



Super Learning with AI:

A Guide to Accelerating Your Technical Training

Gaza Tech Graduation Mentorship Initiative | May 2025

Speaker: Ahmed Haque

التعلم الفائق باستخدام الذكاء الاصطناعي:

دليل لتسريع التدريب الفني الخاص بك

مبادرة الإرشاد لتخريج تكنولوجيا غزة | مايو 2025

المتحدث: أحمد حق





SuperLearning Repository

مستودع التعلم

<https://github.com/afhaque/SuperLearningAI-Workshop>



Weather App Repository

مستودع تطبيقات الطقس

<https://github.com/afhaque/weather-app>

If you would like to follow along, please clone these two repositories on your computer.

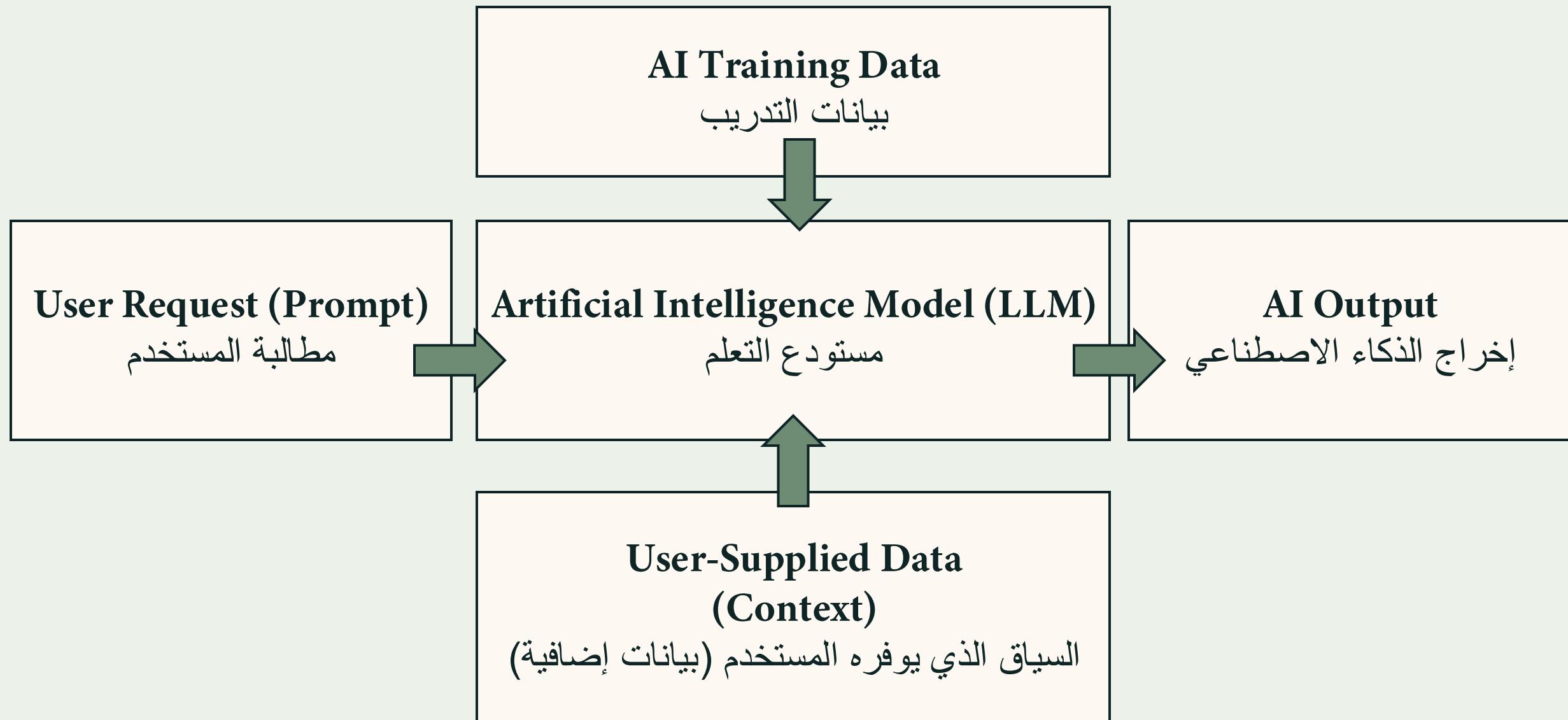
إذا كنت ترغب في المتابعة ، فيرجى استنساخ هذين المستودعين على جهاز الكمبيوتر الخاص بك.

