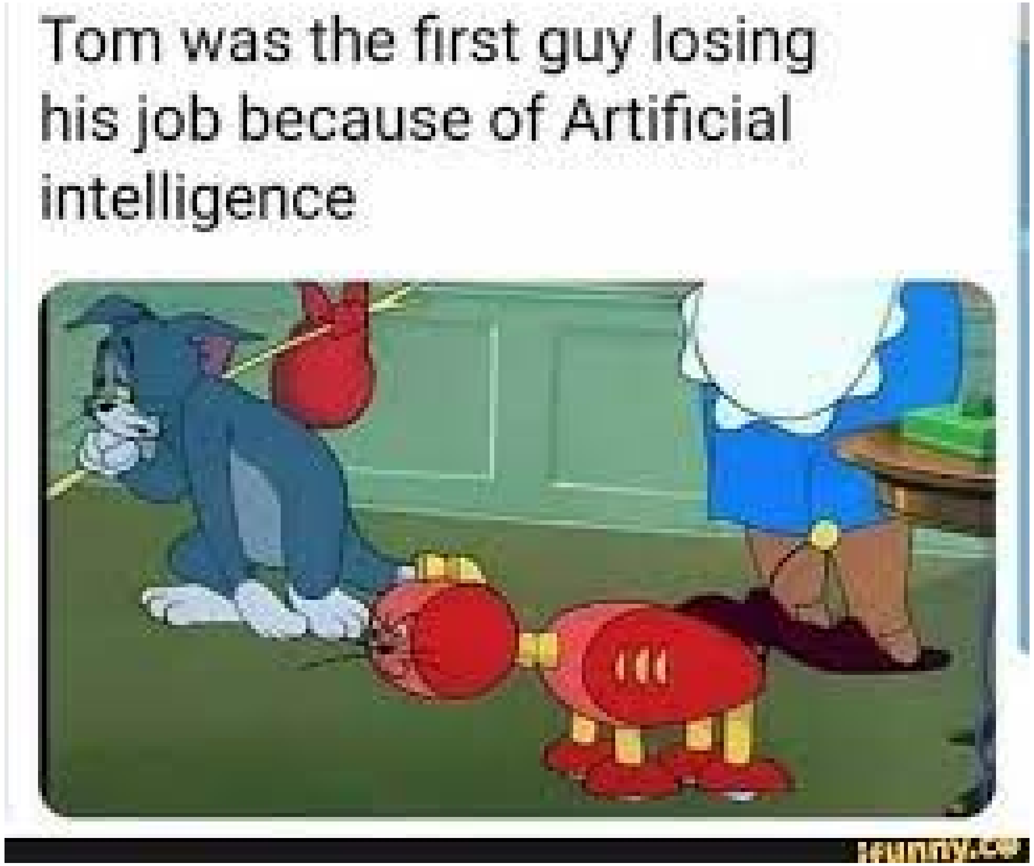
Artificial Intelligence

Going back to from Unknown to 1930

