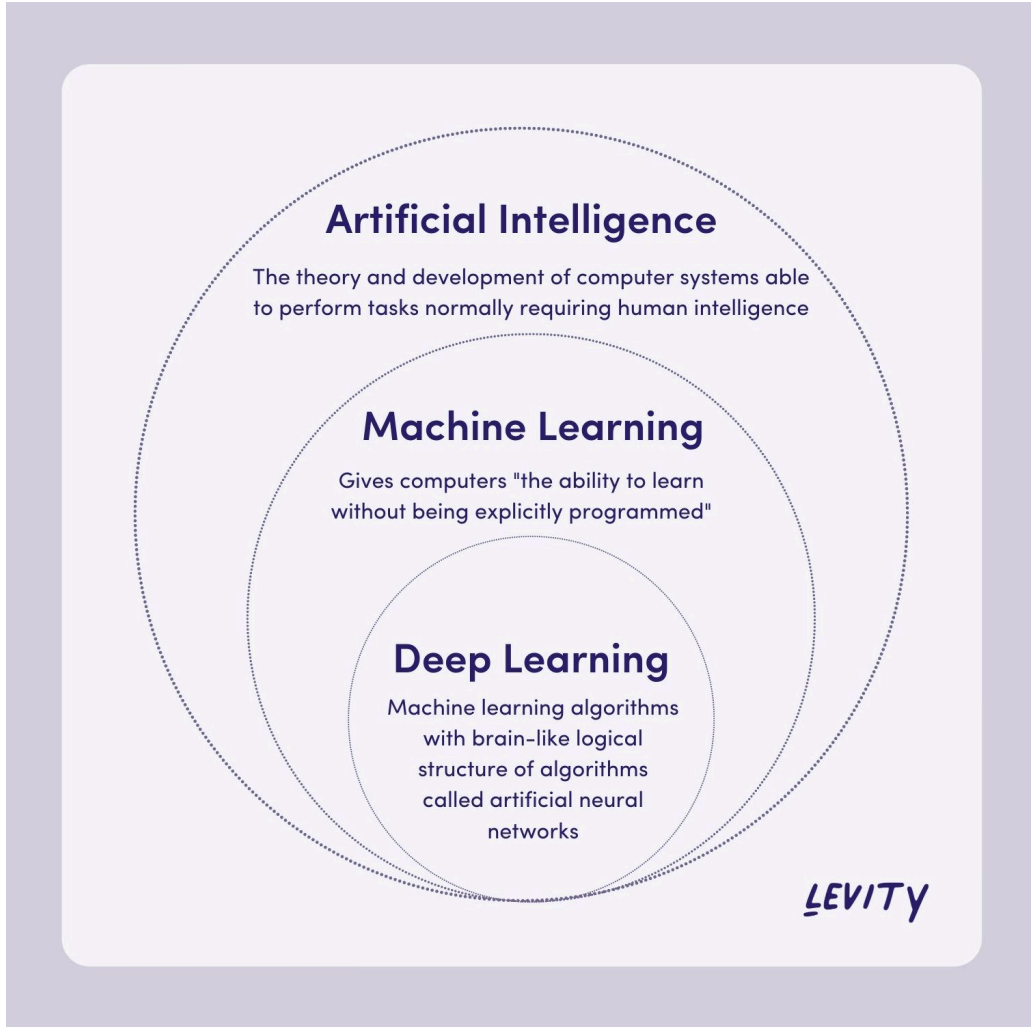