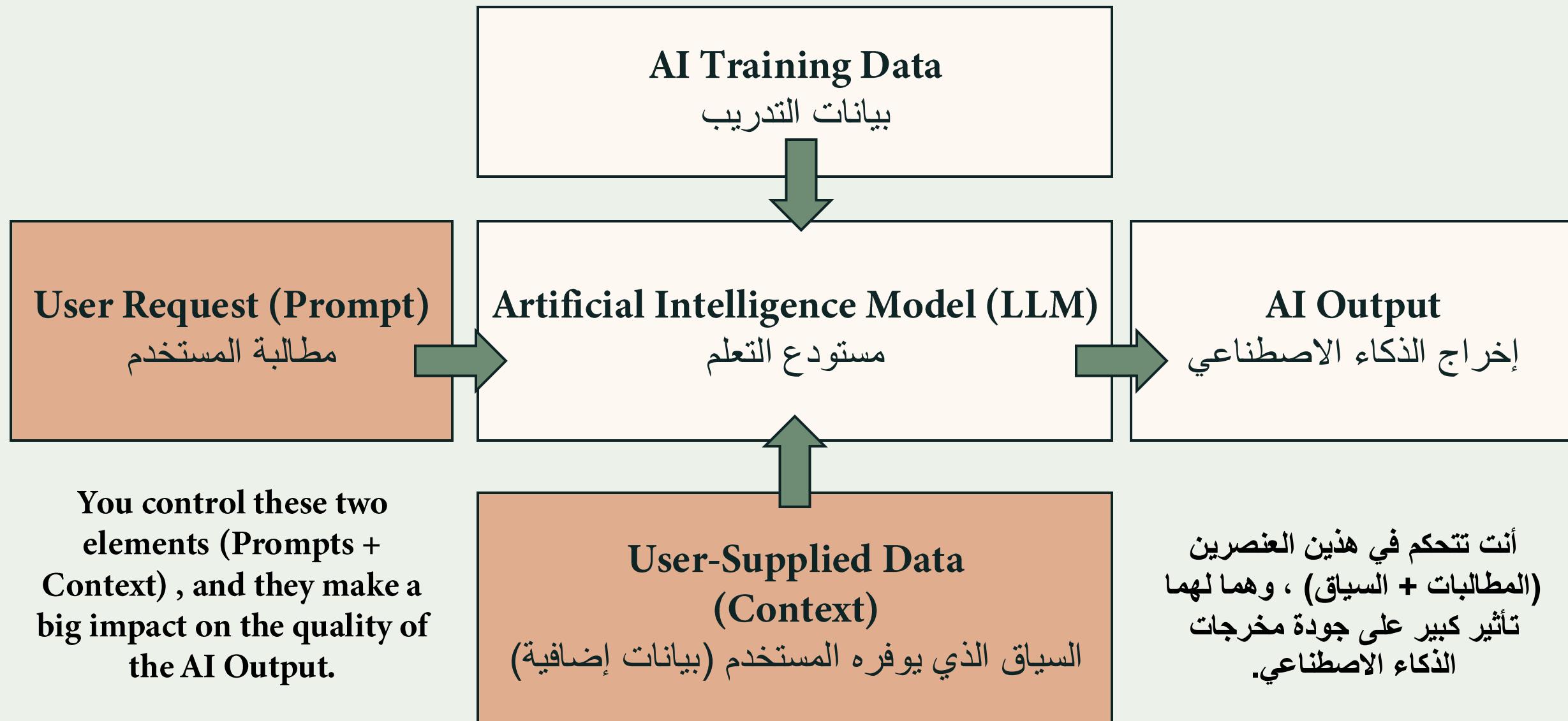


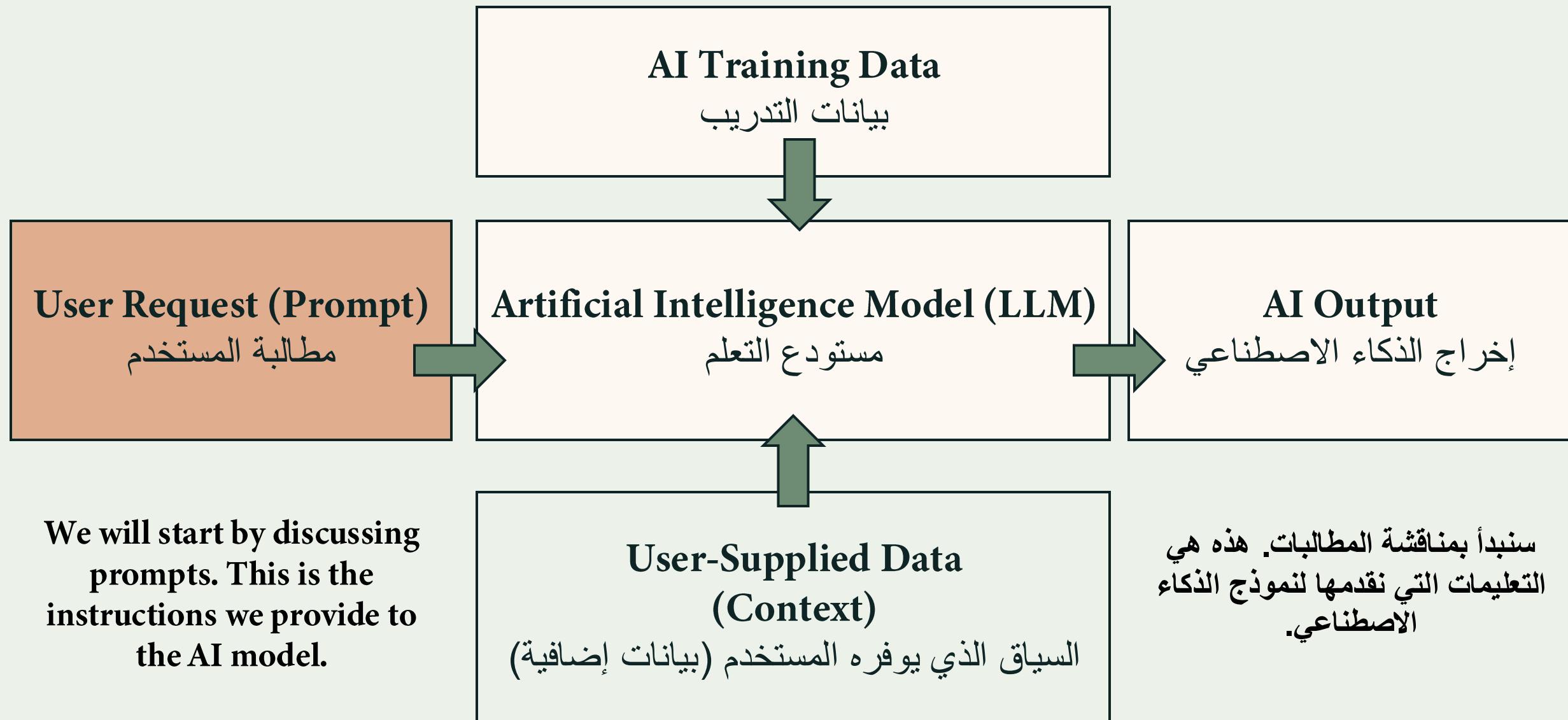
Part I: AI Fundamentals

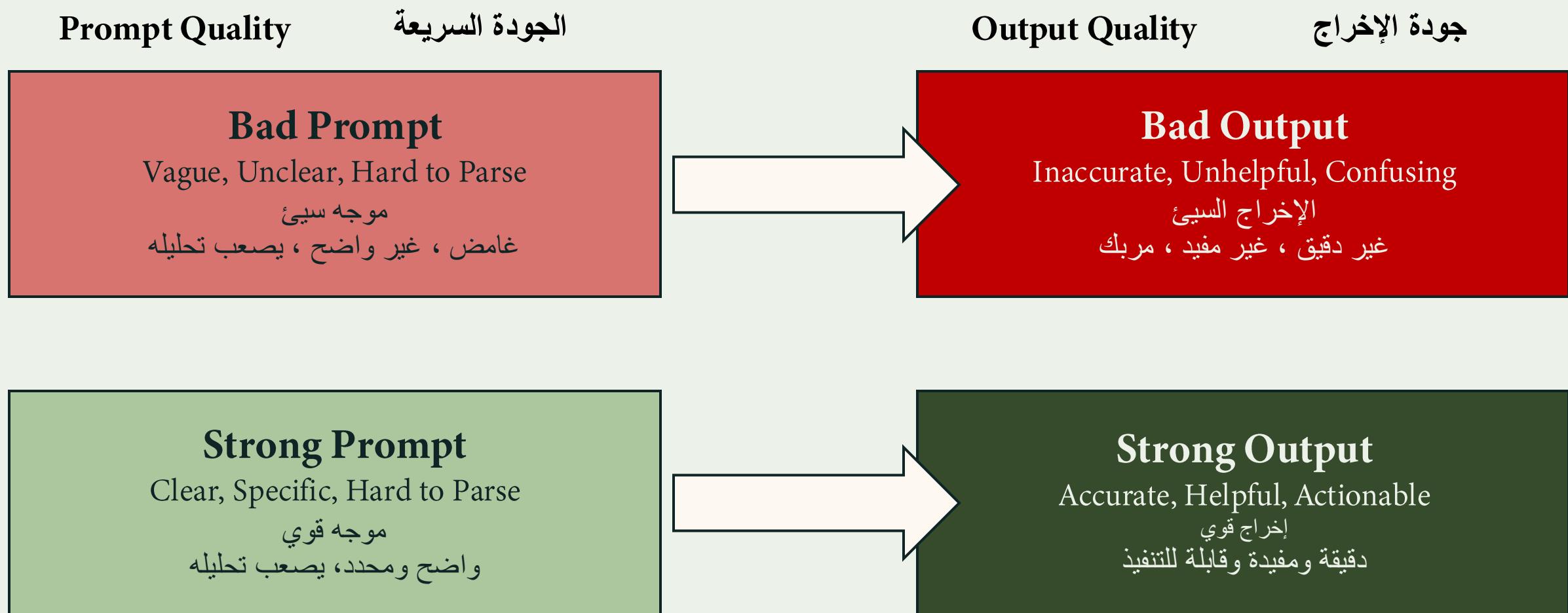
الجزء الأول:
أساسيات الذكاء الاصطناعي











Writing good prompts leads to better results. Slight differences in prompts create major differences in quality.

كتابة مطالبات جيدة تؤدي إلى نتائج أفضل. تخلق الاختلافات الطفيفة في المطالبات اختلافات كبيرة في الجودة.

Examples of Strong Prompts (Good vs. Better)

```
1 ## Bad Prompt
2 Explain to me how React works.
3
4 -----
5
6 ## Good Prompt
7 Explain to me the most critical concepts in React.js Explain the topics I should learn and in what order.
8 Provide me tips on the best strategy to learn React. Assume I am a computer science student who is a beginner in
9 React and Javascript.
10 -----
11 ## Better Prompt
12 Explain to me the most critical concepts in React.js Explain the topics I should learn and in what order.
13 Provide me tips on the best strategy to learn React. Assume I am a computer science student who is a beginner in
14 React and Javascript. Use analogies to simple concepts.
15 // Please respond in Arabic and explain to me the answer in the format of main points with bullets. At most
   provide me with 10 main points and 5 sub-bullets each. Try to be brief.
```

Live Demo: Enter each of these into your AI Tool. See the difference in output.

العرض التوضيحي المباشر: أدخل كل منها في أداة الذكاء الاصطناعي الخاصة بك. انظر الفرق في الإخراج.

Examples of Strong Prompts (Your Learning Style)

```
### Learning Style for React (Table Format)
```

Explain to me the most critical concepts in React.js Explain the topics I should learn and in what order.

Provide me tips on the best strategy to learn React. Use analogies to simple concepts.

