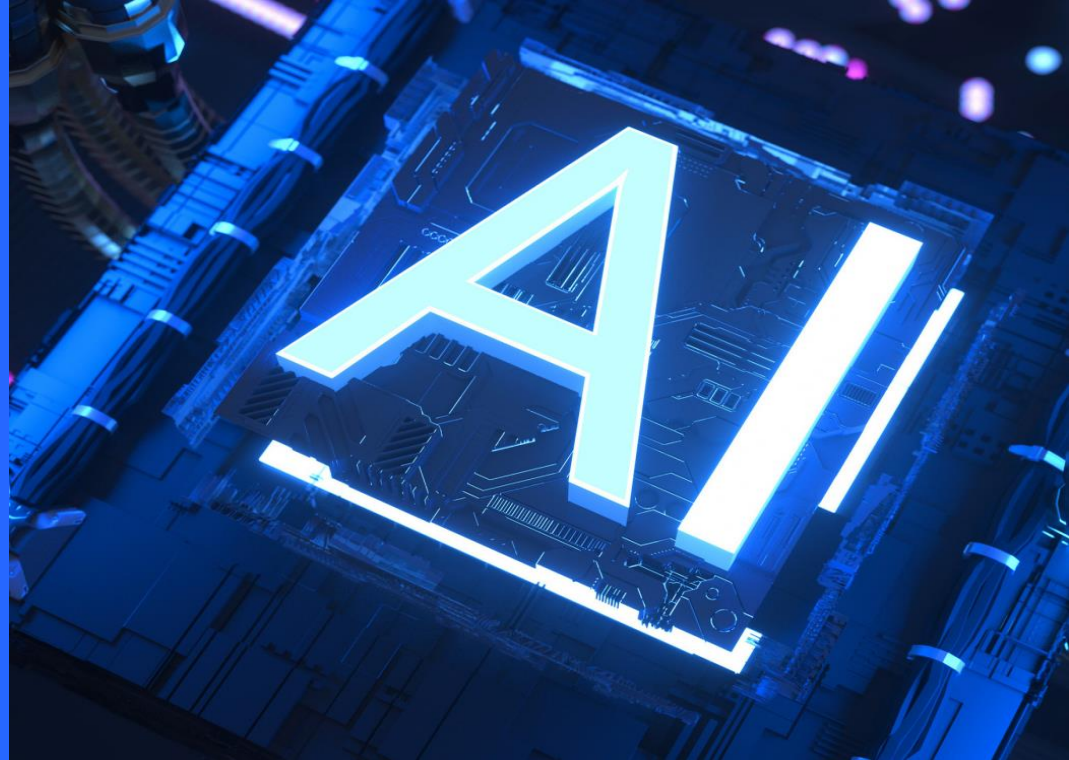


# Getting Familiar for OpenAI



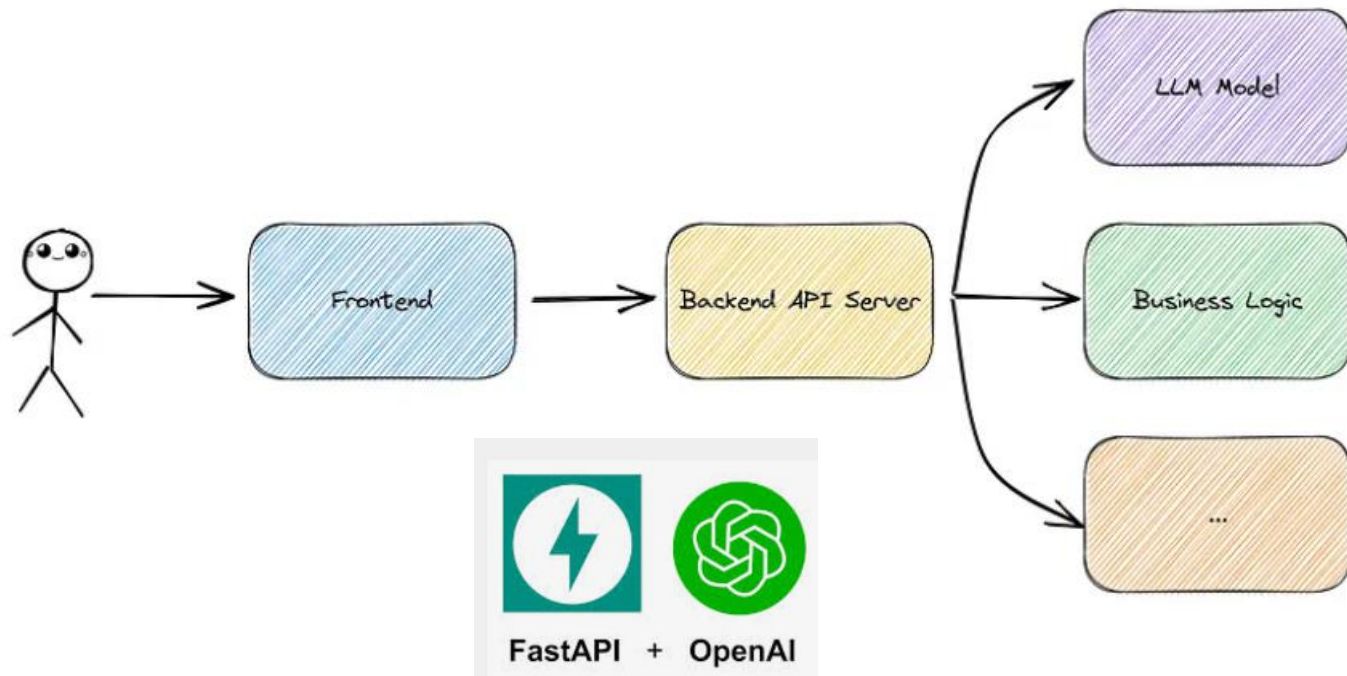
# Agenda

- Chatbot Process
- Prompt Engineering
- Playground
- GPT Parameters
- Get OpenAI API Key
- Setting up the Environment
- Putting all Together
- Python Code. Putting it in App
- Conclusion & Take Aways



