The OpenAI API

Getting Started with the OpenAI API

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Overview

Getting started with the OpenAI API

Exploring the OpenAI API

Using the Chat Completions API

Optimizing API usage

Audience

Beginner and intermediate developers
Ideally, familiar with REST APIs

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Table of contents | Description | Transcript | **Exercise files** | Discussion | Related Courses

These exercise files are intended to provide you with the assets you need to create a video-based hands-on experience. With the exercise files, you can follow along with the author and re-create the same solution on your computer.

Download exercise files

Ask Questions

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0 Comments

Esteban Herrera

Start the discussion...

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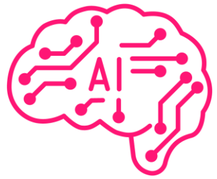
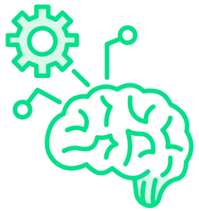
AI, GPT, and OpenAI

AI, Machine Learning, Deep Learning

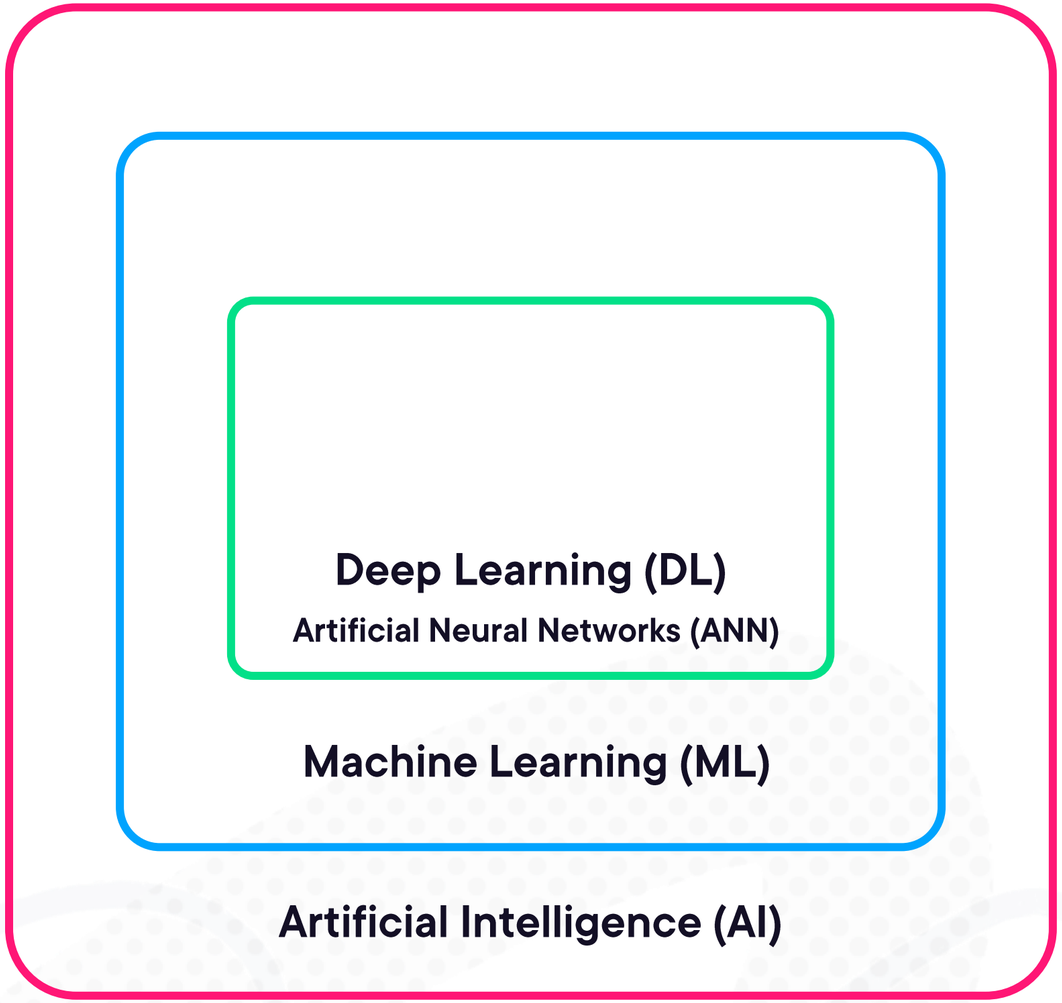


Artificial Intelligence

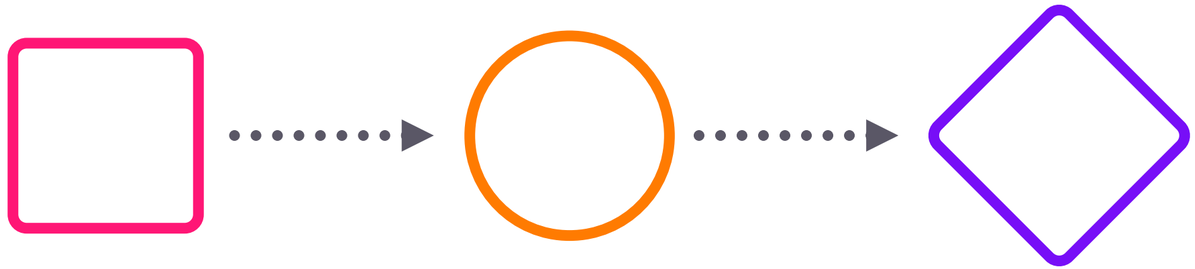
Machine Learning



Deep Learning



Artificial Neural Networks

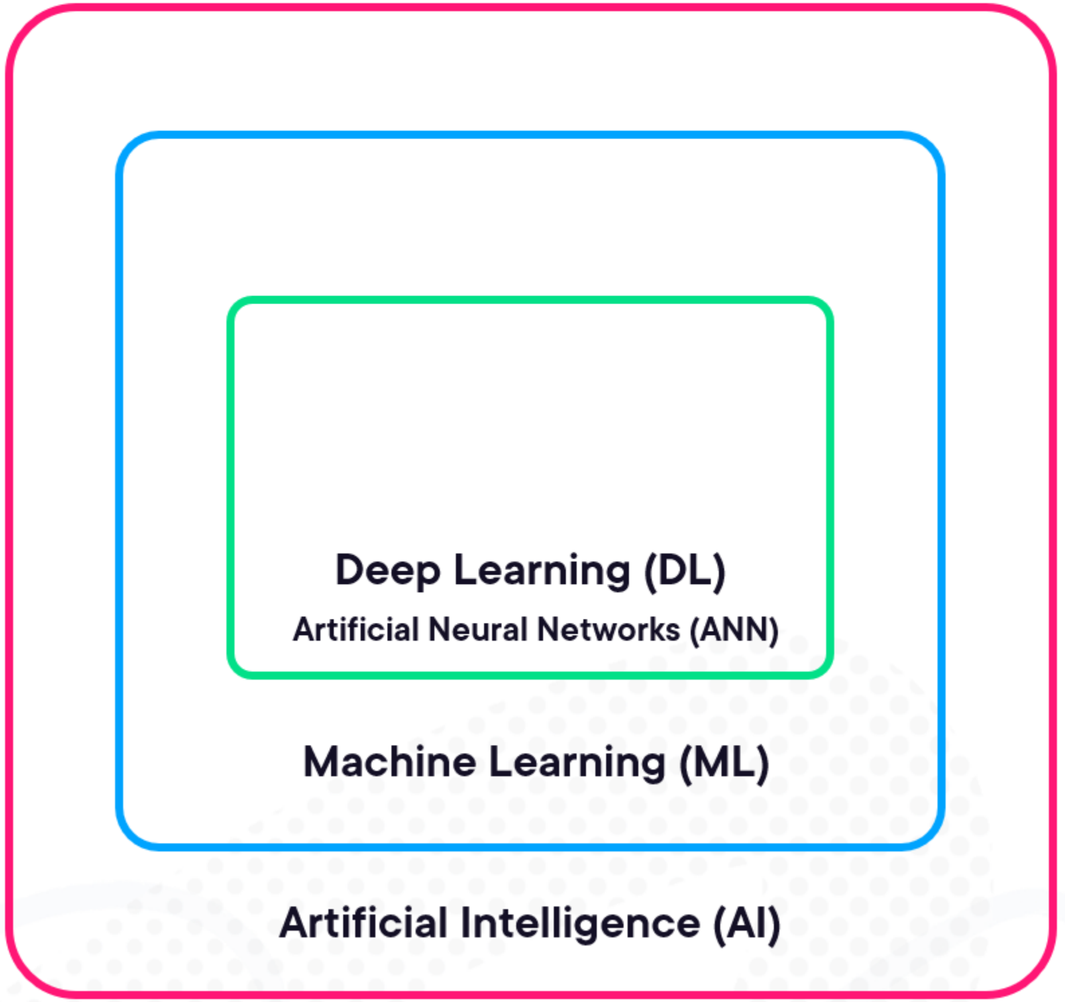


AI, Machine Learning, Deep Learning

Artificial Intelligence

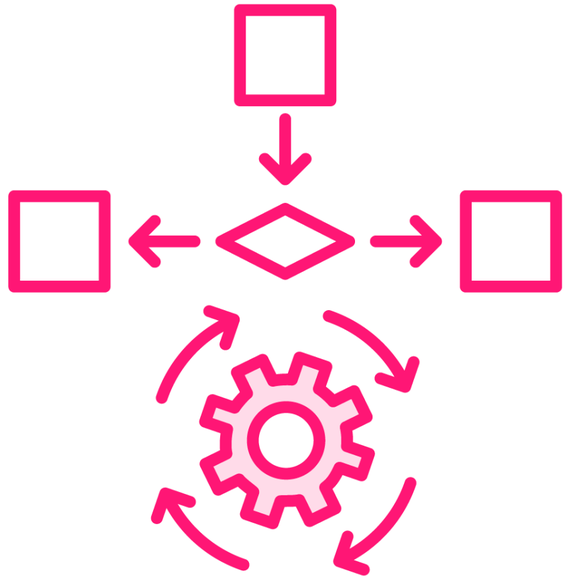