//Explain to me the answer in the format of main points with bullets. At most provide me with 10 main points and 5 sub-bullets each. Present the information in a table format.

mmended learning order, along

**Here we asked for
information to be displayed
as a Table**

**طلبنا هنا عرض المعلومات كعرض
شراوح**

Concept/Strategy	Explanation & Learning Order	Analogy/Tip
1. Core JavaScript Fundamentals	Before React, master JavaScript: Variables & Data Types: How information is stored and categorized. Functions & Arrow Functions: Building blocks for code execution. Objects & Arrays: Structures for organizing data. DOM Manipulation: How JavaScript interacts with web pages. ES6+ Features: Modern syntax like destructuring and modules.	Analogy: JavaScript is the engine and fuel of your car; React is the chassis and body . You need a strong engine before building the car.
2. JSX (JavaScript XML)	Learn this syntax extension that lets you write HTML-like code directly within your JavaScript files. It's how you define what your UI looks like.	Analogy: JSX is like a blueprint for your house (UI). It shows where the walls, windows, and doors (HTML elements) go within your JavaScript "construction site."

Live Demo: You can change the way your AI presents information to suit your needs.

عرض توضيحي مباشر: يمكنك تغيير الطريقة التي يقدم بها الذكاء الاصطناعي المعلومات لتناسب احتياجاتك.

Examples of Strong Prompts (Your Learning Style)

Learning Style for React (Slide Show Format)

Explain to me the most critical concepts in React.js Explain the topics I should learn and in what order.

Provide me tips on the best strategy to learn React. Use analogies to simple concepts.

// Present the information in a slide show format. Break out the content into 15–20 slides. Use HTML, CSS, and Javascript to create the slides or export as a google slide deck.

Here we asked for information to be displayed as a Slide Show

هذا طلبنا عرض المعلومات كجدول

The screenshot shows the Gemini AI interface. On the left, a dark-themed input box contains a prompt asking for learning style information in a slide show format. Below this, a text area shows the AI's response, which includes a summary of React.js concepts, a list of topics for the slideshow, and a note about using analogies. At the bottom of this section is a "Enter a prompt for Gemini" input field and a "Canvas" button. On the right, a presentation slide titled "2. Why React?" is displayed. The slide content lists four key features of React: Component-Based Architecture, Declarative Programming, Virtual DOM, and Large Community & Ecosystem. Below the slide is a "Previous" button and a "Slide 3 / 21" indicator. A sidebar on the right contains an analogy section comparing declarative and imperative programming styles.

Live Demo: You can change the way your AI presents information to suit your needs.

عرض توضيحي مباشر: يمكنك تغيير الطريقة التي يقدم بها الذكاء الاصطناعي المعلومات لتناسب احتياجاتك.

Examples of Strong Prompts (Your Learning Style)

أمثلة على المطالبات القوية (أسلوب التعلم الخاص بك)

```
### Learning Style for React (Flash Card Format)
Explain to me the most critical concepts in React.js Explain the topics I should learn and in what order.
Provide me tips on the best strategy to learn React. Use analogies to simple concepts.

// Explain to me the answer in the format of main points with bullets. At most provide me with 10 main points
and 5 sub-bullets each. Present the information in a flash card format. Use HTML, CSS, and Javascript to create
the flash cards.
```

Here we asked for
information to be displayed
as a Flash Cards

طلبنا هنا عرض المعلومات كعرض
شراوح

The screenshot shows a presentation slide with a dark header containing icons for cards, cloud, search, and refresh, along with a toolbar with 'Code' and 'Preview' buttons. The slide content is organized into three blue rectangular boxes:

- What is React?**
- Components**
- JSX (JavaScript XML)**

Below the slide content, there is a sidebar with the following text and list:

Props (Properties)

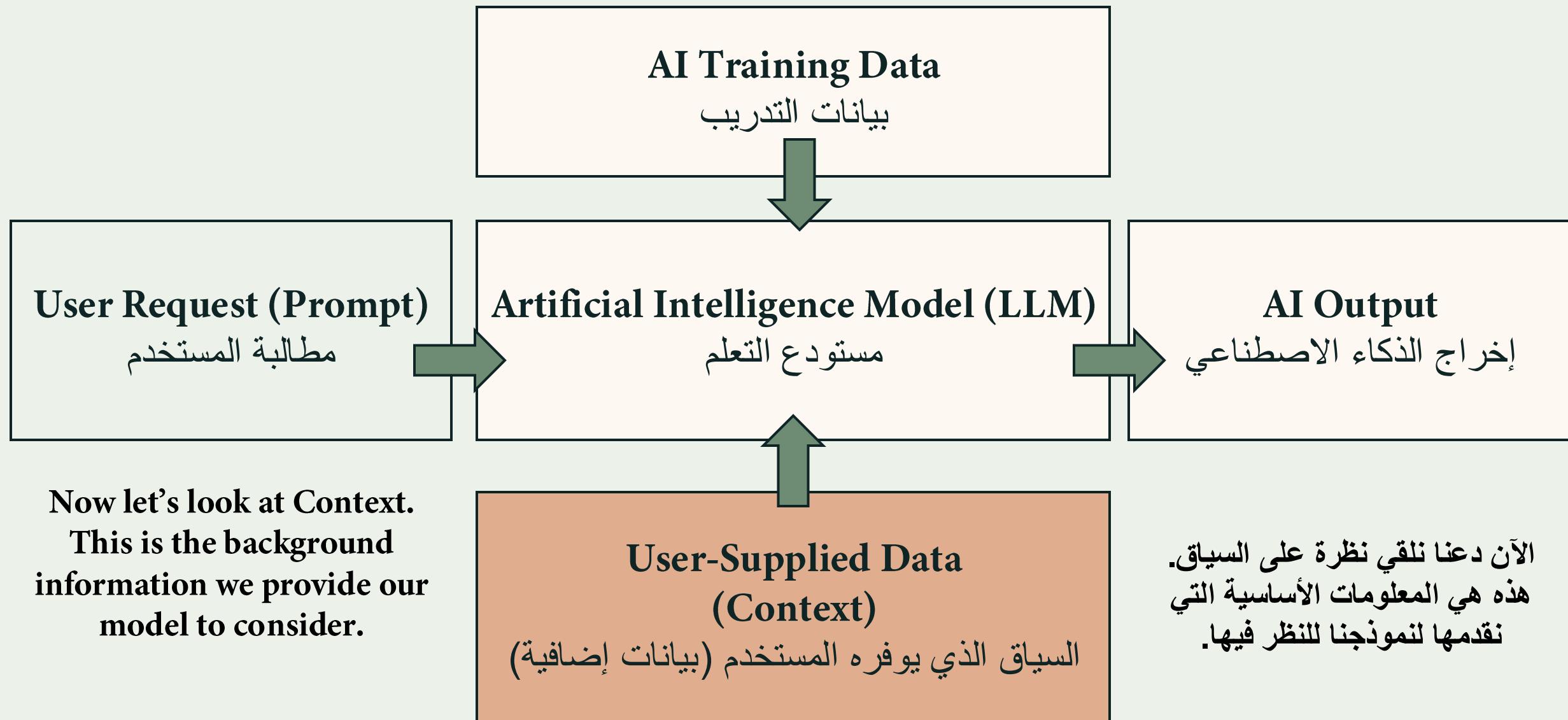
How components receive data from their parent components. Props are read-only.

Main Points:

- Passed to components as attributes in JSX, similar to HTML attributes.
- Data flows in one direction: from parent to child (unidirectional data flow).
- Props are immutable within the receiving component; they should not be changed by the child.

Live Demo: You can change the way your AI presents information to suit your needs.

عرض توضيحي مباشر: يمكنك تغيير الطريقة التي يقدم بها الذكاء الاصطناعي المعلومات لتناسب احتياجاتك.



AI Default Assumptions

AI Training Data
بيانات التدريب

Artificial Intelligence Model (LLM)
مستودع التعلم

الافتراضات الافتراضية لمنظمة الذكاء الاصطناعي

Unique Information Known to User

User-Supplied Data
(Context)

السياق الذي يوفره المستخدم (بيانات إضافية)

معلومات فريدة معروفة للمستخدم

Without your context, AI will make assumptions based on its training data, which may not reflect your scenario.

بدون السياق الخاص بك ، سيضع الذكاء الاصطناعي افتراضات بناء على بيانات التدريب الخاصة به ، والتي قد لا تعكس السيناريو الخاص بك.

