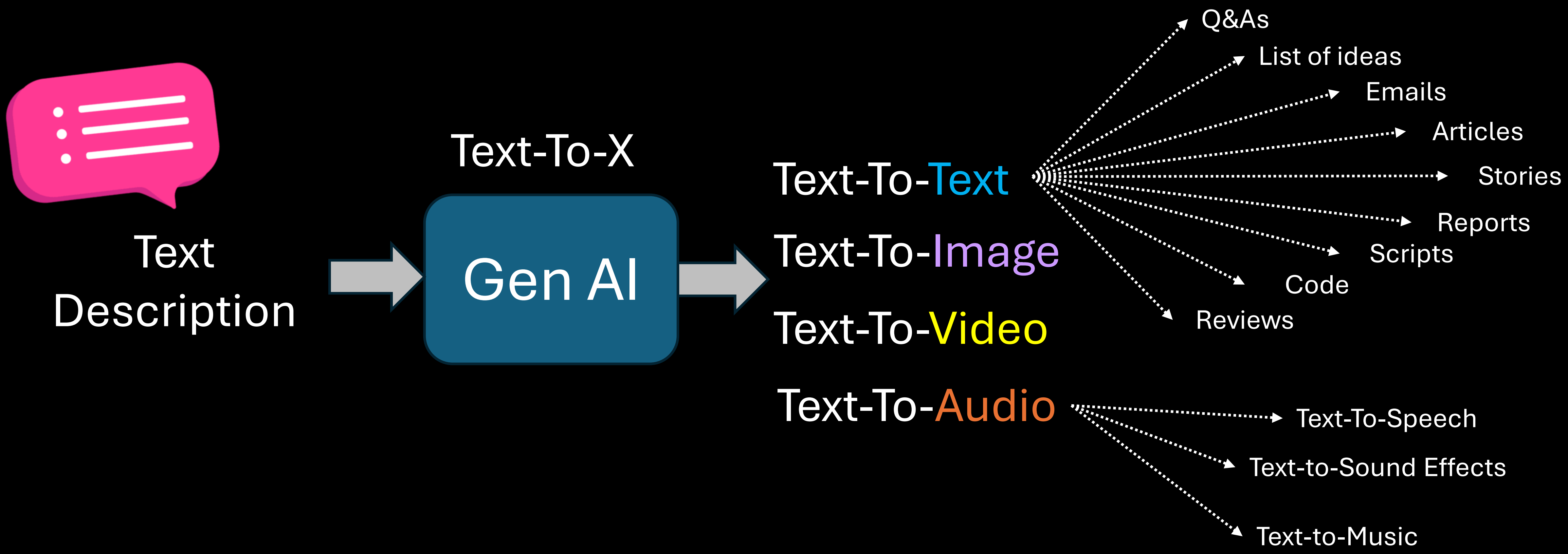
Unleash the Power of Generative AI

Generative AI for Absolute Beginners

By Idan Gabrieli

Text-Image-Video-Audio Generation



Text Description

Text-To-X

Gen AI

Text-To-Text

Text-To-Image

Text-To-Video

Text-To-Audio

Q&As

List of ideas

Emails

Articles

Stories

Reports

Scripts

Code

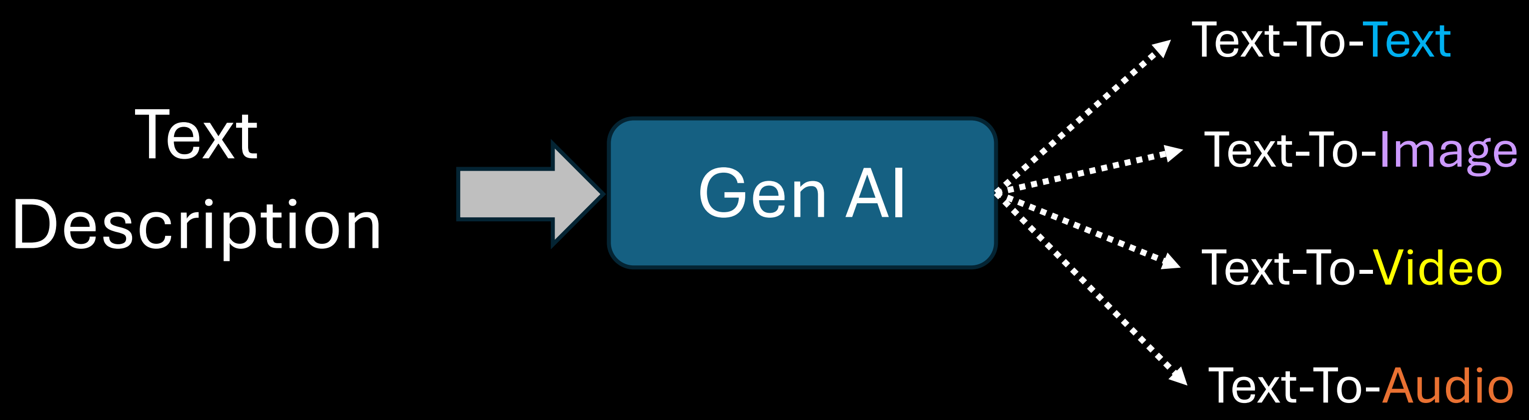
Reviews

Text-To-Speech

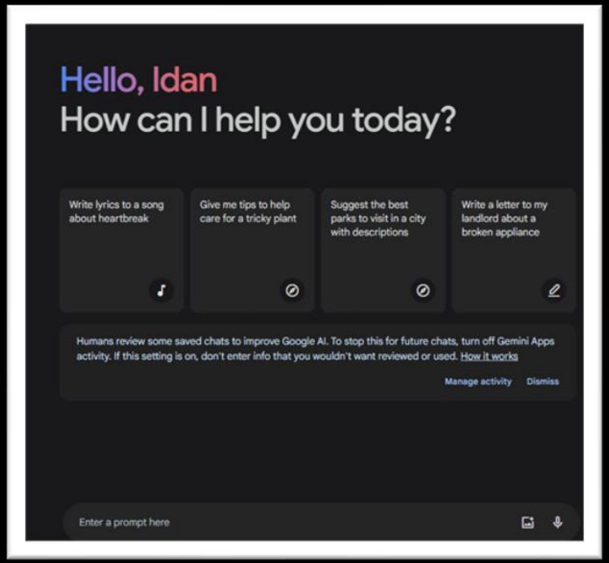
Text-to-Sound Effects

Text-to-Music

Web-Based vs Application-Based (APIs)



#1 - Web-Based



Hello, Idan
How can I help you today?

Write lyrics to a song about heartbreak

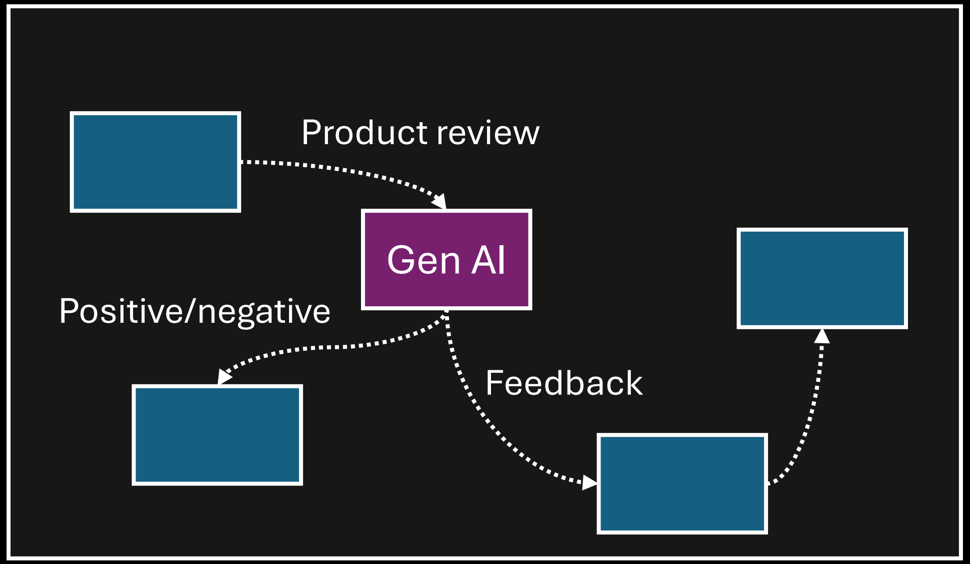
Give me tips to help care for a tricky plant