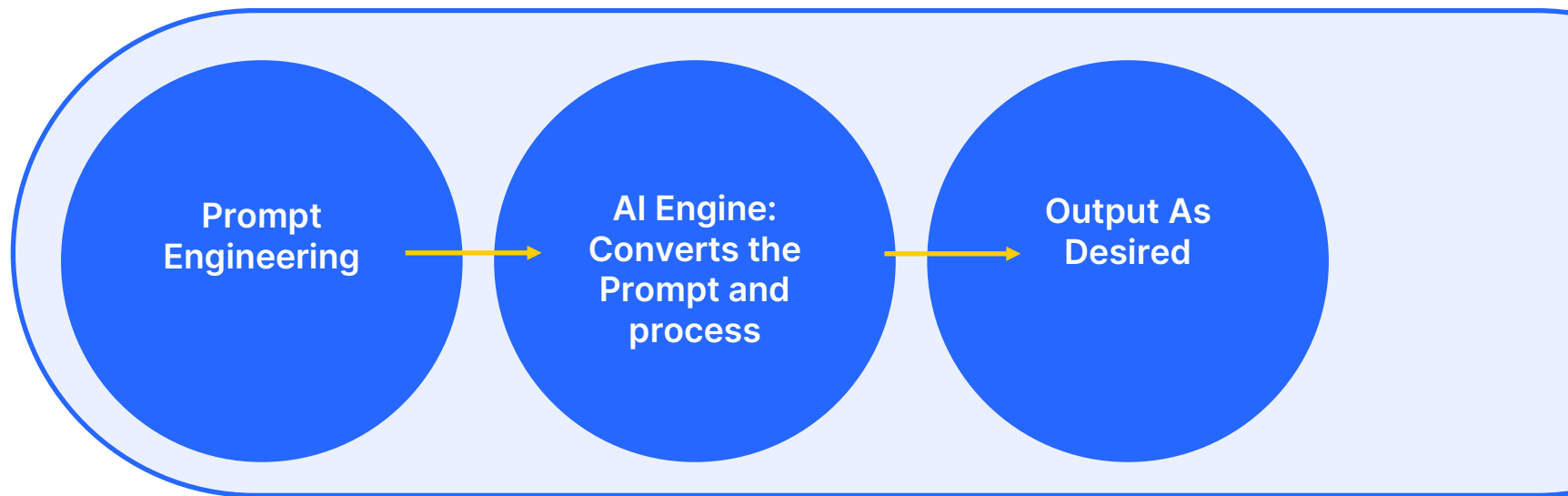
# Chatbot Process

# Chatbot Process



# What is Generative AI

Generative AI is designed to generate new content as its primary Output



# Types of Artificial Intelligence



The diagram consists of a light blue rounded rectangle containing two blue circles. The left circle is labeled 'Internal AI' and the right circle is labeled 'Generative AI'. A blue arc is visible in the top right corner of the slide.

**Internal  
AI**

**Generative  
AI**



# Prompt Engineering

# 4 types of Prompt



The diagram consists of a light blue rounded rectangle containing four blue circles. Each circle contains a white text label representing a type of prompt. The labels are 'Instructions', 'Questions', 'Input Data', and 'Examples', arranged from left to right. A blue circle is partially visible in the top right corner of the slide.

Instructions

Questions

Input Data

Examples



# Prompt Engineer in action

**Beginner** : Write me an article on Business Networking

**Experienced** : I Want You To Act As A **Data Scientist** Very Proficient **SEO Writer** Writes Fluently English. First Create Two Tables. First Table Should be the Outline of the Article and the Second Should be the Article. Bold the Heading of the Second Table using Markdown language. Write an outline of the article separately before writing it, at least 15 headings and subheadings with hyperlinks (including H1, H2, H3, and H4 headings) Then, start writing based on that outline step by step. Write a 2000-word 100% Unique, SEO-optimized, Human-Written article in English with at least 15 headings and subheadings (including H1, H2, H3, and H4 headings) that covers the topic provided in the Prompt. Write The article In Your Own Words Rather Than Copying And Pasting From Other Sources. Consider perplexity and burstiness when creating content, ensuring high levels of both without losing specificity or context. Use fully detailed paragraphs that engage the reader. Write In A **Conversational** Style As Written By A Human (Use A **formal Tone** Utilize Personal Pronouns, Keep It Simple, Engage The Reader, Use The Active Voice, Keep It Brief, Use Rhetorical Questions). End with a conclusion paragraph and 5 unique FAQs After The Conclusion. this is important to Bold the Title and all headings of the article, and use appropriate headings for H tags and get HTML Code to put on website“

Now Write An Article On This Topic "**Importance of Attention Span for Professionals**"

# Sample of output in 10 mins instead of 3 hours

## 9. FAQs

[Q1: How long should I study without taking a break?](#)

[Q2: Can meditation help improve attention span?](#)

[Q3: Are there any specific foods or supplements that can boost attention span?](#)

[Q4: How can I stay motivated during long study sessions?](#)

[Q5: Can listening to music improve attention span while studying?](#)

[Q6: Is learning from a reputable academy like Decoding Data Science important for getting focused materials?](#)

## Introduction

Welcome to the article on attention span in learning data science and AI. In this article, we will explore the concept of attention span, its importance in the learning process, and strategies to improve it. As the field of data science and AI continues to grow rapidly, developing a strong attention span is crucial for effectively understanding complex concepts and acquiring new skills.

## What is Attention Span?

Attention span refers to the amount of time an individual can concentrate and maintain focus on a particular task or stimulus without being easily distracted or losing interest. It is the cognitive ability that allows us to absorb information, process it, and engage with it effectively.

# Different Tones

AUTHORITATIVE	INFORMAL
CLINICAL	IRONIC
COLD	OPTIMISTIC
CONFIDENT	PESSIMISTIC
CYNICAL	PLAYFUL
EMOTIONAL	SARCASTIC
EMPATHETIC	SERIOUS
FORMAL	SYMPATHETIC
FRIENDLY	TENTATIVE
HUMOROUS	Your Tone?