Machine Learning

Deep Learning

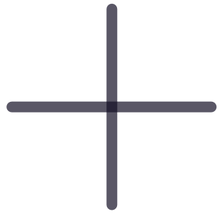


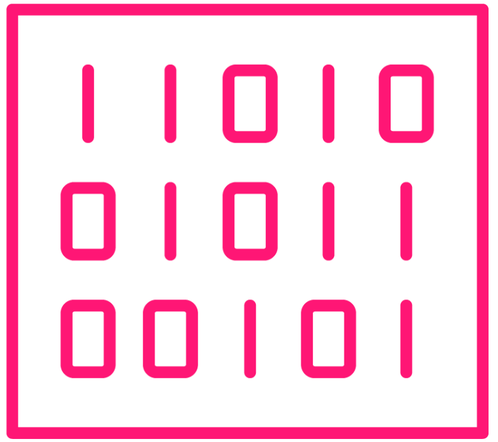
A machine learning model becomes better by learning from more and more data.

Machine Learning Model



Machine learning algorithm





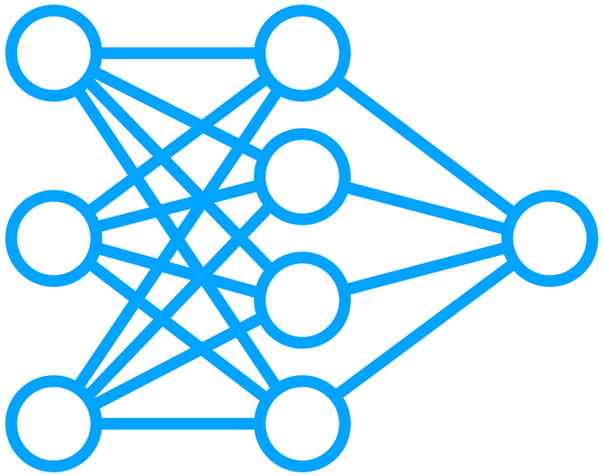
Training data

Training Data

Fruit
Usually sweet

Vegetable
Usually not sweet

Generative Pretrained Transformers (GPT)



A type of deep learning model

Transformers are used for tasks involving human language

They use artificial neural networks to process and understand data

The "pretrained" part means these models have already been trained on a large amount of text