Suggest the best parks to visit in a city with descriptions

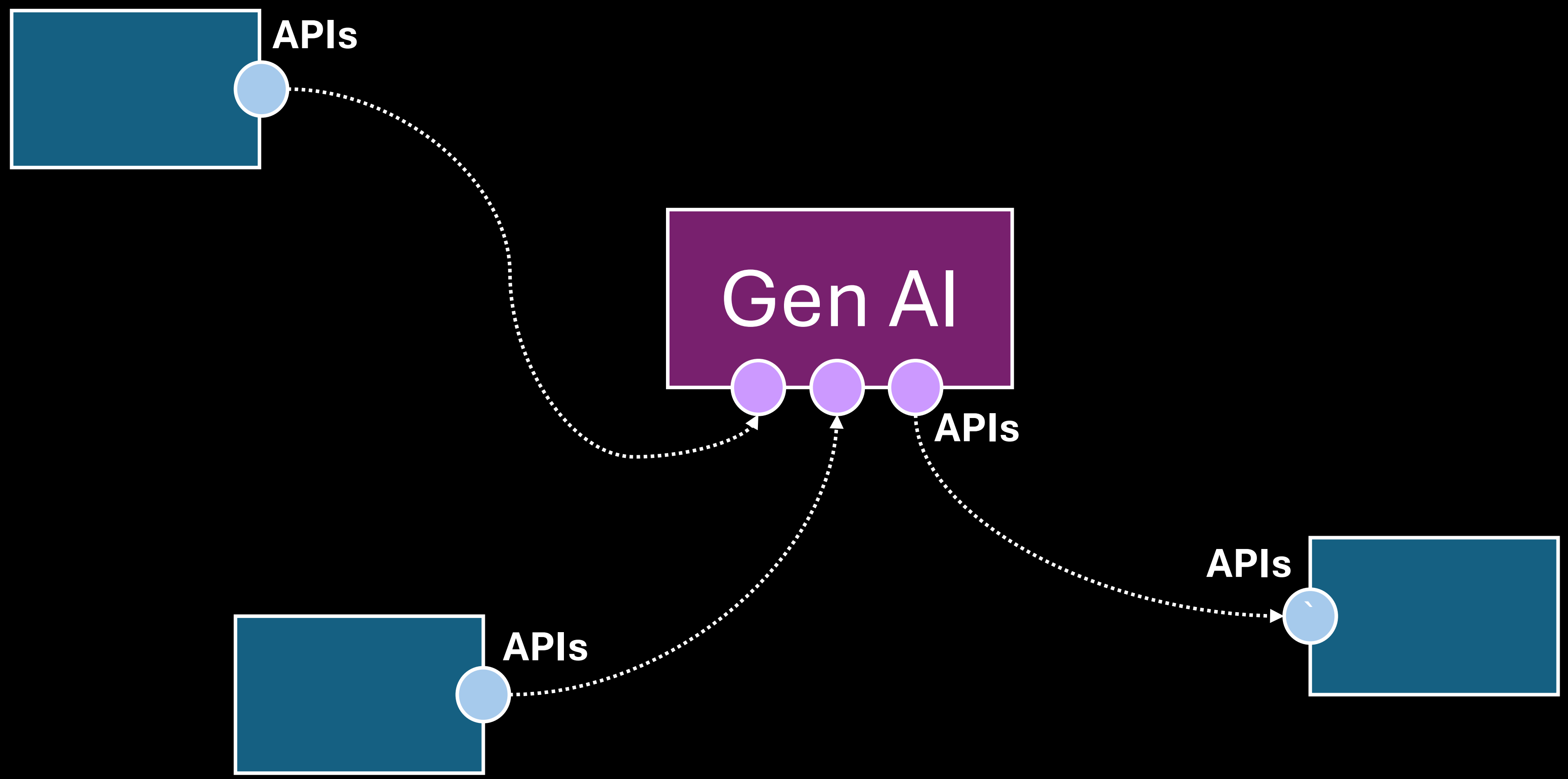
Write a letter to my landlord about a broken appliance

Humans review some saved chats to improve Google AI. To stop this for future chats, turn off Gemini Apps activity. If this setting is on, don't enter info that you wouldn't want reviewed or used. How it works