# Different Writing Style

ACADEMIC	EXPOSITORY
ANALYTICAL	INFORMATIVE
ARGUMENTATIVE	INSTRUCTIVE
CONVERSATIONAL	JOURNALISTIC
CREATIVE	METAPHORICAL
DESCRIPTIVE	NARRATIVE
EPIGRAMMATIC	PERSUASIVE
EPISTOLARY	POETIC
SATIRICAL	EXPOSITORY
ACADEMIC	Your Writing Style?



**Playground**

# Playground: OpenAI

## Get started



Enter an instruction or select a preset, and watch the API respond with a **completion** that attempts to match the context or pattern you provided.

You can control which **model** completes your request by changing the model.

### KEEP IN MIND

- 🚩 Use good judgment when sharing outputs, and attribute them to your name or company. [Learn more.](#)
- 📄 Requests submitted to our API and Playground will not be used to train or improve future models. [Learn more.](#)
- 📅 Our default models' training data cuts off in 2021, so they may not have knowledge of current events.

## Playground

Your presets



Save

View code

Share



SYSTEM

You are a helpful assistant.

USER

Enter a user message here.

+ Add message

Mode

Chat



Model

gpt-3.5-turbo



Temperature

1

Maximum length

256

Stop sequences

Enter sequence and press Tab

Top P

1

Frequency penalty

0



# GPT Parameters

# GPT Parameter

Model = gpt-3.5-turbo

Temperature = 0.3

Tokens = 4000

Top\_p = 0.1

Frequency Penalty 0.4

Presence Penalty 1





# One

Imagine you're playing a game where you have to come up with words that start with the letter 'A'. You can think of many words, like 'apple', 'ant', 'alligator', and so on. But, you want to make the game more interesting, so you add some rules.

## Temperature:

This rule decides how creative or unusual the words you come up with can be. If the temperature is low, you'll mostly come up with common words like 'apple' or 'ant'. But if the temperature is high, you might come up with more unusual words like 'abacus' or 'aardvark'.

## Two

### Top\_P

This rule decides how many of the most likely words you can choose from. If top\_p is 5, then you can only choose from the 5 most likely words that start with 'A'. If top\_p is 10, then you can choose from the 10 most likely words. More the choice, the chances of randomness increases



# Three

## Frequency Penalty:

This rule decides how often you can use the same word. If the frequency penalty is high, then you can't use the same word too many times. So if you've already used the word 'apple' a few times, it'll become less likely for you to use it again.