Examples of Helpful Context (Sample Schemas)

```

1 ## Health Entry from
2
3 Using the JSON Health Sample provided below, create an HTML, CSS, Javascript dashboard that allows me to enter a
4 patient's health information and then have it convert the record into a JSON object.
5
6 ### JSON Health Sample{
7   ``json
8     "patientName": "Fatima Al-Fihri",
9     "dateOfBirth": "1990-03-15",
10    "bloodType": "A+",
11    "allergies": [
12      "Pollen",
13      "Dust Mites"
14    ],
15    "conditions": [
16      "Migraine"
17    ],
18    "medications": [
19      "Sumatriptan"
20    ],
21    "emergencyContact": {
22      "name": "Ahmed Al-Fihri",
23      "relationship": "Brother",
24      "phone": "987-654-3210"
25    }
26  }
```

```

**Live Demo:** Supply the desired JSON format for a health entry database form.

المطلوب JSON العرض التوضيحي المباشر: قم بتوفير تنسيق نموذج قاعدة بيانات إدخال السلامة.

Health Entry Dashboard

Patient Name: Fatima Al-Fihri Date of Birth: 03/15/1990

Blood Type: A+

Allergies: Pollen, Dust Mites  
Enter multiple allergies separated by commas (,)

Conditions: Migraine  
Enter multiple conditions separated by commas (,)

Medications: Sumatriptan  
Enter multiple medications separated by commas (,)

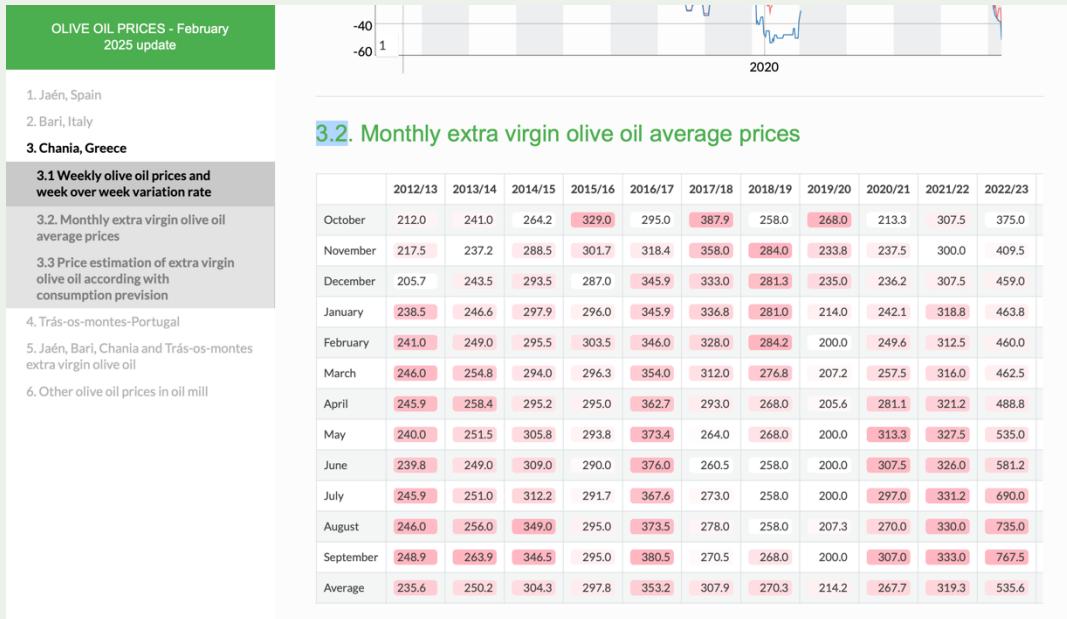
Emergency Contact

|                      |                       |
|----------------------|-----------------------|
| Name: Ahmed Al-Fihri | Relationship: Brother |
| Phone: 987-654-3210  |                       |

Generate JSON Record

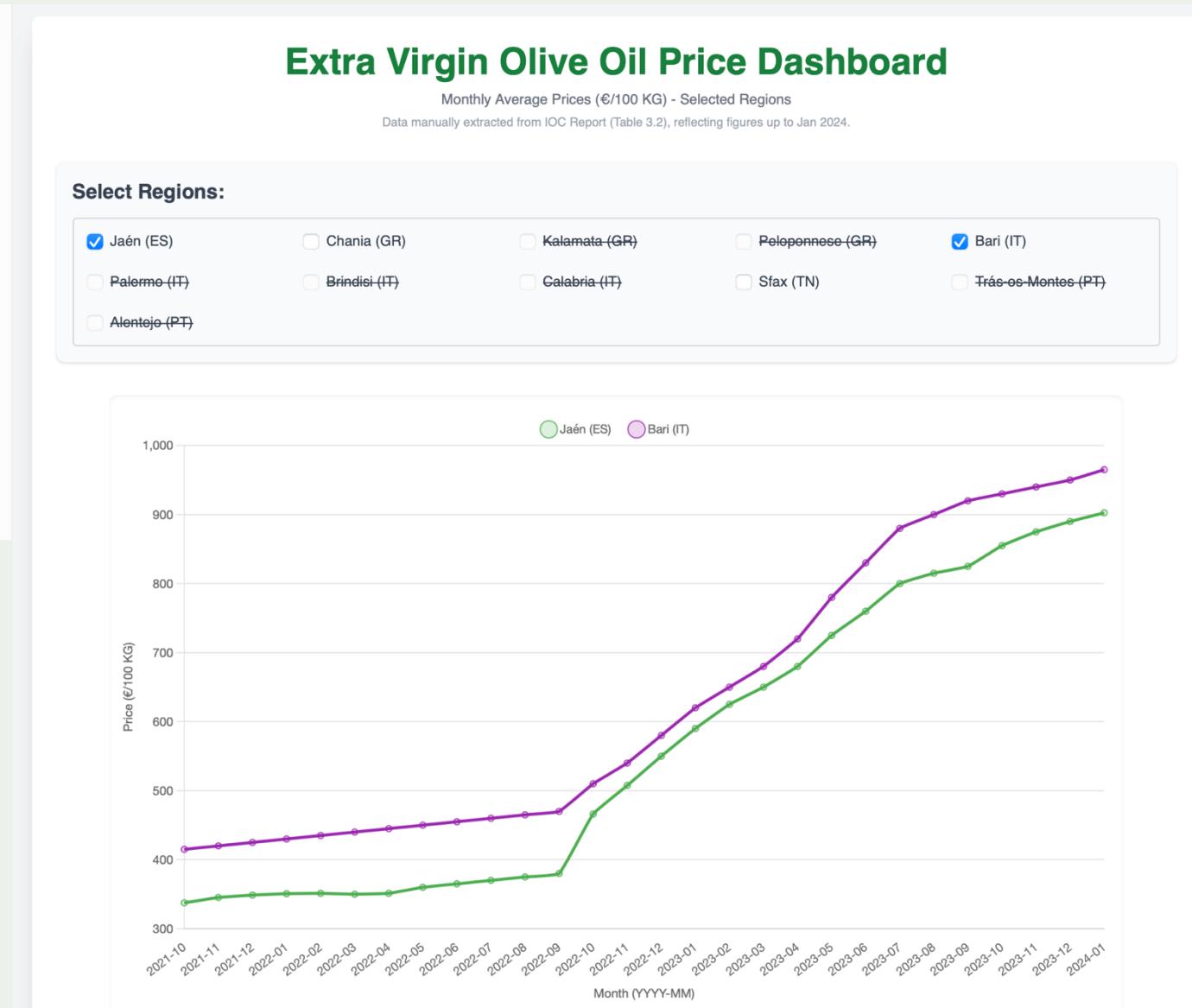