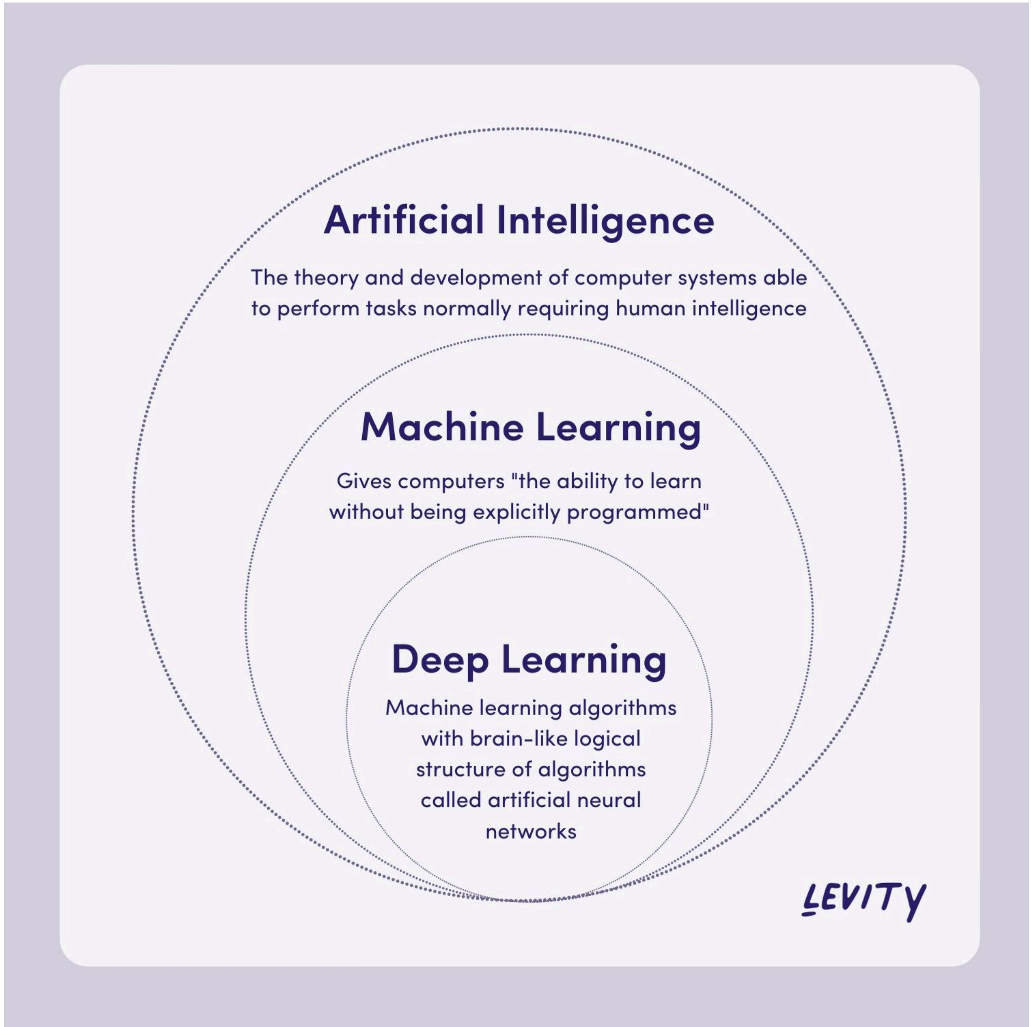
The internet is so fascinating!
That's the microwave!
Slap