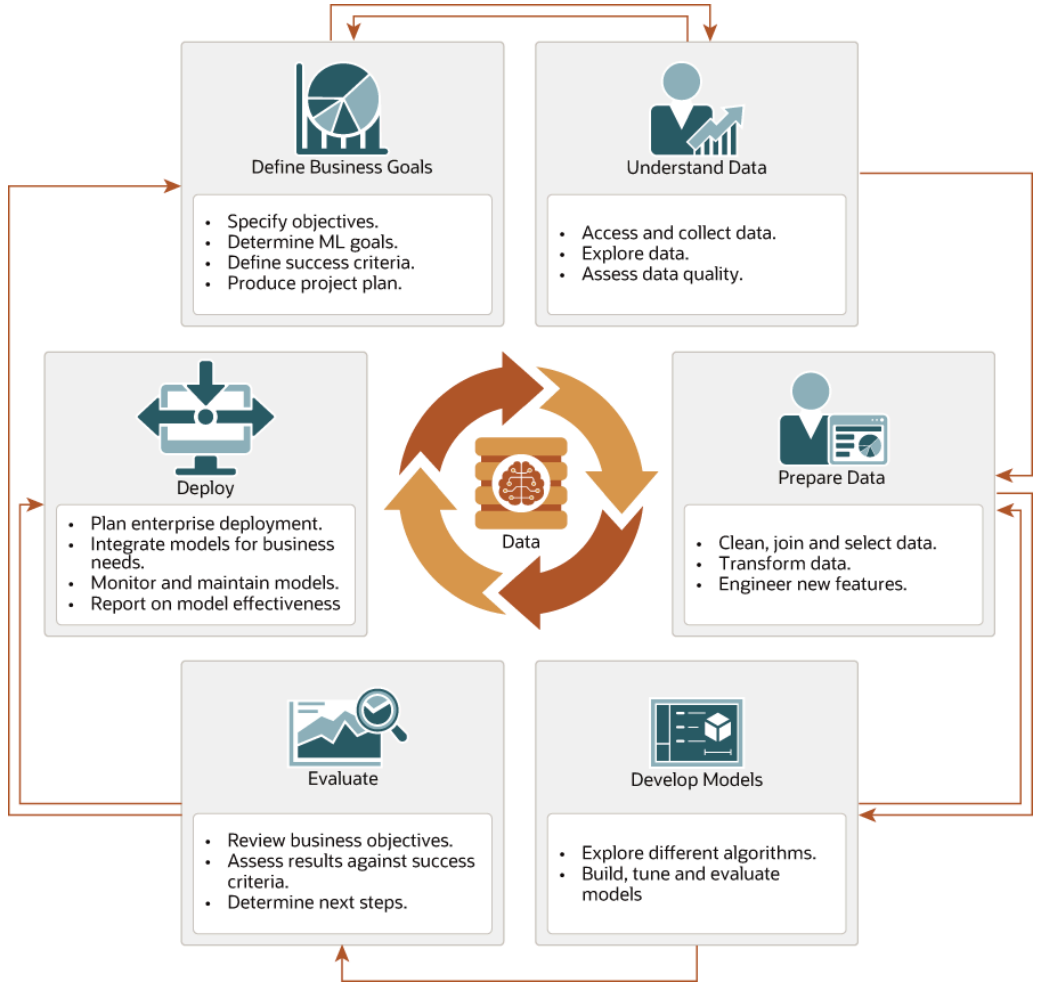
Should we worried?