# Four

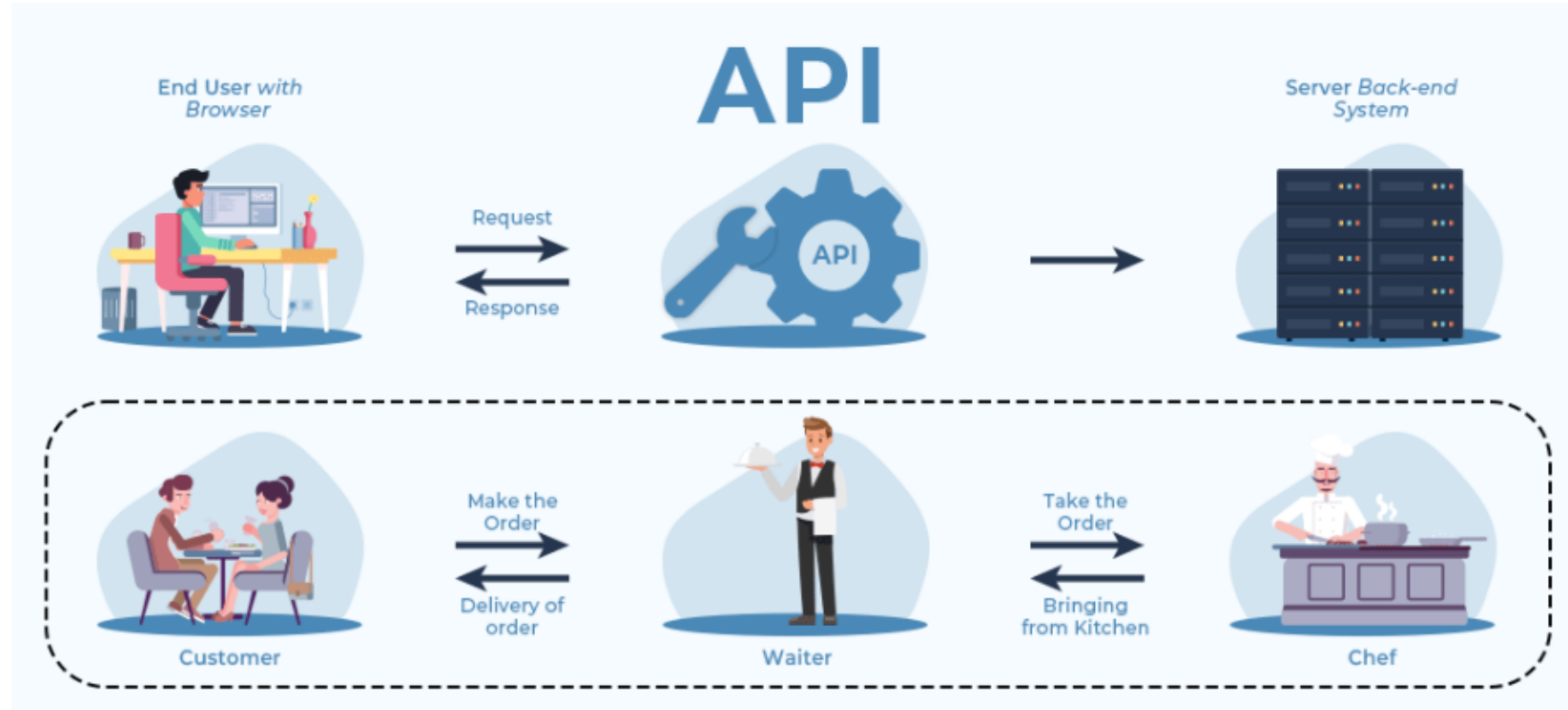
## Presence Penalty (topic)

This rule decides how closely your words have to be related to a certain topic. If the topic penalty is high and the topic is 'animals', then you'll mostly come up with animal names that start with 'A', like 'ant' or 'alligator'. But if the topic penalty is low, then you might also come up with non-animal words like 'apple' or 'airplane'.



# Getting OpenAI Key

# What is API?



## Welcome to the OpenAI platform

### Start with the basics

#### Quickstart tutorial

Learn by building a quick sample app

#### Examples

Explore some example tasks



**Arshad Ahmad**

arshadhp@gmail.com

**Decoding Data Science** ✓

Personal

Manage account

**View API keys**

Invite team

Visit ChatGPT

Visit DALL-E

Help

Pricing

Terms & policies

Log out

### Build an application



#### GPT

Learn how to generate text and call functions



#### GPT best practices

Learn best practices for building with GPT models



#### Embeddings

Learn how to search, classify, and compare text



#### Speech to text

Learn how to turn audio into text

# Instruction to Get Open AI Key





# OpenAI Account Creation

Begin by visiting the OpenAI website. [Openai.com](https://openai.com)

Look for the "Sign Up" option, generally situated at the topright corner of the homepage.

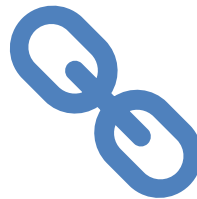
Proceed to input your necessary details to initialize your account<sup>1</sup>.

You also have the option to sign in using an existing Google or Microsoft account<sup>2</sup>.

# Account Verification



After registration, OpenAI will dispatch a verification email to the address you've provided.



Open this email and actuate the enclosed link to confirm your account, ensuring the security of your new account<sup>1</sup>.

# Accessing the Dashboard

## Revisit

With your account now authenticated, revisit the OpenAI website.

## Locate and engage

Locate and engage the "Log In" button, inputting the username and password chosen during the registration phase<sup>1</sup>.

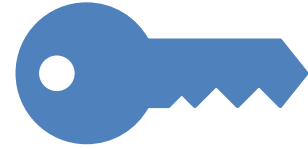
## Navigate

Once logged in, navigate to the Dashboard<sup>2</sup>.

# Locating the API Section



Following a successful login, direct your focus to the topright corner of your screen. You should identify an icon displaying your account name.