#2 - Application-Based



APIs - Application Programming Interface



Use Case - Brainstorm Assistant

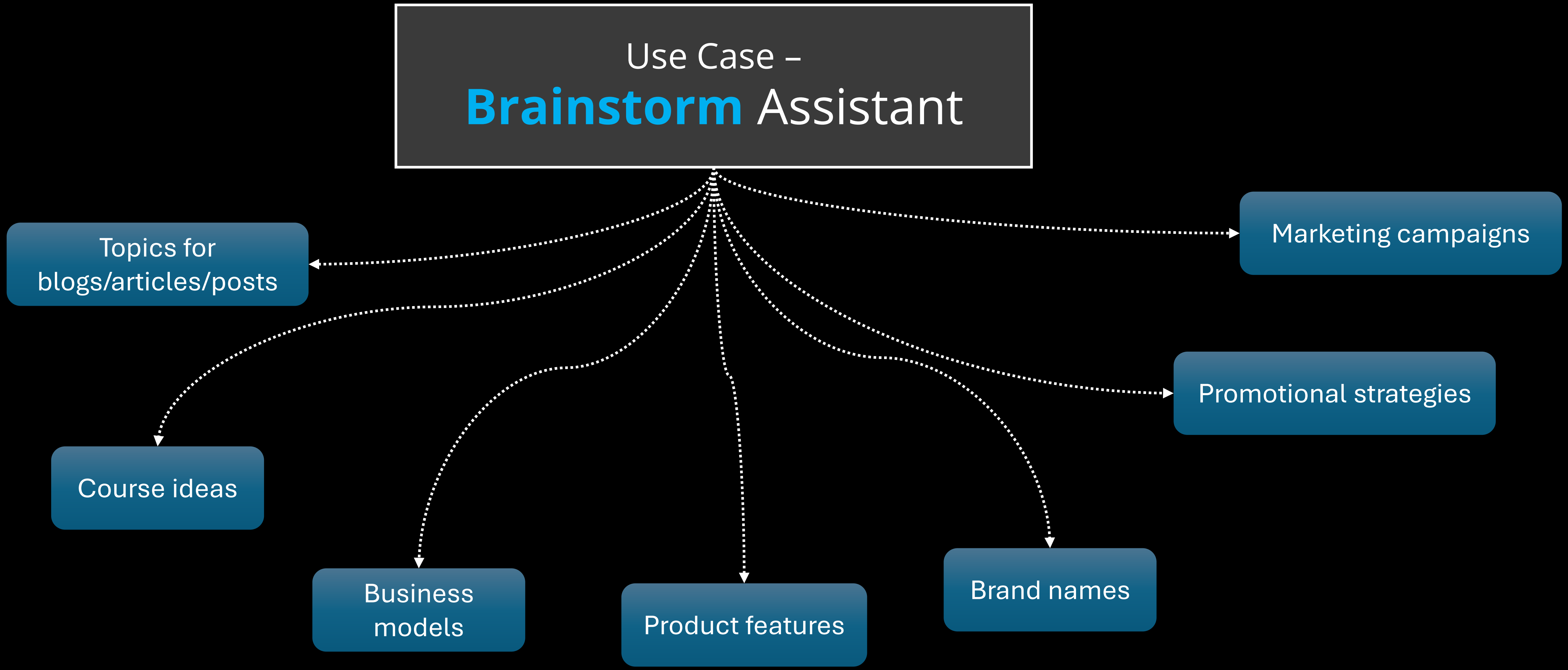
Use Case – Brainstorm Assistant

Ideas

Directions

Perspectives

Use Case - Brainstorm Assistant



Use Case –
Brainstorm Assistant

Topics for blogs/articles/posts

Course ideas

Business models

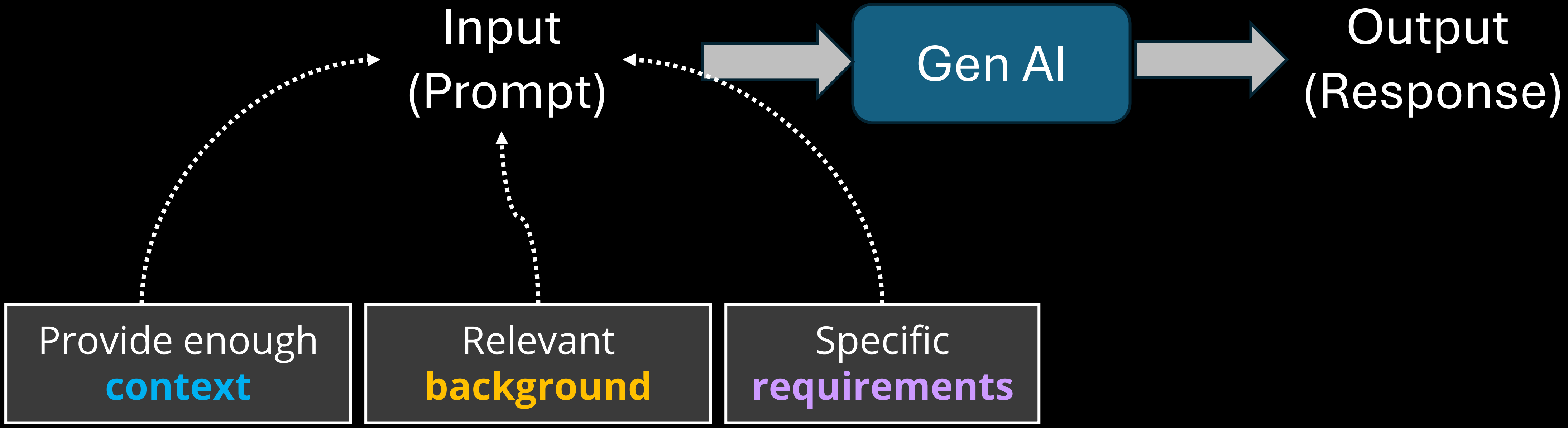
Product features

Brand names

Promotional strategies

Marketing campaigns

Use Case - Brainstorm Assistant



Input (Prompt)

Gen AI

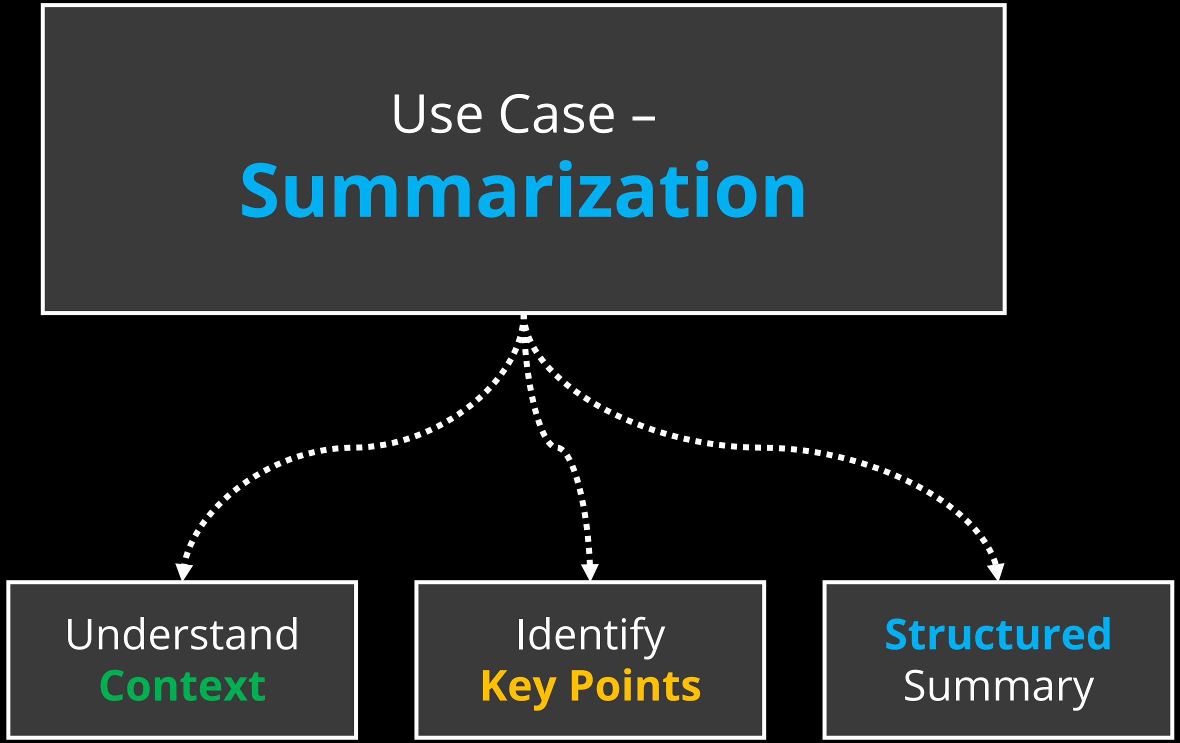
Output (Response)