Artificial Intelligence
The theory and development of computer systems able to perform tasks normally requiring human intelligence
Machine Learning
Gives computers "the ability to learn without being explicitly programmed"
Deep Learning
Machine learning algorithms with brain-like logical structure of algorithms called artificial neural networks
LEVITY

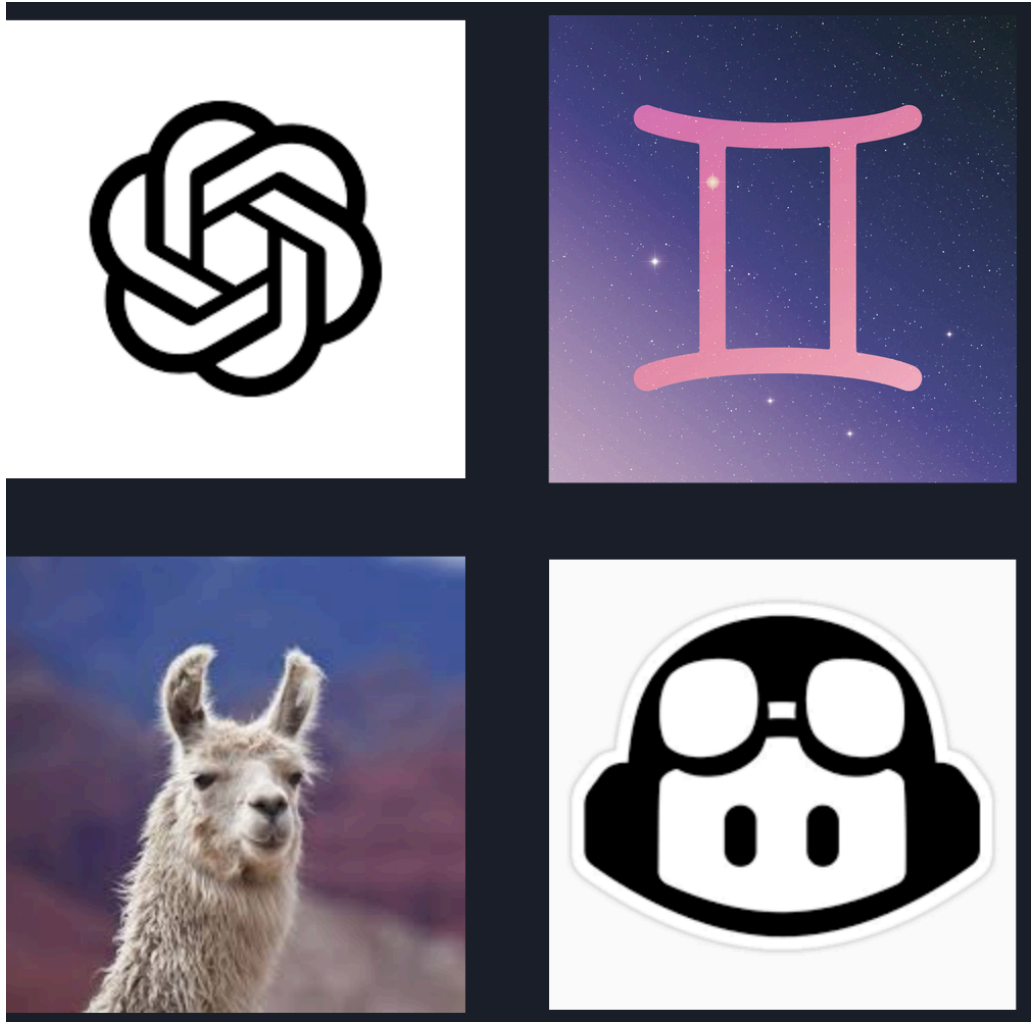

Define Business Goals
Specify objectives.
Determine ML goals.
Define success criteria.
Produce project plan.
Understand Data
Access and collect data.
Explore data.
Assess data quality.
Prepare Data
Clean, join and select data.
Transform data.
Engineer new features.
Develop Models
Explore different algorithms.
Build, tune and evaluate models
Evaluate
Review business objectives.
Assess results against success criteria.
Determine next steps.
Deploy
Plan enterprise deployment.
Integrate models for business needs.
Monitor and maintain models.
Report on model effectiveness
Data

AI Categories

- 📚 **Natural Language Processing**
  - Text Recognition
  - Text Generation
- 🖼️ **Computer Vision**
  - Image Segmentation
  - Image Classification
  - Object Detection
- 🎵 **Audio Recognition**
  - Speech Recognition
  - Audio Classification

Large Language Model

AI That Understands Human Language that Trained on Very Large Data



Huggingface LLM Generation

Simple Code Example

```
!pip install datasets
!pip install accelerate -U
!pip install pip install transformers[torch]

# import all functions
from datasets import load_dataset
from transformers import AutoModelForSequenceClassification, AutoTokenizer, TrainingArguments, Trainer, DataCollatorWithPadding
import numpy as np

from google.colab import drive
drive.mount('/content/drive')
```

```
url = 'https://docs.google.com/spreadsheets/d/1Q0vf3ZXFFKXTQXinkE58YnvC4njhvsk3fnBwrHRW5N8/export?format=csv'

ds = load_dataset('csv',  data_files=url)
ds = ds["train"].train_test_split(test_size=0.2)
ds

model_name = "distilbert-base-uncased"
model = AutoModelForSequenceClassification.from_pretrained(model_name)
tokenizer = AutoTokenizer.from_pretrained(model_name)
```

```
def tokenize(examples):
    outputs = tokenizer(examples['text'], truncation=True, padding=True)
    return outputs

tokenized_ds = ds.map(tokenize,  batched=True)
```

```
path = F"/content/gdrive/My Drive/distilbert-dana-mini"
training_args = TrainingArguments(num_train_epochs=1,
                                  output_dir=path,
                                  push_to_hub=False,
                                  per_device_train_batch_size=32,
                                  per_device_eval_batch_size=32,
                                  learning_rate=5e-5,
                                  evaluation_strategy="epoch")

trainer = Trainer(model=model, tokenizer=model_tokenizer,
                  data_collator=data_collator,
                  args=training_args,
                  train_dataset=tokenized_ds["train"],
                  eval_dataset=tokenized_ds["test"])

trainer.train()

trainer.save_model()
```

```
pipe_kwargs = {
    "top_k": None,
    "batch_size": 16
}

path = F"/content/drive/My Drive/distilbert-dana-review"
text = "Aplikasi Terbaik sepanjang masa"

reward_pipe = pipeline("sentiment-analysis", path, device=-1)
reward_output =  reward_pipe(text, **pipe_kwargs)

print(reward_output)
```