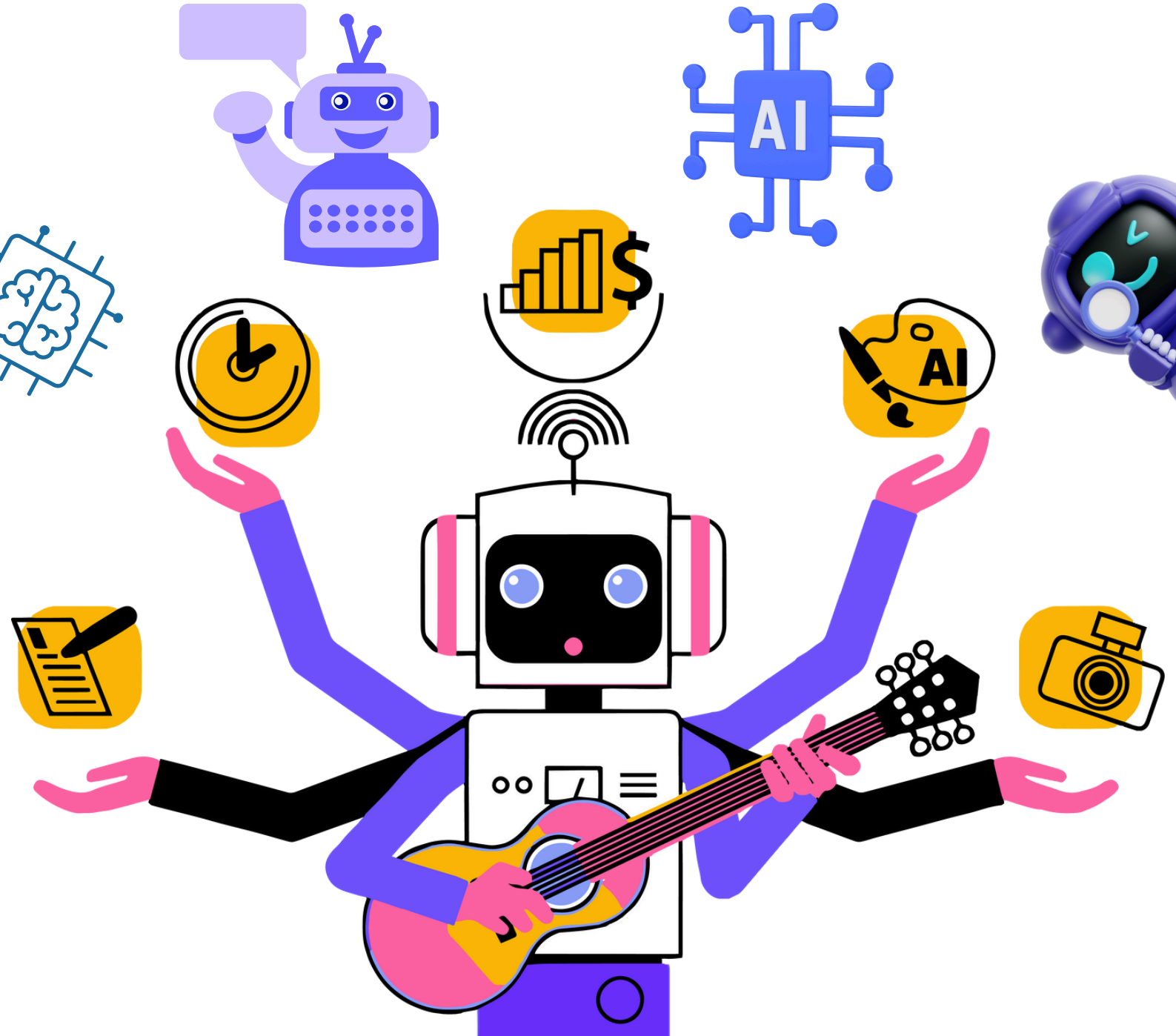
GENERATIVE AI FOR KIDS

By Malika Malik



Modules

01 Welcome to the World of AI

02 How AI is Everywhere

03 Types of AI

04 Prompt Engineering Fundamentals

05 Fun with Generative AI

MODULE 1

WELCOME TO THE WORLD OF AI

Module 1 Content

1.1 Welcome to the World of AI

1.2 Fun Fact

1.3 What is AI?

1.4 How Does AI Actually Work?

1.5 The Importance of More Training Data

1.6 Fun Activity: Find the Next Pattern!

1.7 Key Takeaways

01

Hey there, future tech explorers! Ever felt like the digital world is a bit like a secret club, where things just…happen? Well, you’re not alone! In this blog, we're going to pull back the curtain and reveal the magic behind the machines. We'll be diving into the fascinating world of Artificial Intelligence (AI) – what it is, how it works, and how it's changing the world as we know it. So, are you ready to uncover the secrets?