They don't understand language in the same way humans do

Predicting Text

I am feeling... happy

sad

like ****

OpenAI Timeline

Dec 2015
OpenAI founded
AGI must benefit humanity

Jun 2017
Attention is All You Need
Introduced transformers

Jun 2018
GPT-1
First GPT model

Feb 2019
GPT-2
Improvement over GPT-1

Jun 2020
GPT-3
Better understanding

Mar 2022
GPT-3.5
Revision of GPT-3

Mar 2023
GPT-4
Best model

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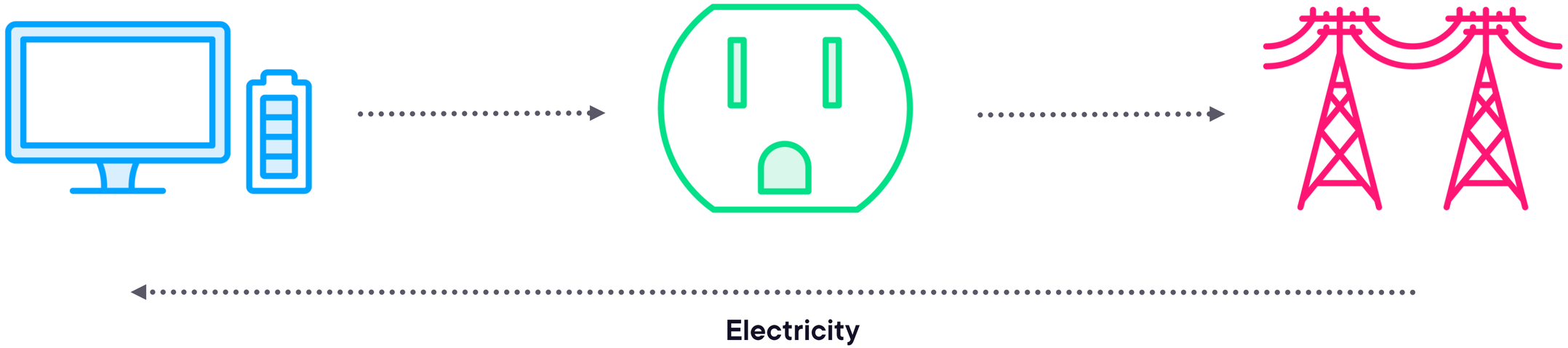
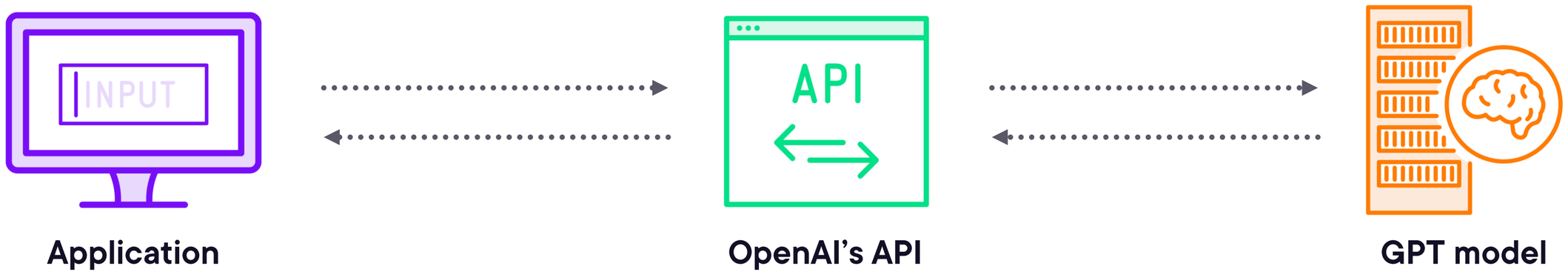
REST APIs and JSON

API (Application Programming Interface) Analogy



Data Exchange Flow



REST (Representational State Transfer) API

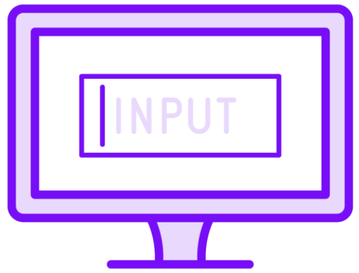
Style of API that uses HTTP (Hypertext Transfer Protocol) as the communication protocol, allowing different applications to talk to each other using HTTP requests.

https://en.wikipedia.org/wiki/Representational_state_transfer

REST API

Functionality	VS	HTTP Method
Retrieve		GET
Create		POST
Update		PUT/PATCH
Delete		DELETE

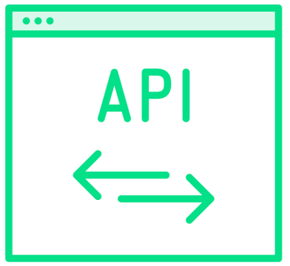
API Request and Response




```
{
  "prompt": "Translate to French: artificial intelligence",
  "max_tokens": 50
}
```