Generated JSON Object:

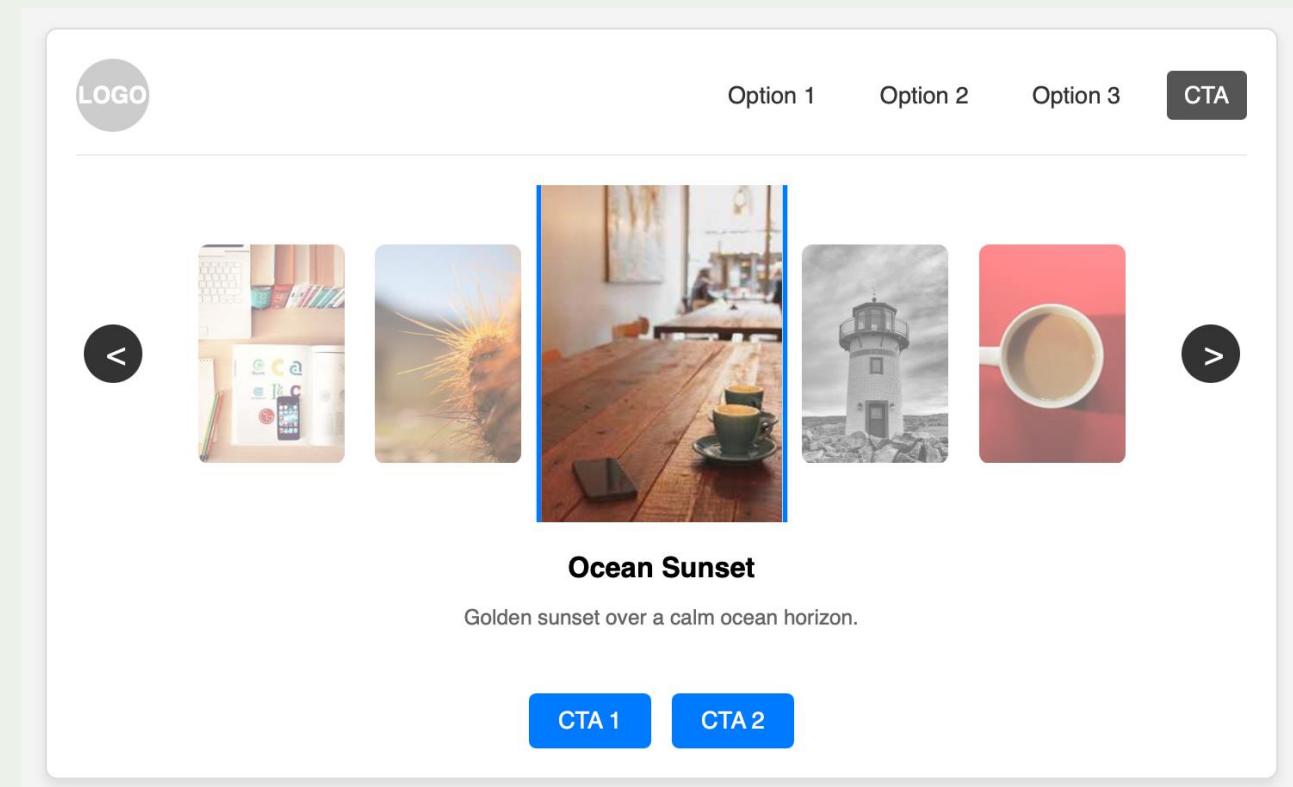
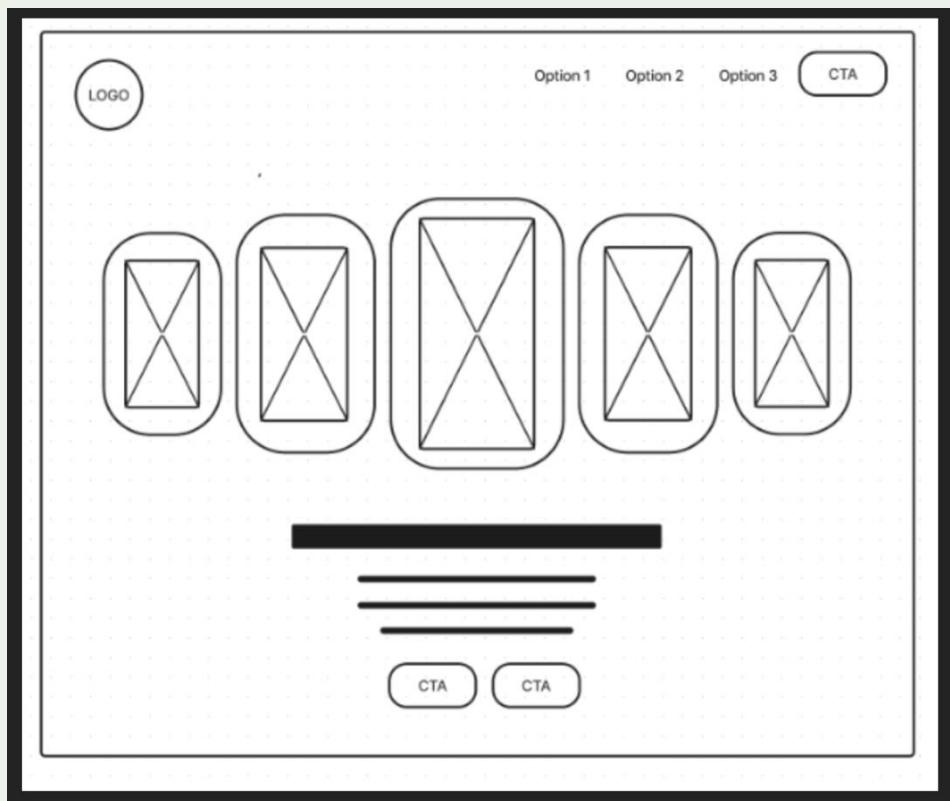
# Examples of Helpful Context (Documentation)



Live Demo: Supply data from a website to be used in building a dashboard.

العرض التوضيحي المباشر: توفير البيانات من موقع ويب لاستخدامها في إنشاء لوحة معلومات.





**Live Demo: Supply a sketch to provide a desired layout for a website.**

عرض توضيحي مباشر: قم بتوفير رسم تخطيطي لتوفير التخطيط المطلوب لموقع ويب.

## AI User Formula

### صيغة مستخدم الذكاء الاصطناعي



This is a formula to remember when interacting with AI.

هذه صيغة يجب تذكرها عند التفاعل مع الذكاء الاصطناعي.

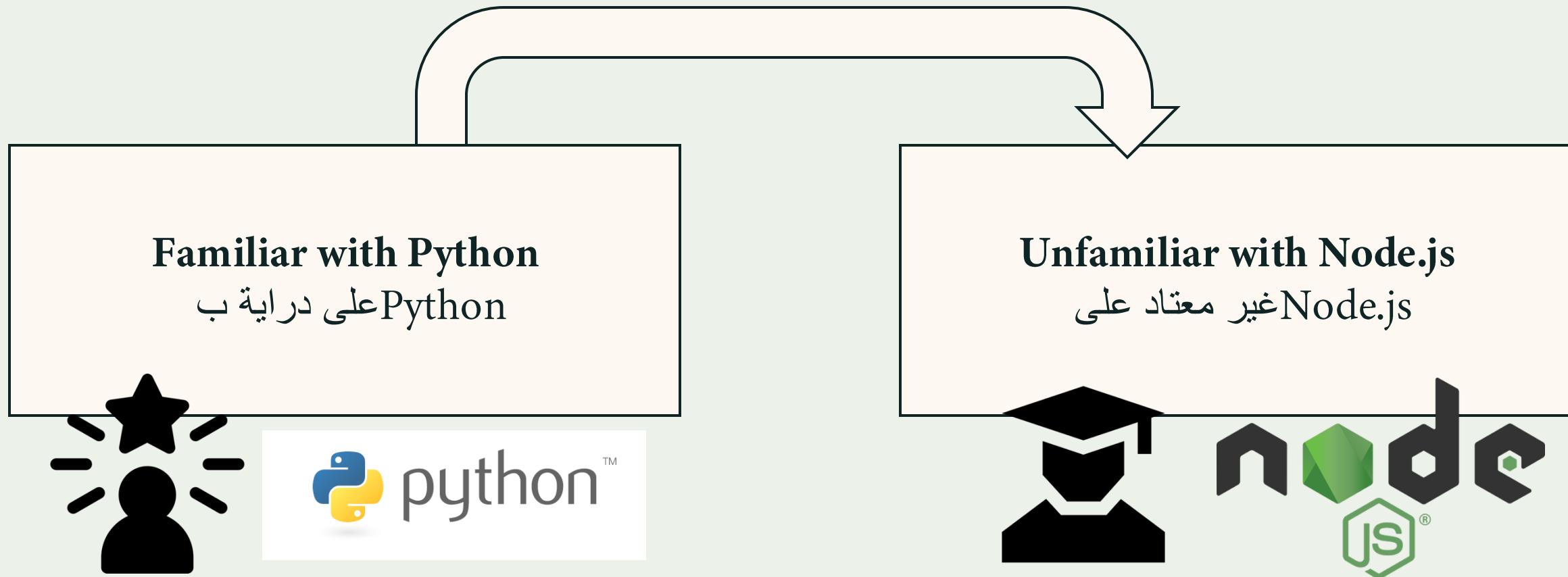


الجزء الثاني:  
تعلم اللغات والأطر



## Part II:

# Learning Languages and Frameworks



Often, we need to quickly learn a new language or framework. How can we use AI to help?

في كثير من الأحيان ، نحتاج إلى تعلم لغة أو إطار عمل جديد بسرعة. كيف يمكننا استخدام الذكاء الاصطناعي للمساعدة؟

1) Ask for “Big Concepts”

1) اسأل عن "المفاهيم الكبيرة"

2) Ask for Comparisons to Familiar Technologies

2) اطلب مقارنات مع التقنيات المألوفة

3) Build Annotated Examples in Both Languages

3) بناء أمثلة مشرورة بكلتا اللغتين

4) Ask Clarifying Questions

4) اطرح أسئلة توضيحية

5) Ask for What to Learn Next

5) اسأل عما يجب تعلمه بعد ذلك

6) Repeat the Exercise

6) كرر التمرين

You can use this process to quickly learn new languages.

يمكنك استخدام هذه العملية لتعلم لغات جديدة بسرعة.

## Example Exercise: From Python -> Node.js

## مثال على التمرين: من Python -> Node.js