Provide enough **context**

Relevant **background**

Specific **requirements**

Use Case - Summarization

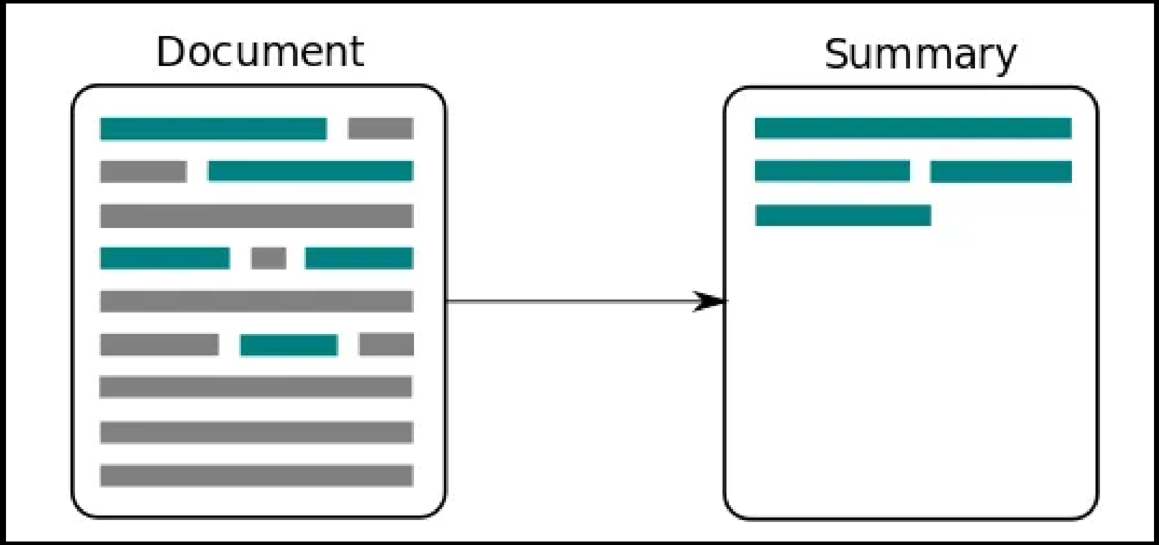


Use Case – **Summarization**

Understand **Context**

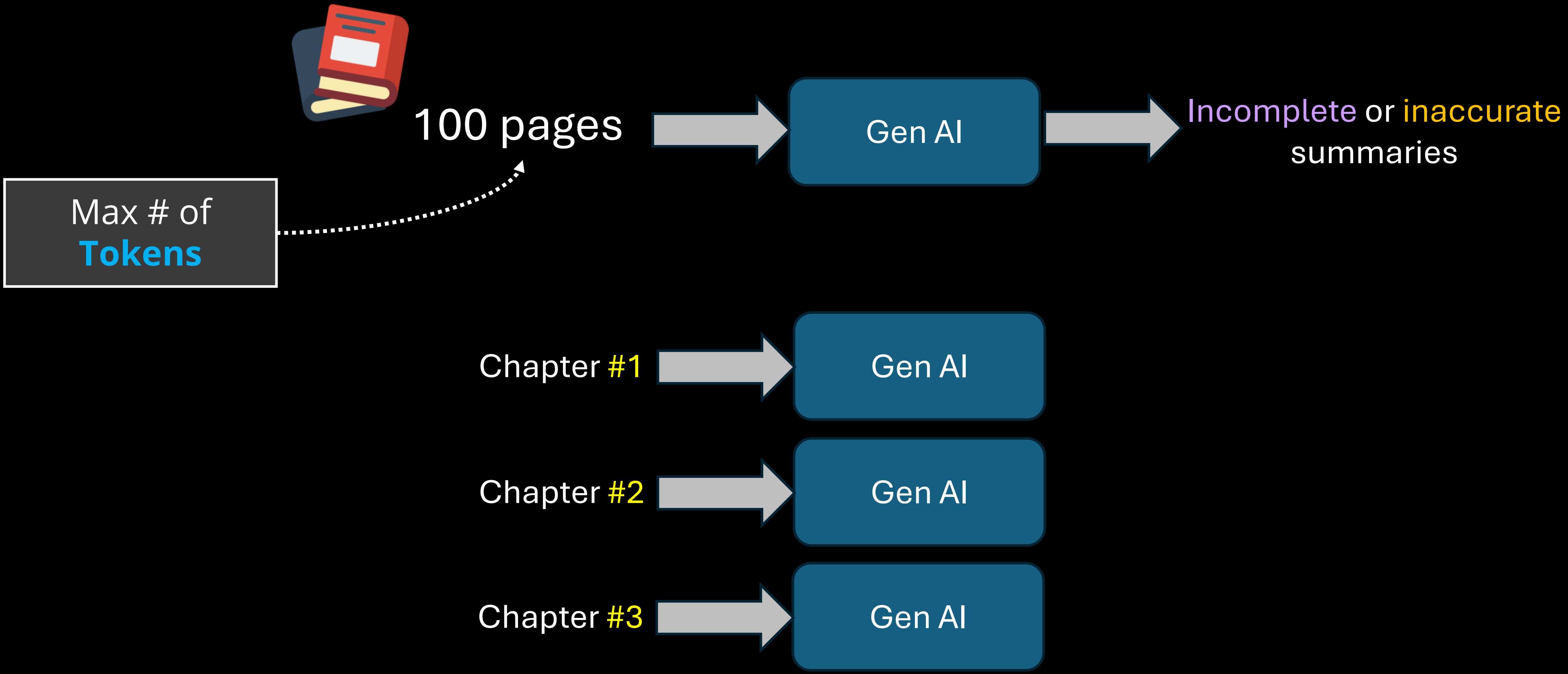
Identify **Key Points**

Structured Summary



Summarize that text in **a specific way**

Use Case - Summarization



100 pages

Gen AI

Incomplete or inaccurate summaries

Max # of **Tokens**

Chapter #1

Gen AI

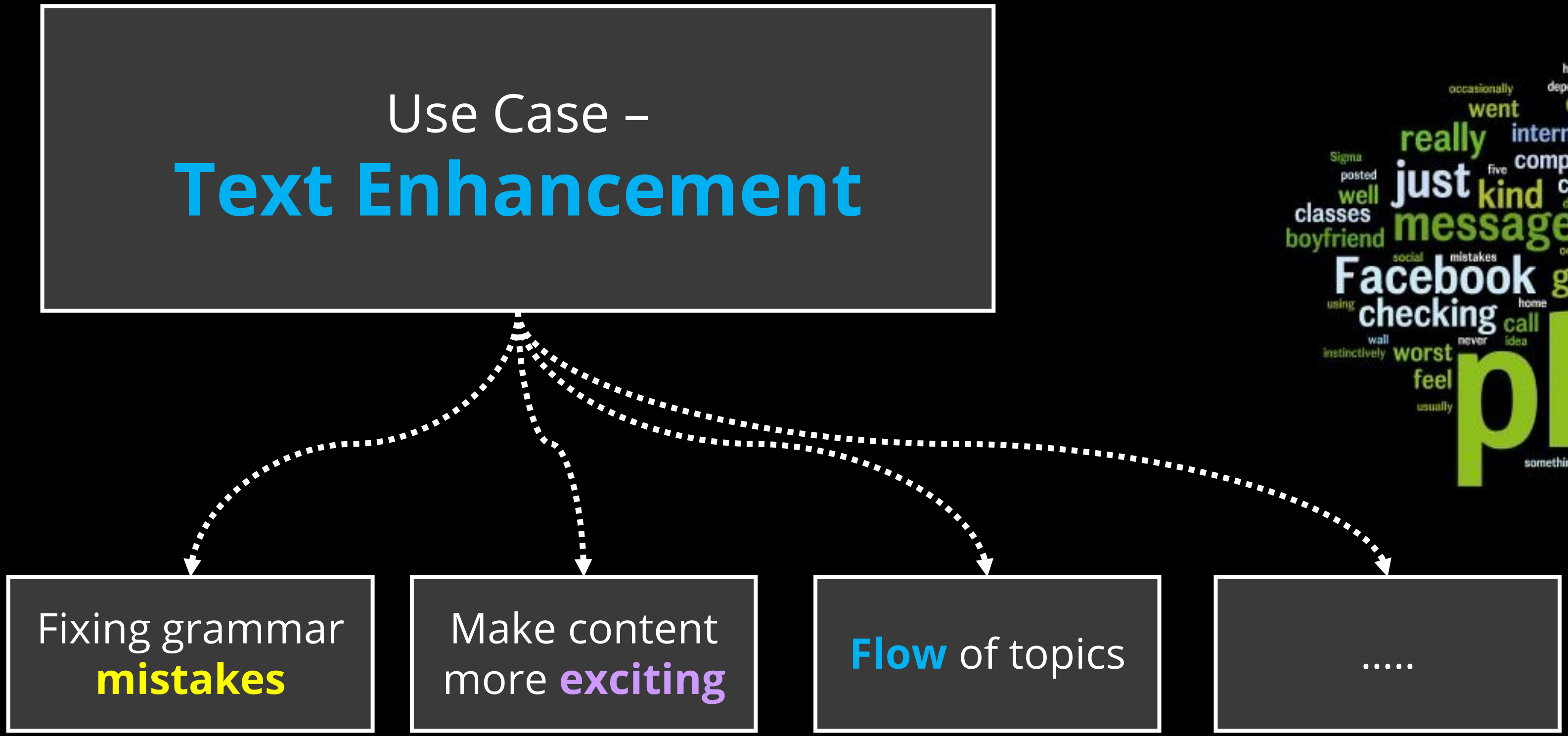
Chapter #2

Gen AI

Chapter #3

Gen AI

Use Case - Text Enhancement



Use Case –
Text Enhancement

Fixing grammar **mistakes**

Make content more **exciting**

Flow of topics

.....