1.1. Welcome to the World of AI

Fig 1.1 Future With AI

Let’s start by thinking about your everyday online experiences. Think about the last time you searched for something online. The next day, you saw ads for the same product everywhere! Have you ever noticed how Netflix recommends movies you might like before you even search for them? Look at the image below to see how Netflix uses AI to predict exactly what you’ll want to watch next.

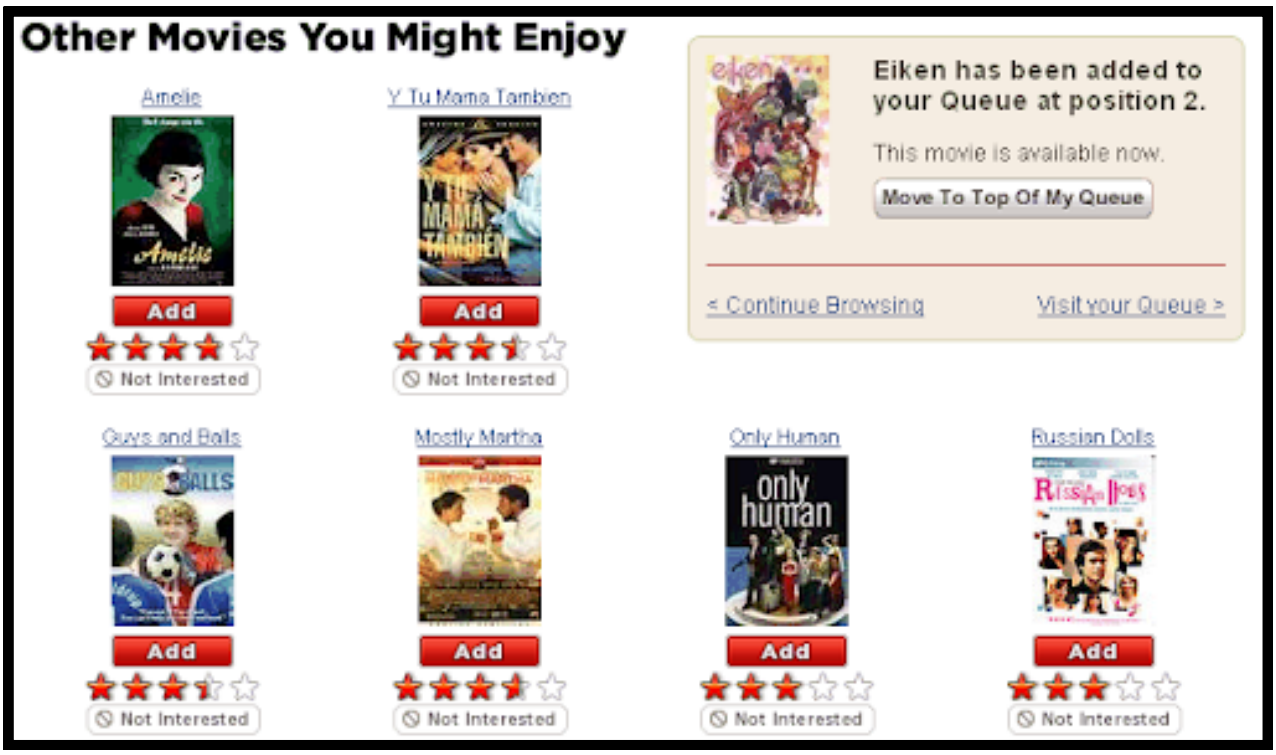


Fig 1.2: AI-powered movie recommendations on Netflix

Or how your phone suggests words before you finish typing a sentence? Check out the image below to see AI in action.