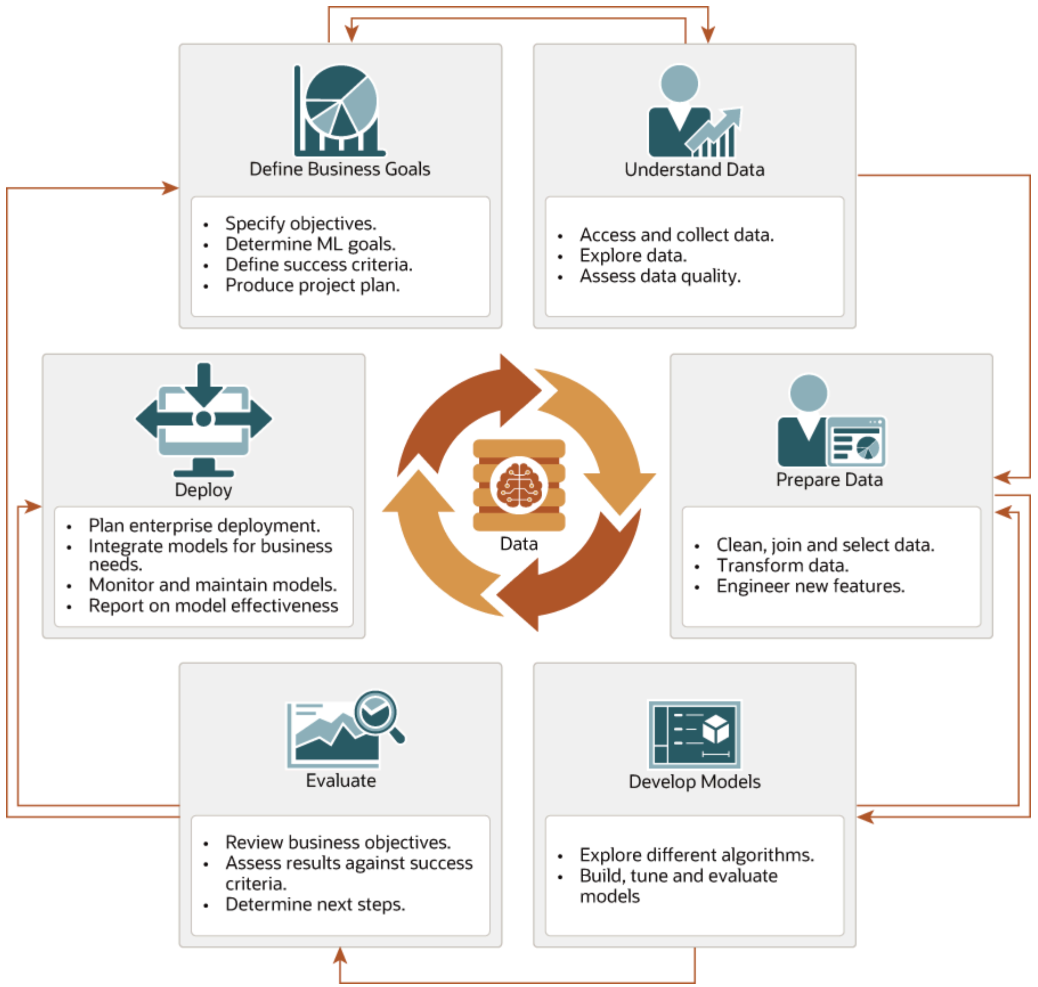
10 YEARS AGO
Ding!!
You've got mail!!!
NOW
436 unread emails
poolytoo.tumblr.com

Should we worried?



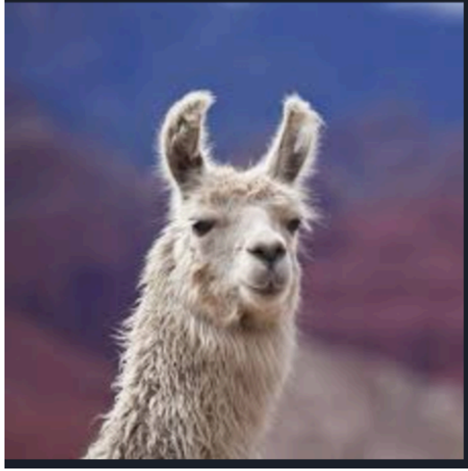
Tom was the first guy losing his job because of Artificial intelligence


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.
Deploy
Plan enterprise deployment.
Integrate models for business needs.
Monitor and maintain models.
Report on model effectiveness
Data
Prepare Data
Clean, join and select data.
Transform data.
Engineer new features.
Evaluate
Review business objectives.
Assess results against success criteria.
Determine next steps.
Develop Models
Explore different algorithms.
Build, tune and evaluate models

Large Language Model

AI That Understands Human Language that Trained on Very Large Data



https://huggingface.co/

Simple Code Example

```python
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)
```

Simple Code Example

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

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

Simple Code Example

```
path = F"/content/gdrive/My Drive/distilbert-dana-review"
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,
                                  evaluation_strategy="epoch")

data_collator = DataCollatorWithPadding(tokenizer)

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

trainer.train()

trainer.save_model()
```

Simple Code Example

```python
from transformers import pipeline, Conversation
import torch

chatbot = pipeline(
            "conversational",
            model="facebook/blenderbot-400M-distill",
            tokenizer="facebook/blenderbot-400M-distill",
            device=pipe_device)

def handle_message(msg):
    conversation = Conversation(msg)

    # Generate a response using the Hugging Face model
    response = chatbot(conversation)
    reply = response.generated_responses[-1]

    return reply
```