Text Enhancement

A **Final** Draft

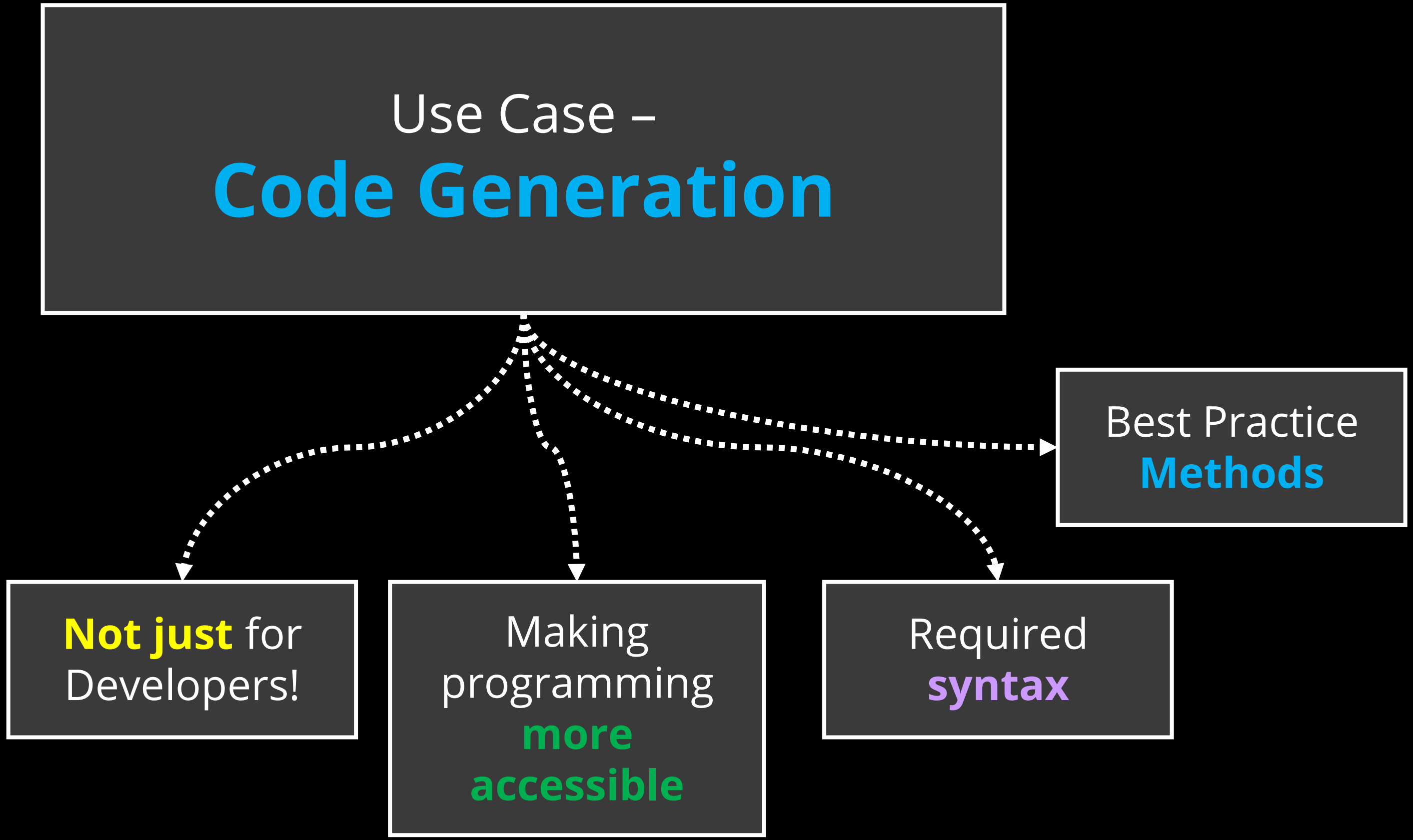
Gen AI

Lower %

Created by **AI**

“Garbage in, Garbage Out…”

Use Case - Code Generation



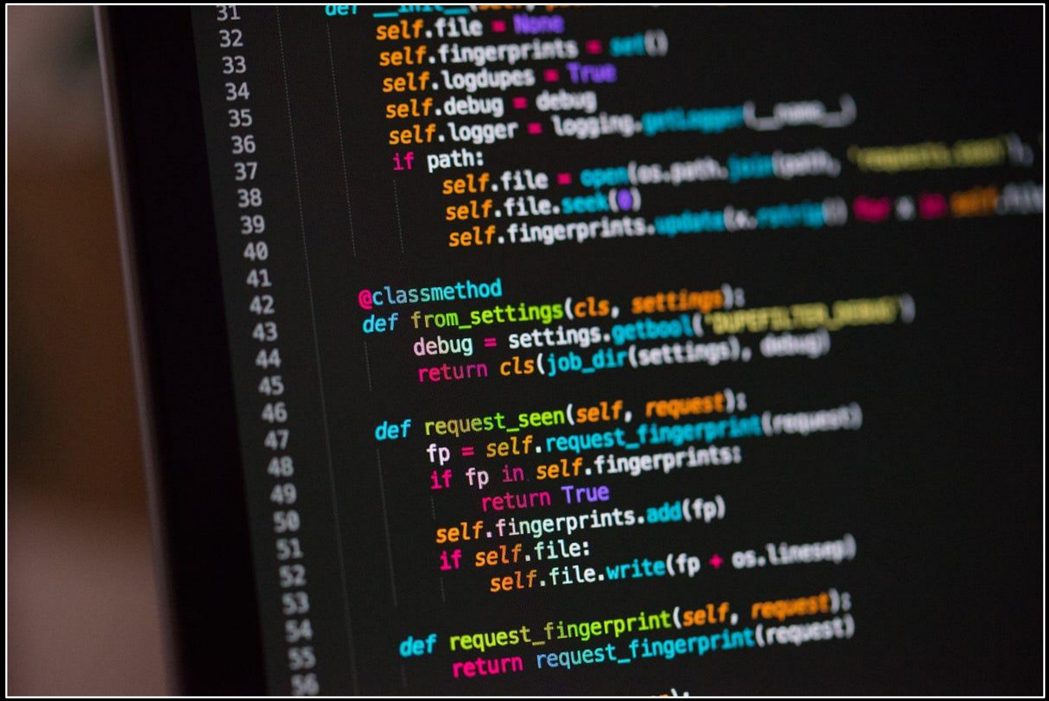
Use Case –
Code Generation

Not just for Developers!

Making programming **more accessible**

Required **syntax**

Best Practice **Methods**

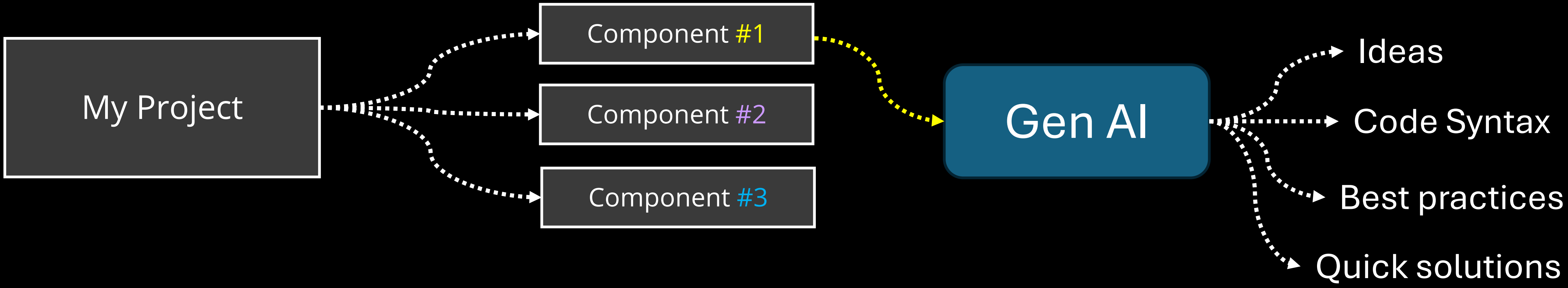


```
def __init__(self, [illegible]
    self.file = None
    self.fingerprints = set()
    self.logdupes = True
    self.debug = debug
    self.logger = logging.getLogger(__name__)
    if path:
        self.file = open(os.path.join(path, 'requests.seen'), [illegible]
        self.file.seek(0)
        self.fingerprints.update(x.rstrip() for x in self.file)

@classmethod
def from_settings(cls, settings):
    debug = settings.getbool('DUPEFILTER_DEBUG')
    return cls(job_dir(settings), debug)

def request_seen(self, request):
    fp = self.request_fingerprint(request)
    if fp in self.fingerprints:
        return True
    self.fingerprints.add(fp)
    if self.file:
        self.file.write(fp + os.linesep)

def request_fingerprint(self, request):
    return request_fingerprint(request)
```