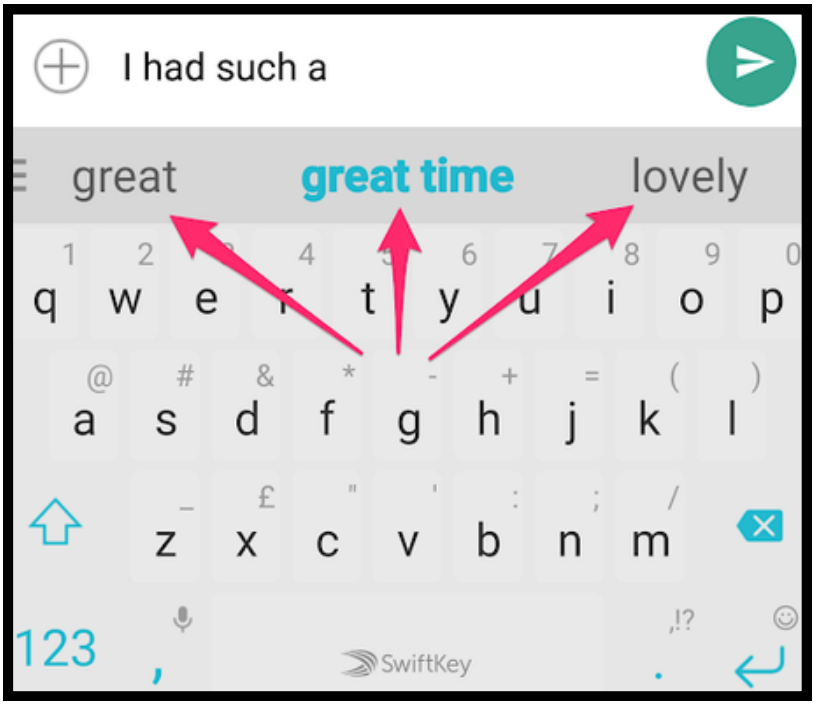


Fig 1.3:Word Suggestions

Maybe you've seen your friend's name pop up just when you were about to tag them in a photo. Check out the image below to see how AI suggests names for tagging in photos.