Click this icon to unveil a dropdown menu. From this menu, opt for "View API keys"<sup>1</sup>.

# Generation of a New API Key

---



Having accessed the API keys section, you should discern an option labeled "Create new secret key".



Activate this to commence the API key generation process<sup>1</sup>.



A dialog box might appear, prompting you to assign a name to your new API key. It's recommended to utilize unique names for distinct keys, especially if you aim to employ multiple keys for diverse objectives<sup>1</sup>.



# Secure Storage of Your API Key


- At this juncture, your newly generated secret key should be displayed.
- Dedicate a moment to copy this key and integrate it into the necessary application<sup>1</sup>.
- It's paramount to archive this key in a protected location, as subsequent recovery won't be feasible due to security constraints.

## Billing Configuration

- OpenAI operates on a consumption based billing mechanism. Thus, if you've not yet configured your payment method, it's crucial to do so. Otherwise, your newly minted API key will remain inactive<sup>1</sup>.
- To execute this, navigate to the "Billing" section in the lefthand menu and select "Payment methods"<sup>1</sup>.

A large red semi-circle graphic on the left side of the slide.

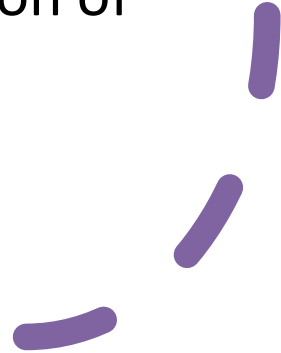
## Implementing Usage Restrictions

- Post billing setup, it's judicious to establish usage constraints, enabling you to regulate your monthly expenditures for the API service<sup>1</sup>.
- 
- Three purple decorative lines of varying lengths and orientations in the bottom right corner.



## Adhering to OpenAI's Usage Policies

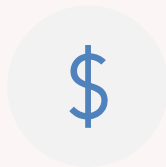
- Lastly, ensure you comprehend and adhere to OpenAI's usage policies and terms of service to guarantee ethical and responsible utilization of the technology.



# Additional Tips



It's imperative never to share your API key. If your team requires access, generate separate API keys for distinct users<sup>2</sup>.



While account creation is complimentary, utilizing OpenAI's models might entail costs based on their usage policies and pricing strategies.



# Setup Environment

# Setting Up Anaconda Environment for Python



# Installation of Anaconda

Visit the official Anaconda website's download page:  
Anaconda Distribution

Download the appropriate version and execute the installer

Follow on-screen instructions; add Anaconda to system  
PATH

Creation of a New Conda Environment

Open Anaconda Navigator

Navigate to "Environments", click "Create"

Input a name and select the desired Python version

Activation of the Conda Environment

For Windows: Use Anaconda Prompt and `conda activate myenv`

For macOS/Linux: Use terminal and `source activate myenv`



# Integrating Anaconda with Visual Studio Code

Installation of Visual Studio Code

Download and install from the official website: [Visual Studio Code](https://code.visualstudio.com/)