Use Case - Code Generation

Open-source Framework – Web Development

Extended with WordPress Plugins



My Project

Component #1

Component #2

Component #3

Gen AI

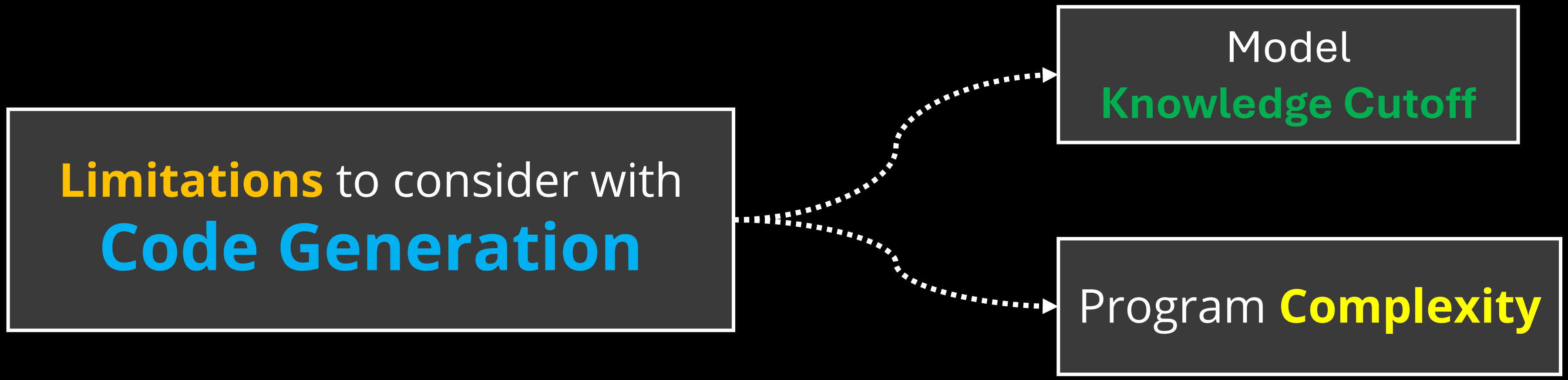
Ideas

Code Syntax

Best practices

Quick solutions

Use Case - Code Generation



Limitations to consider with

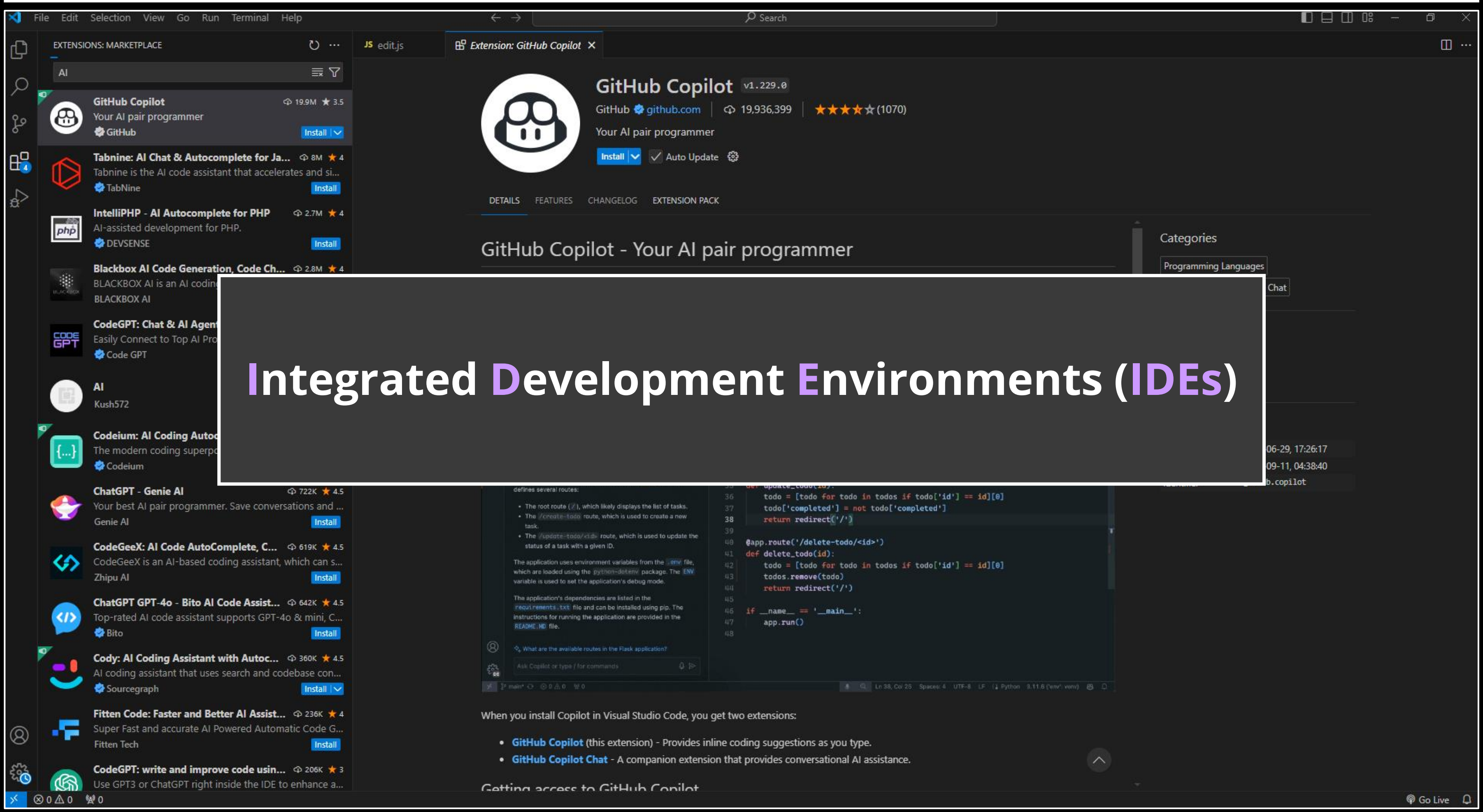
Code Generation

Model **Knowledge Cutoff**

Program **Complexity**

Use Case - Code Generation

AI-Based Applications for Software Development



GitHub Copilot 19.9M ★ 3.5
Your AI pair programmer
GitHub

Tabnine: AI Chat & Autocomplete for Ja... 8M ★ 4
Tabnine is the AI code assistant that accelerates and si...
TabNine

IntelliPHP - AI Autocomplete for PHP 2.7M ★ 4
AI-assisted development for PHP.
DEVSENSE

Blackbox AI Code Generation, Code Ch... 2.8M ★ 4
BLACKBOX AI is an AI codin
BLACKBOX AI

CodeGPT: Chat & AI Agent
Easily Connect to Top AI Pro
Code GPT

AI
Kush572

Codeium: AI Coding Autoc
The modern coding superpo
Codeium

ChatGPT - Genie AI 722K ★ 4.5
Your best AI pair programmer. Save conversations and ...
Genie AI

CodeGeeX: AI Code AutoComplete, C... 619K ★ 4.5
CodeGeeX is an AI-based coding assistant, which can s...
Zhipu AI

ChatGPT GPT-4o - Bito AI Code Assist... 642K ★ 4.5
Top-rated AI code assistant supports GPT-4o & mini, C...
Bito

Cody: AI Coding Assistant with Autoc... 360K ★ 4.5
AI coding assistant that uses search and codebase con...
Sourcegraph

Fitten Code: Faster and Better AI Assist... 236K ★ 4
Super Fast and accurate AI Powered Automatic Code G...
Fitten Tech

CodeGPT: write and improve code usin... 206K ★ 3
Use GPT3 or ChatGPT right inside the IDE to enhance a...

⊗ 0 ⚠ 0 0

GitHub Copilot v1.229.0
GitHub github.com | 19,936,399 | ★★★★☆ (1070)
Your AI pair programmer

GitHub Copilot - Your AI pair programmer

Categories
Programming Languages
Chat

06-29, 17:26:17
09-11, 04:38:40
b.copilot

defines several routes:

- The root route (/), which likely displays the list of tasks.
- The /create-todo route, which is used to create a new task.
- The /update-todo/<id> route, which is used to update the status of a task with a given ID.

The application uses environment variables from the .env file, which are loaded using the python-dotenv package. The ENV variable is used to set the application's debug mode.

The application's dependencies are listed in the requirements.txt file and can be installed using pip. The instructions for running the application are provided in the README.MD file.

What are the available routes in the Flask application?