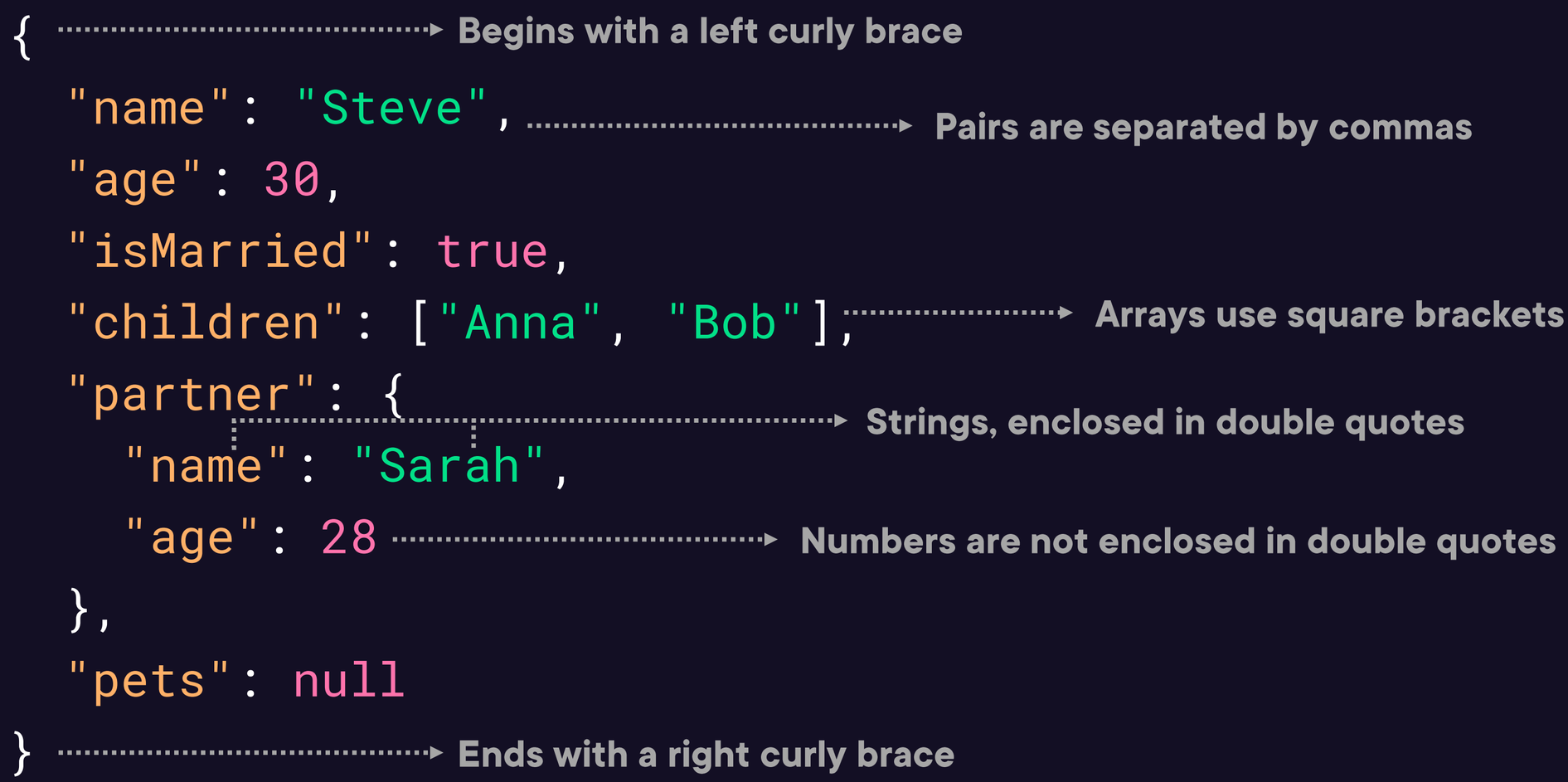
POST Request

Response




```
{
  "object": "text.completion",
  "model": "text-davinci-003",
  "choices": [
    {
      "message": {
        "role": "system",
        "content": "intelligence artificielle"
      },
      "finish_reason": "stop",
      "index": 0
    }
  ]
}
```

JSON (JavaScript Object Notation)



Getting an OpenAI API Key

API Key

`Z59whbXmkEZ8E9pNMpq1T3BlbkFLeLA8QjU40Fr0TP6V8AB1`

- Unique string
- Letters & numbers

Autorization Header

```
Authorization: Bearer Z59whbXmkEZ8E9pNMpq1T...
```

If someone gets your API key, they can pretend to be you and use the API.

Demo

Calling the API using curl, JS, and Python

Summary

Artificial intelligence

- Machine learning
  - Deep learning

Generative pretrained transformers (GPT)

- A type of deep learning model
- Transformers are used to understand and generate human language

Summary

OpenAI

- Creates advanced versions of the GPT model (like GPT-3.5 and GPT-4)
- Access to these models through an API
  - HTTP (for communication)
  - JSON (for data exchange)
  - API key (for authentication)

An API can be used in different contexts

- Command-line script
- JavaScript function
- Python script

Up Next:

Exploring the OpenAI API