```
superLearningAI-Workshop > OS_Learning_Node_Basics > = 04=python_prompt.txt
```

```
1 ## Python Word Scrambler
2 create a command line interface in Python that will take in a set of 6 letters and then respond with all of the
possible words that can be created from those 6 letters. The words should be based on a standard english
dictionary. The same letter can be used multiple times. Use the words_alpha.txt file supplied in the same
directory as the source of the dictionary. Include comments to highlight the most important parts of the code.
3
4 // Please respond in arabic and include arabic comments in your code.
5
```



```
1 ## Node.js Word Scrambler
2 Using the Python example provided, create a similar command line interface in Node.js. Consider that I am not a
JavaScript developer so I am not familiar with the syntax nor how Node.js works. Reference the Python examples
as much as possible in the comments to help me understand the new code. Make the focus of your commentary to
explain the similarities and differences to the Python code. Be sure to include instructions on how to run the
code at the top of the file.
3
4 // Please respond in arabic and include arabic comments in your code.
```

```
* Python equivalent: def main():
*/
function main() {
 // --- Argument Parsing ---
 // Python: parser = argparse.ArgumentParser(...)
 // parser.add_argument("letters_input", ...)
 // args = parser.parse_args()
 // input_str_original_case = args.letters_input
 // Node.js: 'process.argv' is an array containing command line arguments.
 // process.argv[0] is the path to Node.js executable.
 // process.argv[1] is the path to the script being run.
 // process.argv[2] onwards are the actual arguments passed.
 // This is simpler than Python's argparse for basic cases but less flexible.
 // For more complex CLI apps, libraries like 'yargs' or 'commander' are used in Node.js.