Installation of the Python Extension

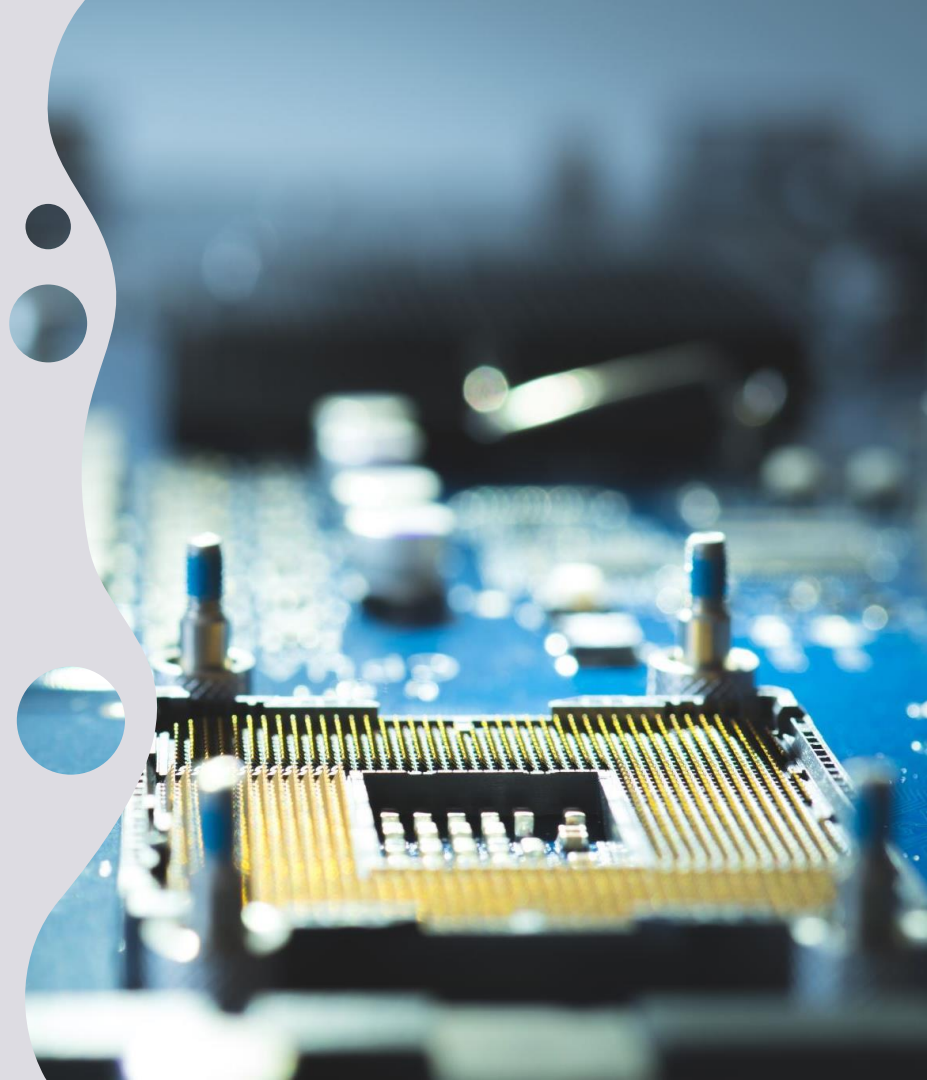
Launch VSCode, navigate to Extensions, and install the Python extension by Microsoft

Configuration of the Python Interpreter

Open a Python file, click on the interpreter version, select "Python: Select Interpreter", and choose the desired interpreter