Ask Copilot or type / for commands

```
def update_todo(id):
    todo = [todo for todo in todos if todo['id'] == id][0]
    todo['completed'] = not todo['completed']
    return redirect('/')

@app.route('/delete-todo/<id>')
def delete_todo(id):
    todo = [todo for todo in todos if todo['id'] == id][0]
    todos.remove(todo)
    return redirect('/')

if __name__ == '__main__':
    app.run()
```

main* ⊗ 0 ⚠ 0 0 Ln 38, Col 25 Spaces: 4 UTF-8 LF Python 3.11.6 ('env': venv)

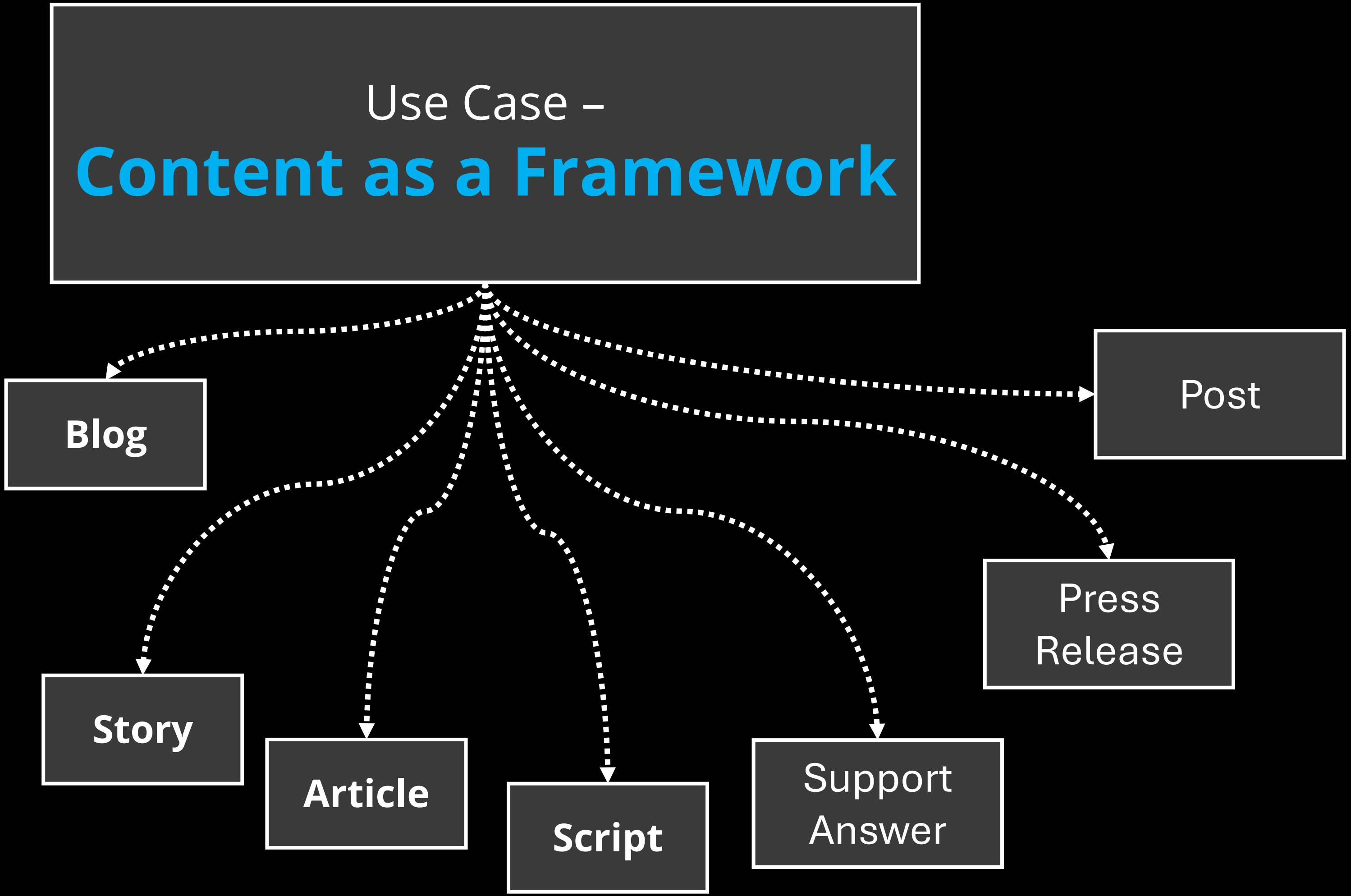
When you install Copilot in Visual Studio Code, you get two extensions:

- GitHub Copilot (this extension) - Provides inline coding suggestions as you type.
- GitHub Copilot Chat - A companion extension that provides conversational AI assistance.

Getting access to GitHub Copilot

Integrated Development Environments (IDEs)

Use Case - Content as a Framework



Use Case –
Content as a Framework

Blog

Story

Article

Script

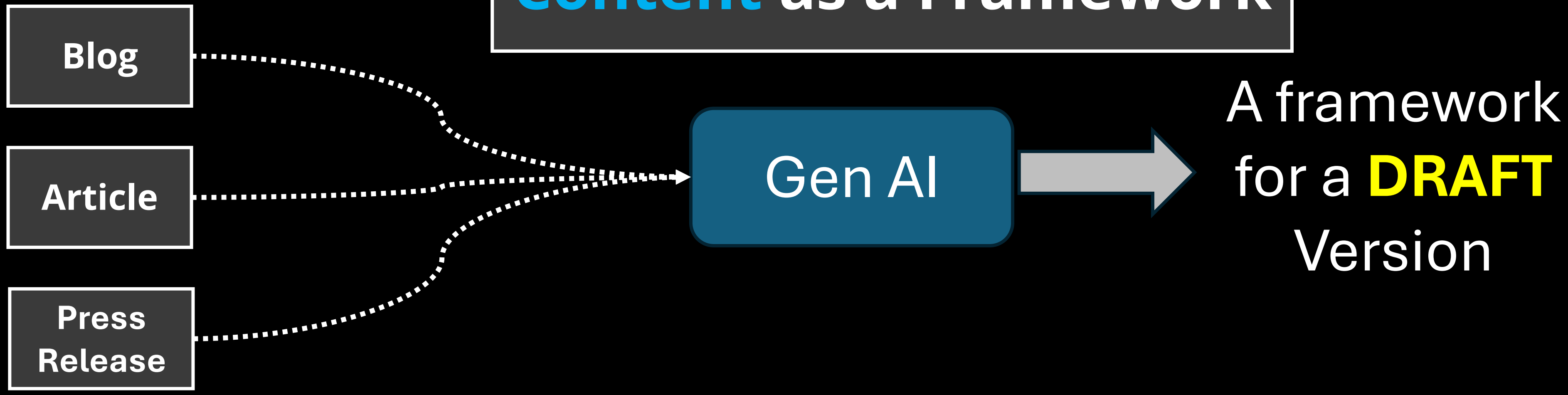
Support Answer

Press Release

Post

Use Case - Content as a Framework

Content as a Framework

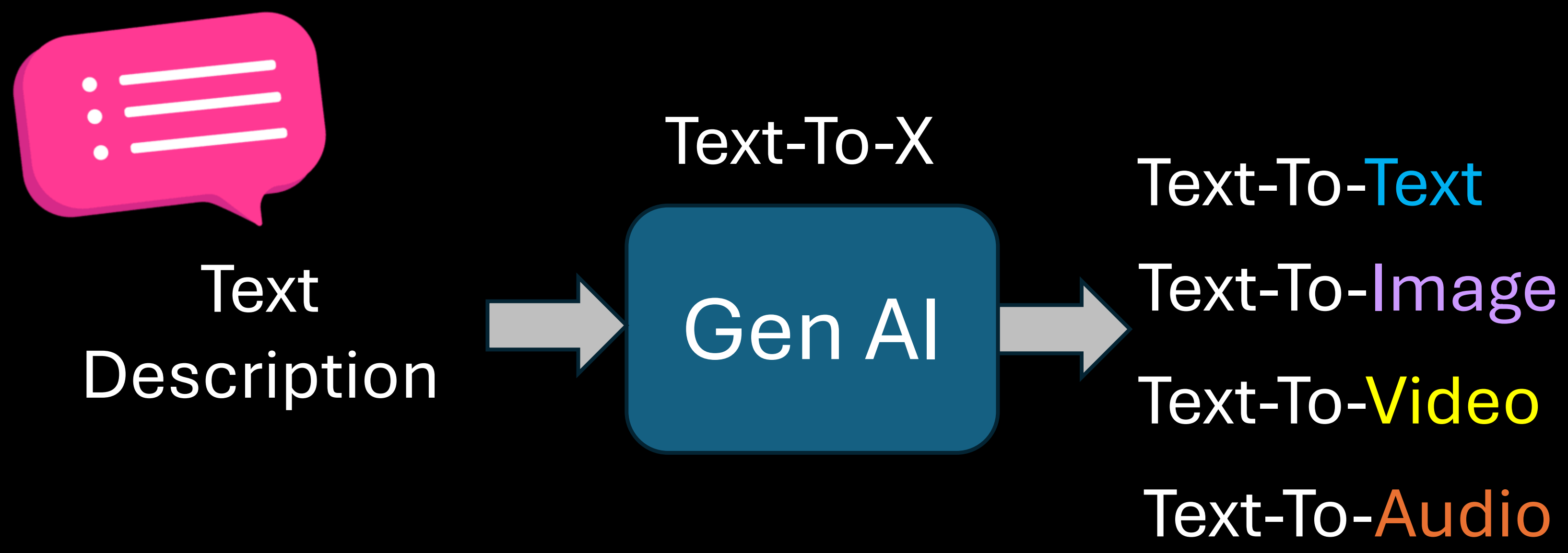


Try to make the content, **YOUR** content.