 if (process.argv.length < 3) {
 // Similar to argparse showing help if arguments are missing.
 console.error("Error: Please provide a 6-letter string as an argument.");
 console.error("Usage: node 04-node_scrambler.js <letters>");
 // Python: sys.exit(1)
 // Node.js: process.exit(exitCode)
 process.exit(1);
 }
}
```



Live Demo: Build a word mixer in Python and then Node.Js for comparison.

للمقارنة . ثم Node.Js ثم Python عرض توضيحي مباشر: قم ببناء خلاط كلمات في

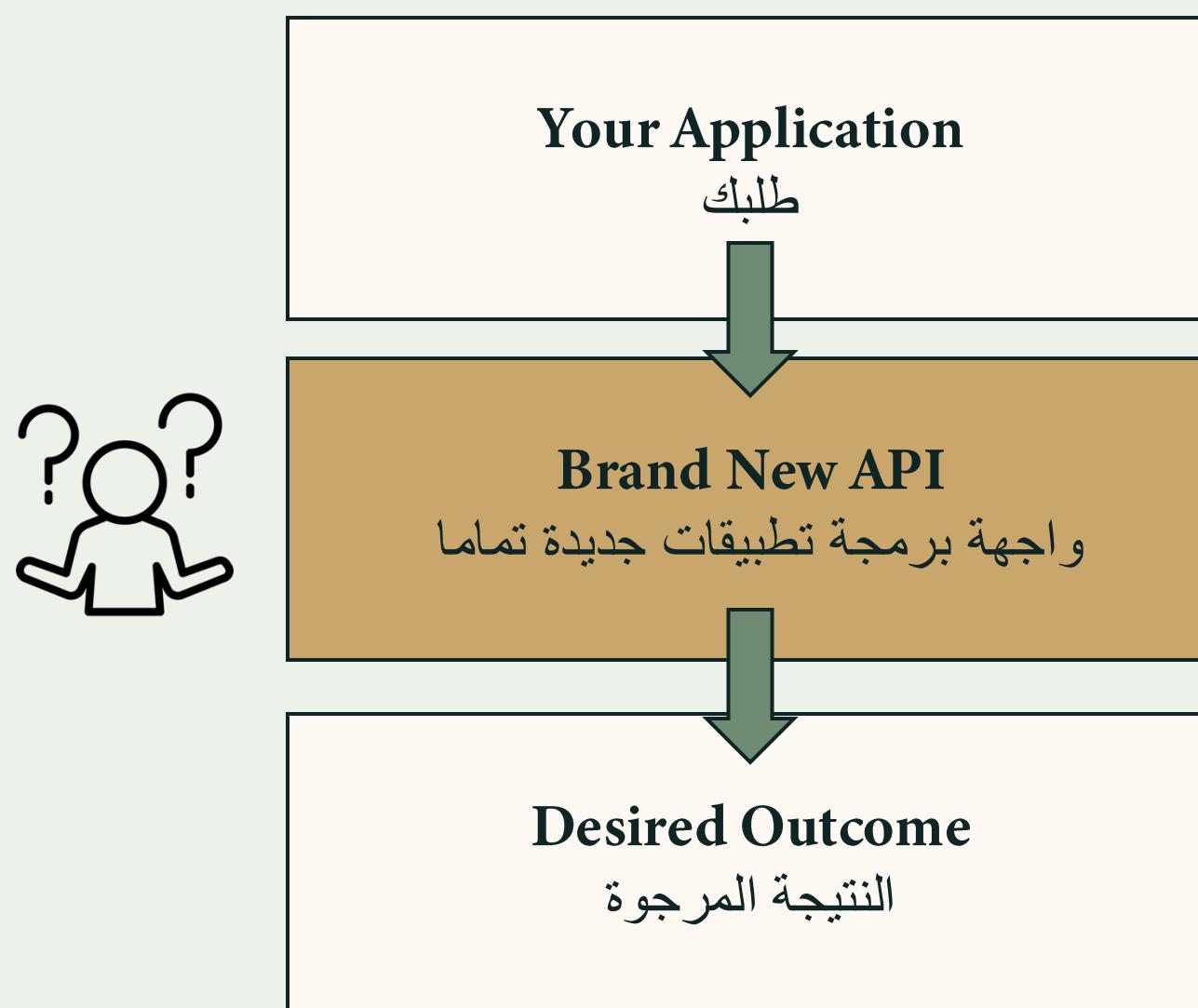
A vibrant, abstract painting of a cityscape. It features various buildings with facades in shades of blue, green, yellow, and white. Some buildings have arched windows or doors. The sky is a bright blue.

الجزء الثالث:

التنقل في واجهات برمجة التطبيقات  
والأدوات

## Part III: Navigating APIs and Tools

A vibrant, abstract painting of a cityscape. It features various buildings with facades in shades of pink, teal, yellow, and red. Some buildings have arched windows or doors. The sky is a bright blue.



Often, we need to quickly learn how to work with a new proprietary API with confusing documentation.

في كثير من الأحيان ، نحتاج إلى تعلم كيفية العمل بسرعة مع واجهة برمجة تطبيقات جديدة خاصة مع وثائق مربكة.

1) Feed the API Documentation as Context

1) تغذية وثائق واجهة برمجة التطبيقات كسياق

2) Ask for the Big Concepts

2) اسأل عن المفاهيم الكبيرة

3) Ask for a Mermaid Diagram

3) اطلب مخطط حورية البحر

4) Ask for Application Ideas

4) اطلب أفكار التطبيق

5) Ask for a Simple Coded Example

5) اطلب مثالاً مشفراً بسيطاً

You can use this process to quickly work with new APIs.

يمكنك استخدام هذه العملية للعمل بسرعة مع واجهات برمجة التطبيقات الجديدة.

**Airline Routes**

Available on: Basic Plan and higher

The aviationstack API is capable of providing data about airline routes, updated every 24 hours. In order to get airline route data, use the API's `routes` endpoint along with a series of optional parameters to filter results.

**Example API Request:**

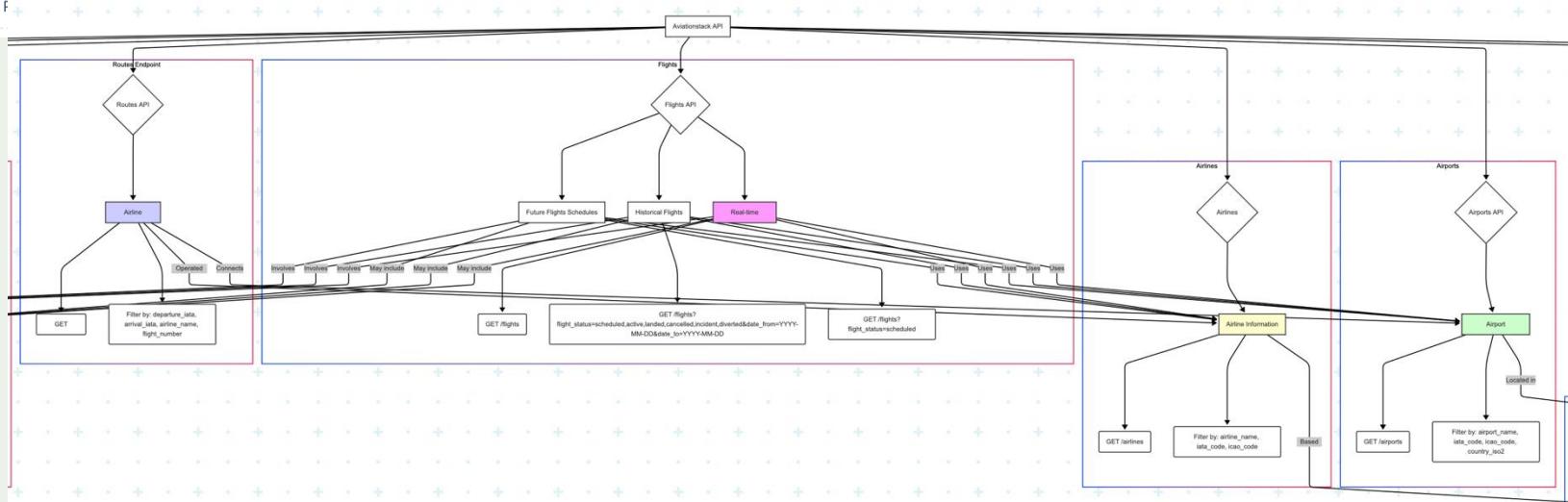
```
https://api.aviationstack.com/v1/routes
? access_key = e78c1f017589c49102b940fb68d6cbc4
```

**Run API Request**

**HTTP GET Request Parameters:**

| Object                  | Description                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>access_key</code> | [Required] Your API access key, which can be found in your <a href="#">account dashboard</a> .                                                           |
| <code>callback</code>   | [Optional] Use this parameter to specify a JSONP callback function name to wrap your API response in. Learn more about <a href="#">JSONP Callbacks</a> . |
| <code>limit</code>      | [Optional] Specify a limit of results to return. Professional Plan and <code>1000</code> on and above F                                                  |

يمكنا استخدام الذكاء الاصطناعي الخاصة بنا لإنشاء مخطط حوريّة البحر وعرض واجهة برمجة التطبيقات بصرياً باستخدام أداة مثل <https://mermaid.live/>



We can use our AI to generate a mermaid diagram and view the api visually using a tool like <https://mermaid.live/>

**Aviationstack API Route Tester**

Select an endpoint, enter parameters, and see the generated API URL.

API Access Key \*

Your aviationstack API key is required to build the URLs.

Flights Routes Airports Airlines Aircraft Types

**Primary Parameters:**

Airport IATA Code  
e.g., JFK

**Optional Filters:**

Airport Name  
e.g., John F Kennedy

ICAO Code  
e.g., KJFK

Country ISO2  
e.g., US

**Generated API URL:**

```
https://api.aviationstack.com/v1/airports?access_key=e78c1f017589c49102b940fb68d6cbc4
```

This tool helps you construct API URLs for testing. It does not make actual API calls.