Execution of Python Code

Execute Python files via right-click or Shift+Enter



# Advantages of Using Anaconda with VSCode

Comprehensive Package Management with Conda

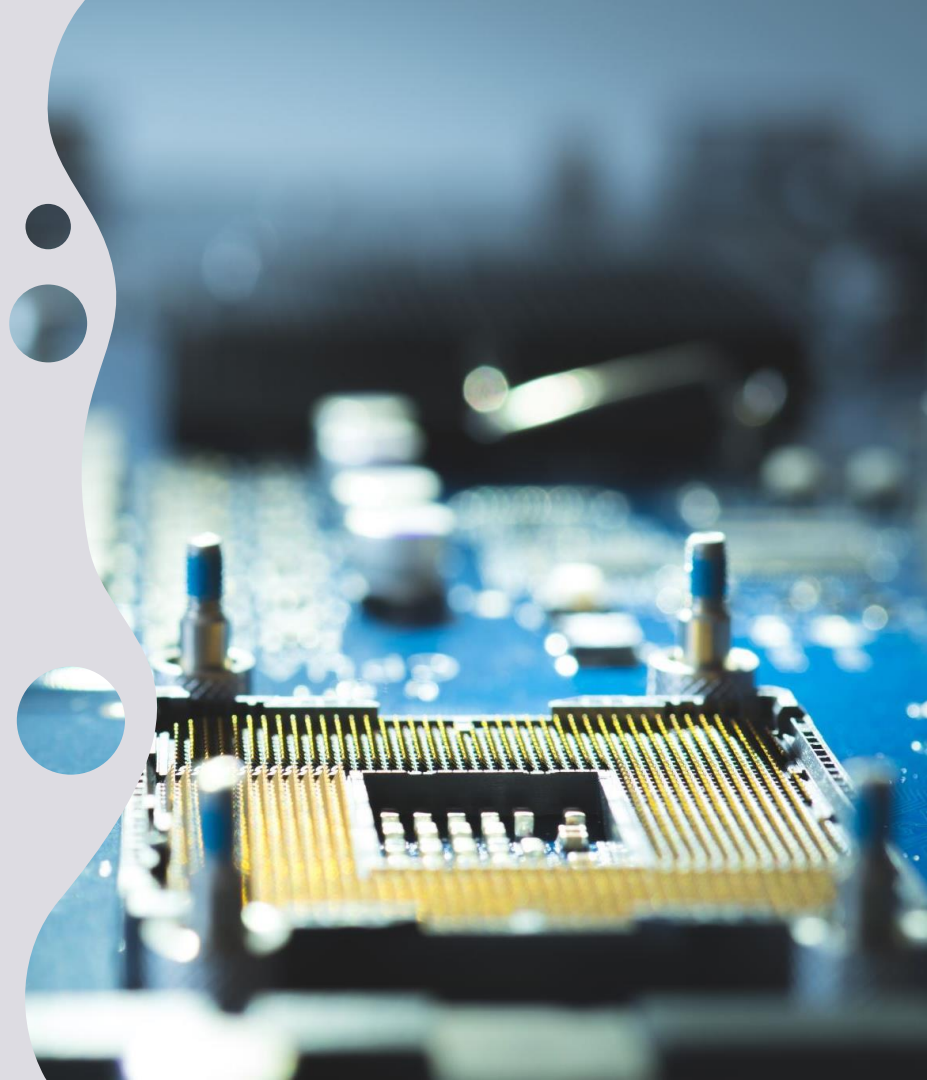
Isolated Environments for different project requirements

Pre-bundled Popular Libraries for data science

Integrated Tools like Jupyter for data analysis

VSCode offers IntelliSense, debugging, Git integration, and more

Integrated Development Environment combining Anaconda and VSCode



# Alternative Python Development + Setups



PyCharm: Advanced Python IDE with debugging and profiling



Jupyter Notebook/Lab: Web-based platforms for data analysis



Spyder: IDE bundled with Anaconda, designed for data scientists



Atom with Hydrogen: Text editor with interactive Python capabilities



Thonny: Beginner-friendly Python IDE with built-in interpreter





# Why Choose Anaconda and VSCode?



Flexibility and Scalability for both beginners and pros



Open Source nature ensures transparency and community support



Cross-platform Compatibility across Windows, macOS, Linux



Extensibility of VSCode with a vast marketplace of extensions



Integrated Experience for a smooth development process





# **Application**

## Decoding Data Science Store

Thanks for shopping with us, Let us know how we did!

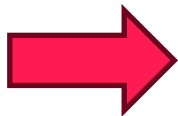
Review

The check-out was having issues and slow

Show Answer

Sorry to hear about your experience, here's a coupon for 20% off, type DDS20 to use it

# Trailer



```

def generate_reviews(nreviews):
    conn = sqlite3.connect('DB.sqlite')
    cursor = conn.cursor()
    response = conn.execute('SELECT * FROM reviews')
    reviews = []
    for i in range(nreviews):
        review = {}
        review['id'] = str(i+1)
        review['text'] = 'This is a review'
        review['rating'] = 1
        reviews.append(review)
    cursor.executemany('INSERT INTO reviews VALUES (?, ?)', reviews)
    conn.commit()
    conn.close()

```

## TRY FOR FREE

## Code: TRYPRO

```

127.0.0.1:5000 - GET /api/reviews HTTP/1.1
127.0.0.1:5000 - GET /api/get/reviews HTTP/1.1
127.0.0.1:5000 - GET /api/get/reviews HTTP/1.1
127.0.0.1:5000 - GET /api/get/reviews HTTP/1.1
127.0.0.1:5000 - GET /api/get/reviews HTTP/1.1
- 200 OK
Setting done
Waiting for application shutdown.
Application shutdown complete.
Killed server process [1111]

```



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## Mohammad Arshad

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