Use Case –
Images on Demand

“A **picture** is worth a thousand words…”

Use Case - Boosting AI-Based Apps



Text Description

Text-To-X

Gen AI

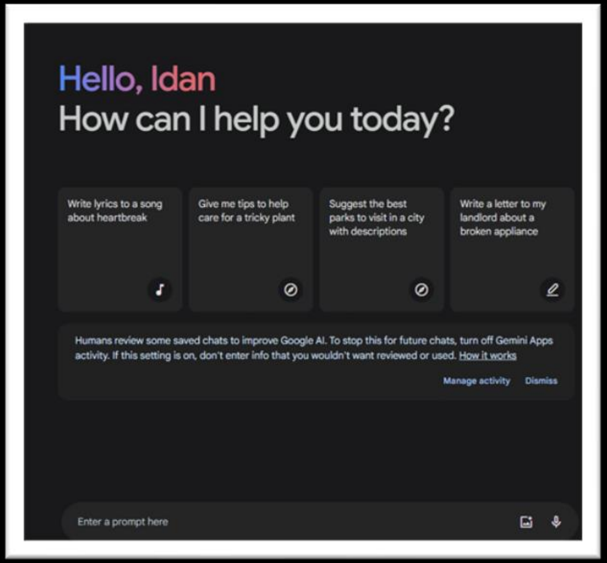
Text-To-Text

Text-To-Image

Text-To-Video

Text-To-Audio

#1 - Web-Based



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Suggest the best parks to visit in a city with descriptions

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Manage activity Dismiss

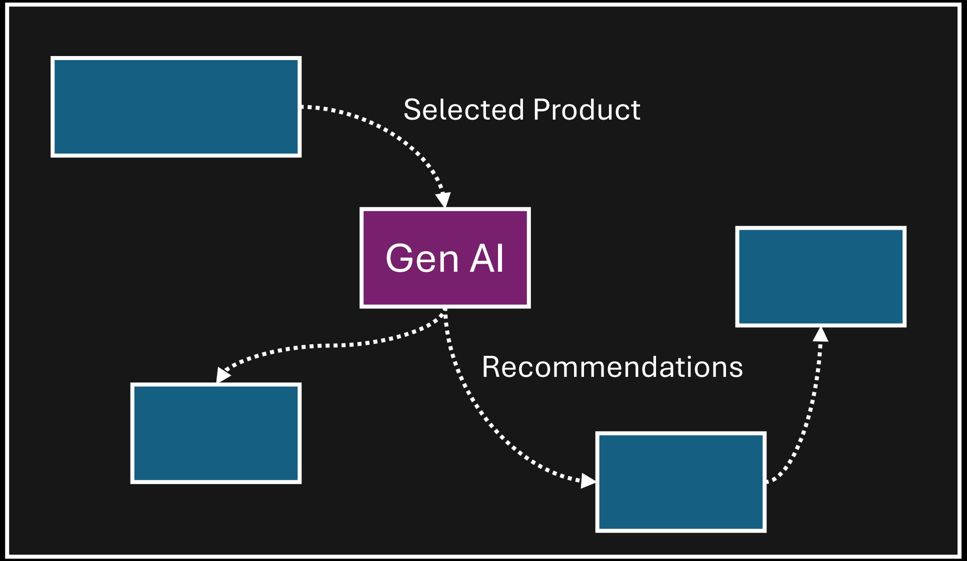
Enter a prompt here

Use Case – Boosting AI-Based Apps

Each **business workflow**, **process**, and step are **candidates** for integrating **Generative AI** modules as part of a larger application.

Use Case - Boosting AI-Based Apps

End-to-End Application

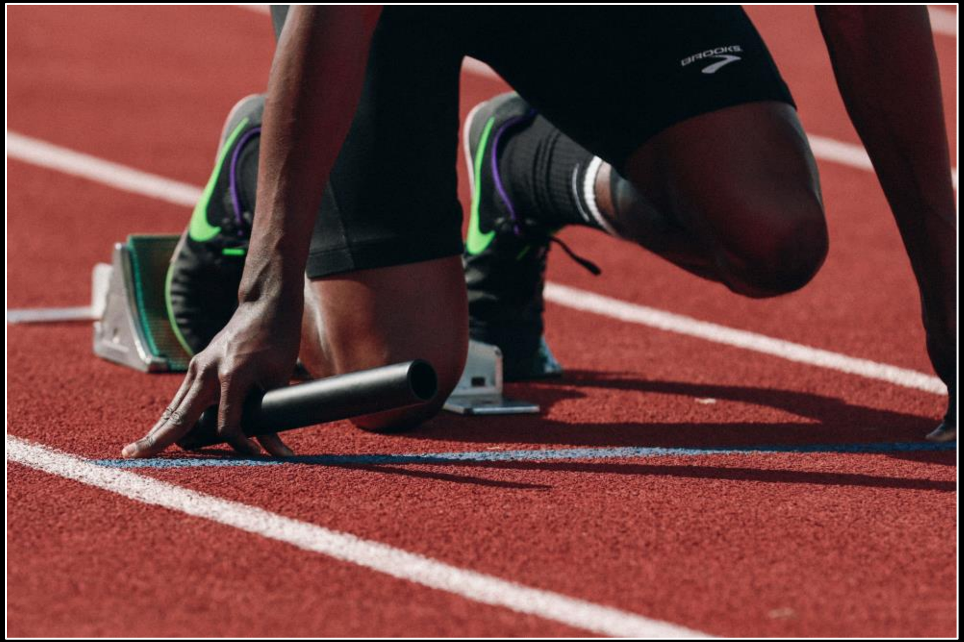


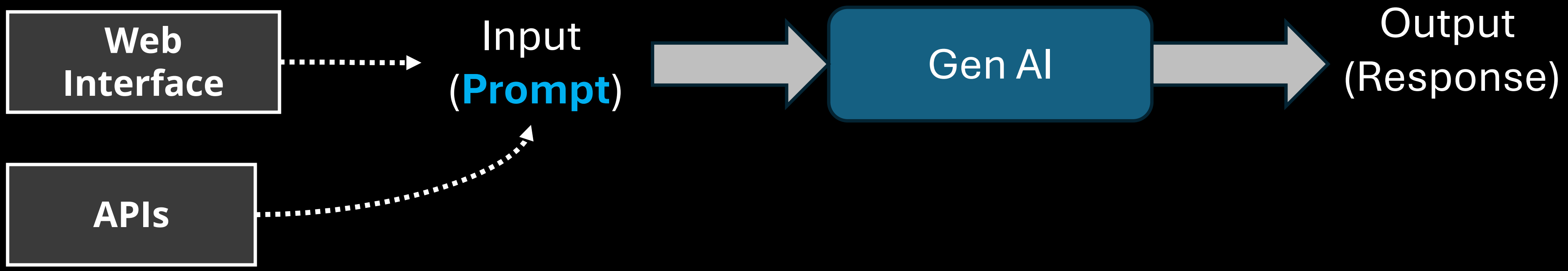
Use Case – **Boosting AI-Based Apps**

HUGE potential for business innovation

↓

The Race is ON!





Prompt Engineering

Engineering better prompts

Prompt Engineering

Engineering better prompts

#1 – Be Specific and Clear

Clearly define what you want the AI to generate

#2 - Use Contextual Information

Providing context that helps the model understand the scenario or background

#3 – Define a Scope and Boundaries

Define the scope of the task

Prompt Engineering

Engineering better prompts

#4 – Structure and Format

Organize input prompt in a logical structure and specify the desired format

#5 – Avoid Confidential Information

Avoid providing any confidential information as part of the prompt

#6 - Request for Simplification or Clarification

If needed, ask it to simplify or clarify the information in specific way

Prompt Engineering

Engineering better prompts

#7 - Encourage Multiple Perspectives

Ask the model to consider different viewpoints or alternatives

#8 - Break Down Complex Tasks

Break a complex task down into smaller tasks

#9 – Iterate and Refine

We can ask something with a group of sequential iterations