```

1 ## Producing a API Sandbox for Experimentation
2 Create a simple html and javascript application I can use to test the most important get routes. Make it such
 that I can enter values, see the urls, and see options to add filters or parameters.
3

```

We can even prompt our AI to create a full sandbox for us that will dynamically create API URLs for testing!!

يمكنا حتى استخدام الذكاء الاصطناعي الخاص بنا لإنشاء لواجهة URL وضع حماية كامل لنا من شأنه إنشاء عناوين برجة التطبيقات ديناميكيا للاختبار !!



## Part IV: Exploring and Extending Existing Codebases

الجزء الرابع:

استكشاف قواعد التعليمات البرمجية الحالية  
وتوسيعها



Your Assignment: Add a Feature

طلبك



Large Legacy Codebase

قاعدة التعليمات البرمجية القديمة الكبيرة

Often, we need to understand how a codebase works as a first step towards adding new features.

في كثير من الأحيان ، نحتاج إلى فهم كيفية عمل قاعدة التعليمات البرمجية كخطوة أولى نحو إضافة ميزات جديدة.

1) Pack the Codebase into a Single File

(1) قم بتبנית قاعدة التعليمات البرمجية في ملف واحد

2) Ask AI to Summarize the Codebase

(2) اطلب من الذكاء الاصطناعي تلخيص قاعدة التعليمات البرمجية

3) Ask for Help on Running Locally

(3) اطلب المساعدة في الجري محلياً

4) Ask About Specific Code Files and Functionality

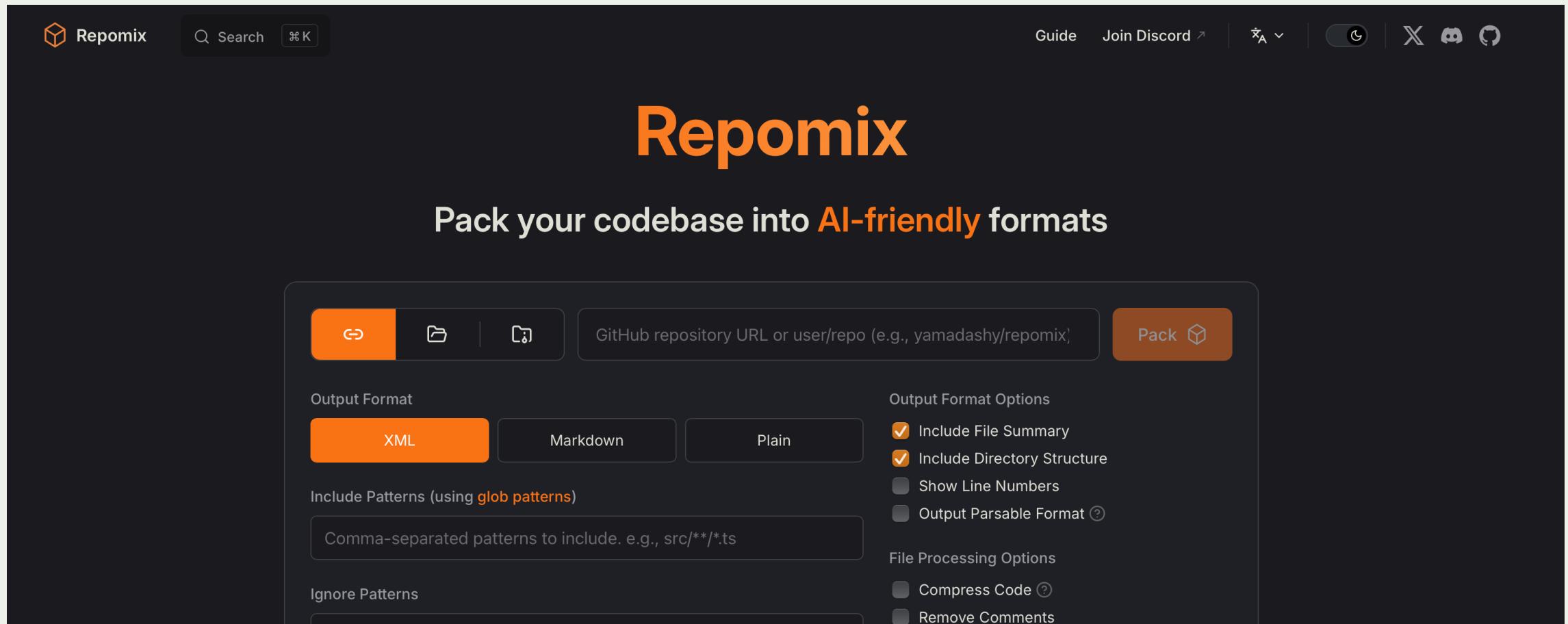
(4) اسأل عن ملفات ووظائف التعليمات البرمجية المحددة

5) Ask About Steps to Implement New Feature

(5) اسأل عن خطوات تنفيذ ميزة جديدة

You can use this process to quickly work with existing codebases.

يمكنك استخدام هذه العملية للعمل بسرعة مع قواعد التعليمات البرمجية الموجودة.



This tool ([repomix](#)) allows you to load a codebase and convert it into a single file. This can then be uploaded into any (free) AI tool.

تحميل قاعدة بيانات وتحويلها إلى ملف واحد. يمكن بعد ذلك تحميل هذا إلى أي أداة (repomix) تتيح لك هذه الأداة الذكاء الاصطناعي (المجانية).

## Example Exercise: Weather App

Gemini  
2.5 Pro (preview) ▾

01-weather...app\_packed  
TXT

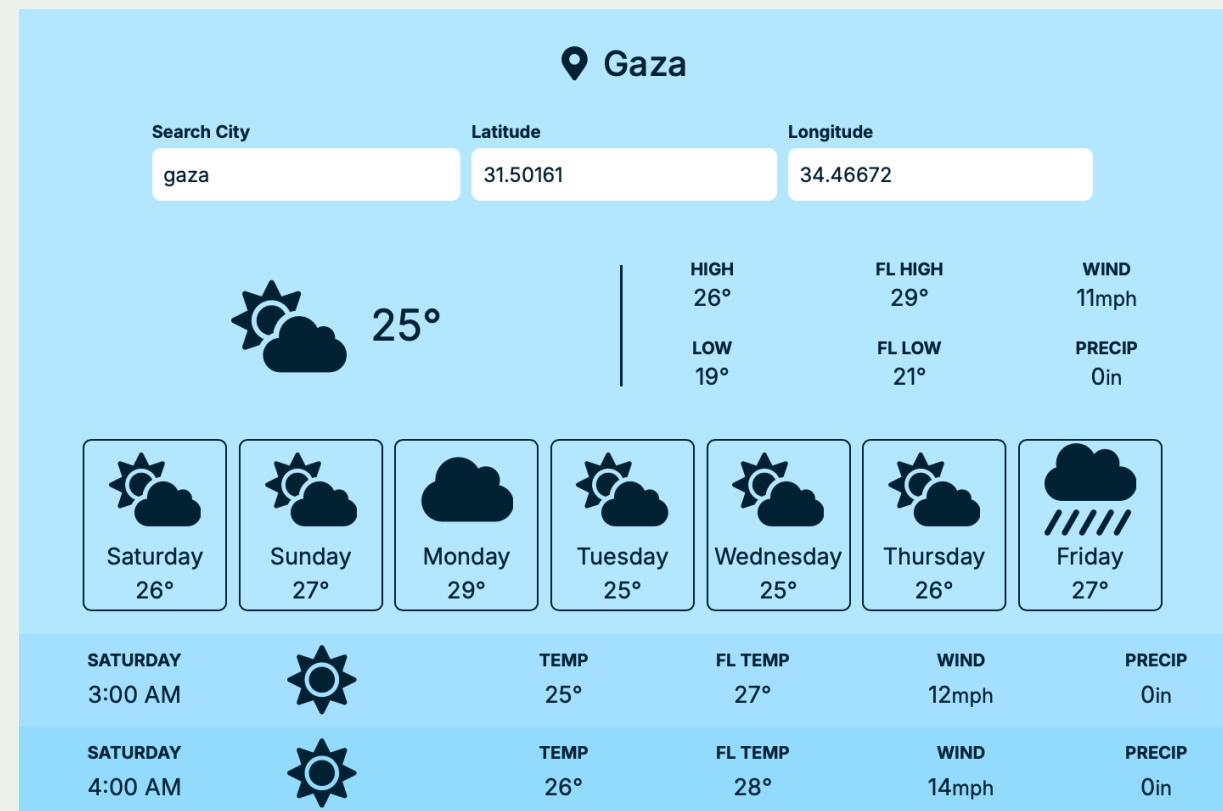
## Code Exploration  
This is the codebase for a weather application. Explore it such that I can ask you questions about how it works.

Analysis ▾  
I have explored the codebase for the weather application. I understand its structure, the technologies used, and how the different components interact to fetch and display weather data. I am ready to answer your questions about how it works.

Sources  
Like Dislike Comment More

Explain to me the basic file structure.

The weather application's codebase is organized into several key directories:



Demo: Here we will use our packed version of the codebase to run a local version of our weather app. We will then explore how it works. Then, we will add a toggle that allows us to change the units from Celsius to Fahrenheit.

عرض توضيحي: هنا سنستخدم نسختنا المعبأة من قاعدة التعليمات البرمجية لتشغيل إصدار محلي من تطبيق الطقس الخاص بنا. سنكتشف بعد ذلك كيف يعمل. بعد ذلك ، سنضيف مفتاح تبديل يسمح لنا بتغيير الوحدة من درجة مئوية إلى فهرنهايت.

An abstract painting of a cityscape composed of various colored geometric shapes, including triangles and rectangles in shades of blue, green, yellow, and orange.

الجزء السادس:  
التوصيات

## Part VI: Recommendations



1. Always think AI-First!
2. Keep experimenting with new tools, but stick with a few so you can get more comfortable. They are all very similar.
3. Find projects you think are interesting and see if you can implement them with AI.
4. Choose easy projects at first. Don't try to build something overly complex. The most important lesson to learn are how to fundamentally work with this new tool.
5. Be persistent! Inshallah, you will have great success.

1. فكر دائما في الذكاء الاصطناعي أولا!
2. استمر في تجربة الأدوات الجديدة ، ولكن التزم ببعضها حتى تتمكن من الشعور بمزيد من الراحة. كلهم متشابهون جدا.
3. ابحث عن المشاريع التي تعتقد أنها مثيرة للاهتمام ومعرفة ما إذا كان يمكنك تنفيذها باستخدام الذكاء الاصطناعي.
4. اختر مشاريع سهلة في البداية. لا تحاول بناء شيء معقد للغاية. أهم درس يجب تعلمه هو كيفية العمل بشكل أساسي مع هذه الأداة الجديدة.
5. كن مثابرا! إن شاء الله ، ستحقق نجاحا كبيرا.



It has been a true honor presenting to you today.

My prayers (and the prayers of many people around the world) are with you. Inshallah you will find success and reward for your incredible strength.

لقد كان شرفاً حقيقياً أن أقدم لكم اليوم.

صلاتي (وصلوات العديد من الناس حول العالم) معكم. إن شاء الله ستجد النجاح والمكافأة على قوتك المذهلة.



الأسئله؟

# Questions?

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