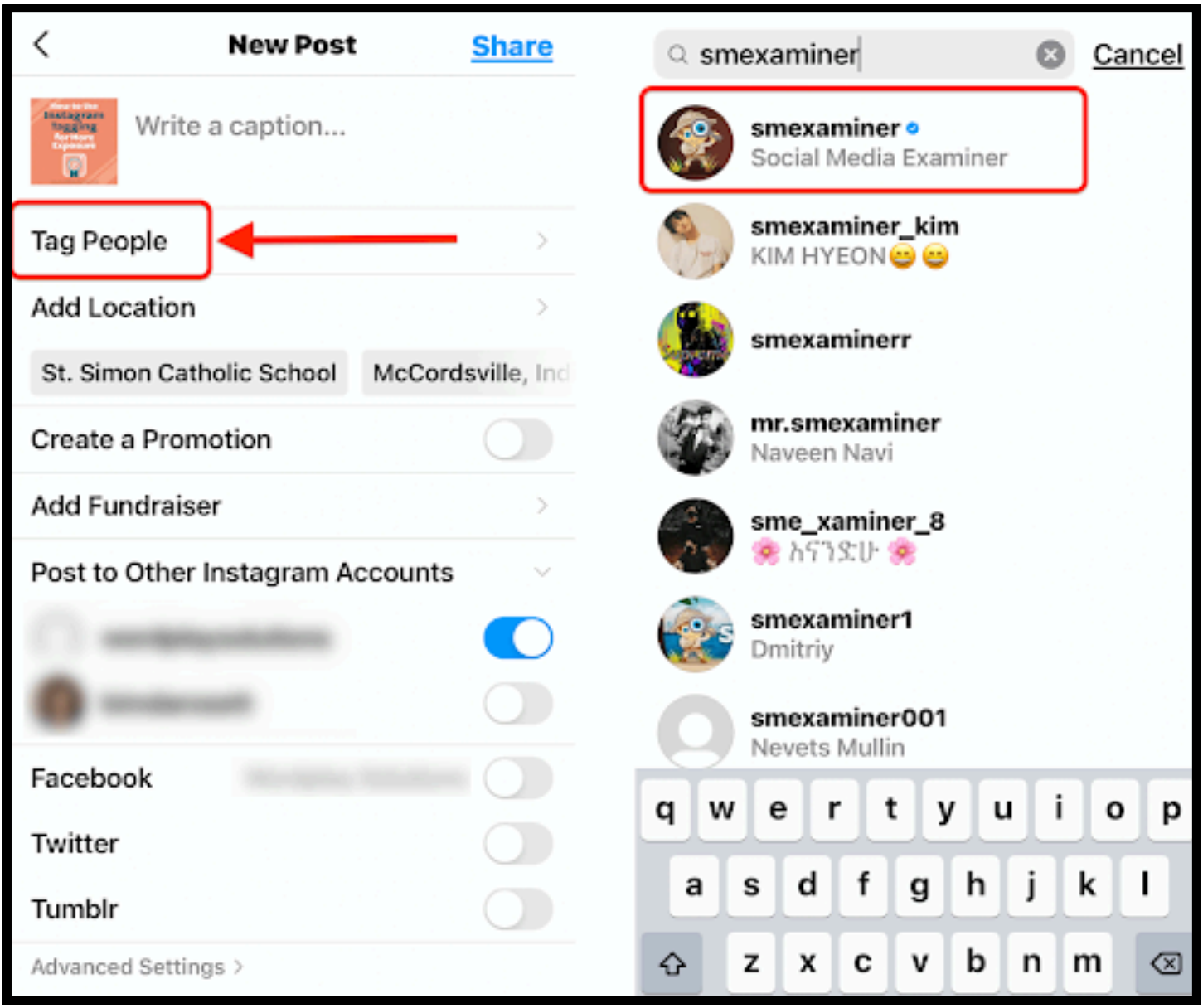


Fig 1.4: Friend Suggestion

It almost feels like your devices can read your mind, right? But they're not magic—they're using something called Artificial Intelligence (AI).

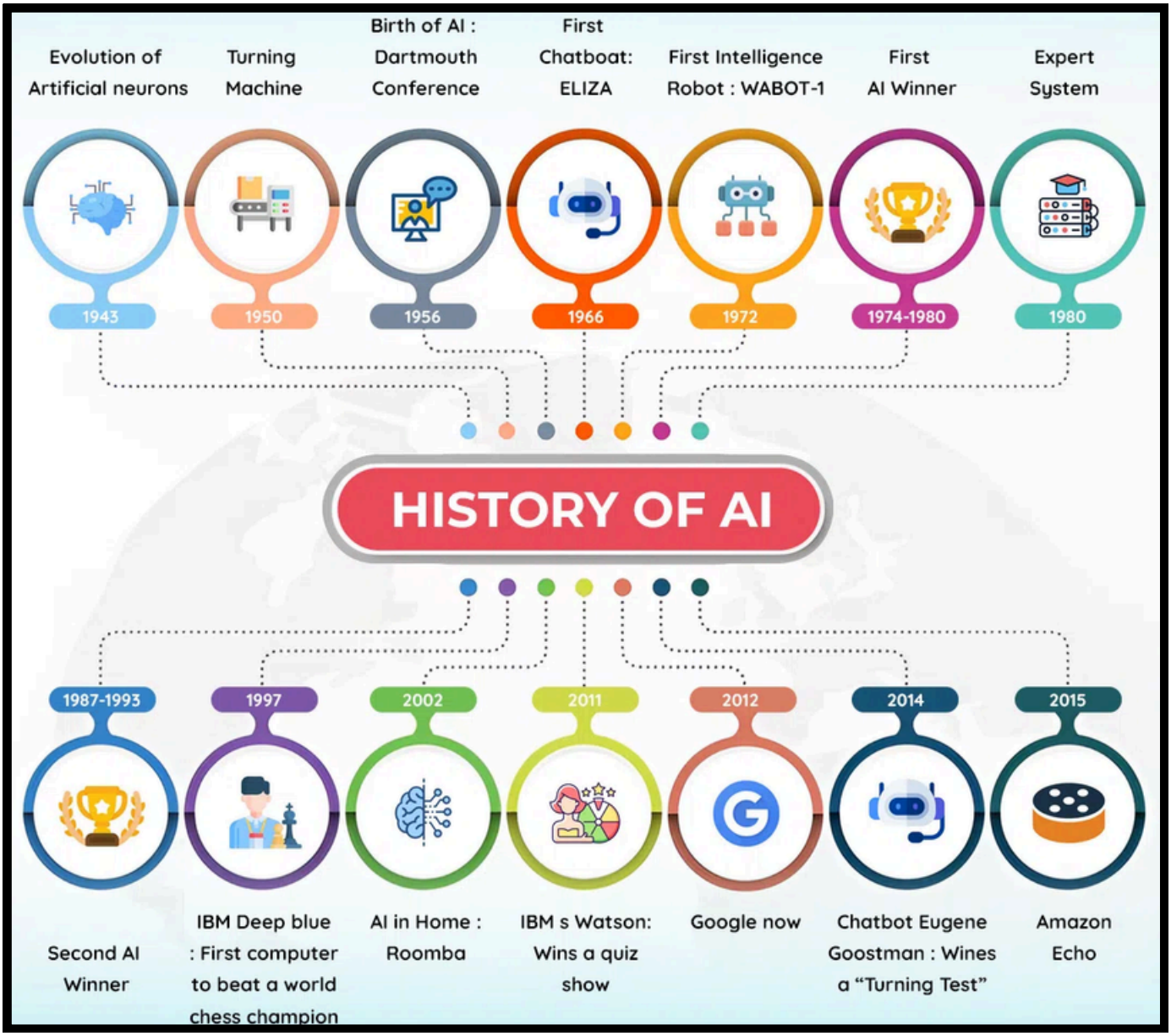
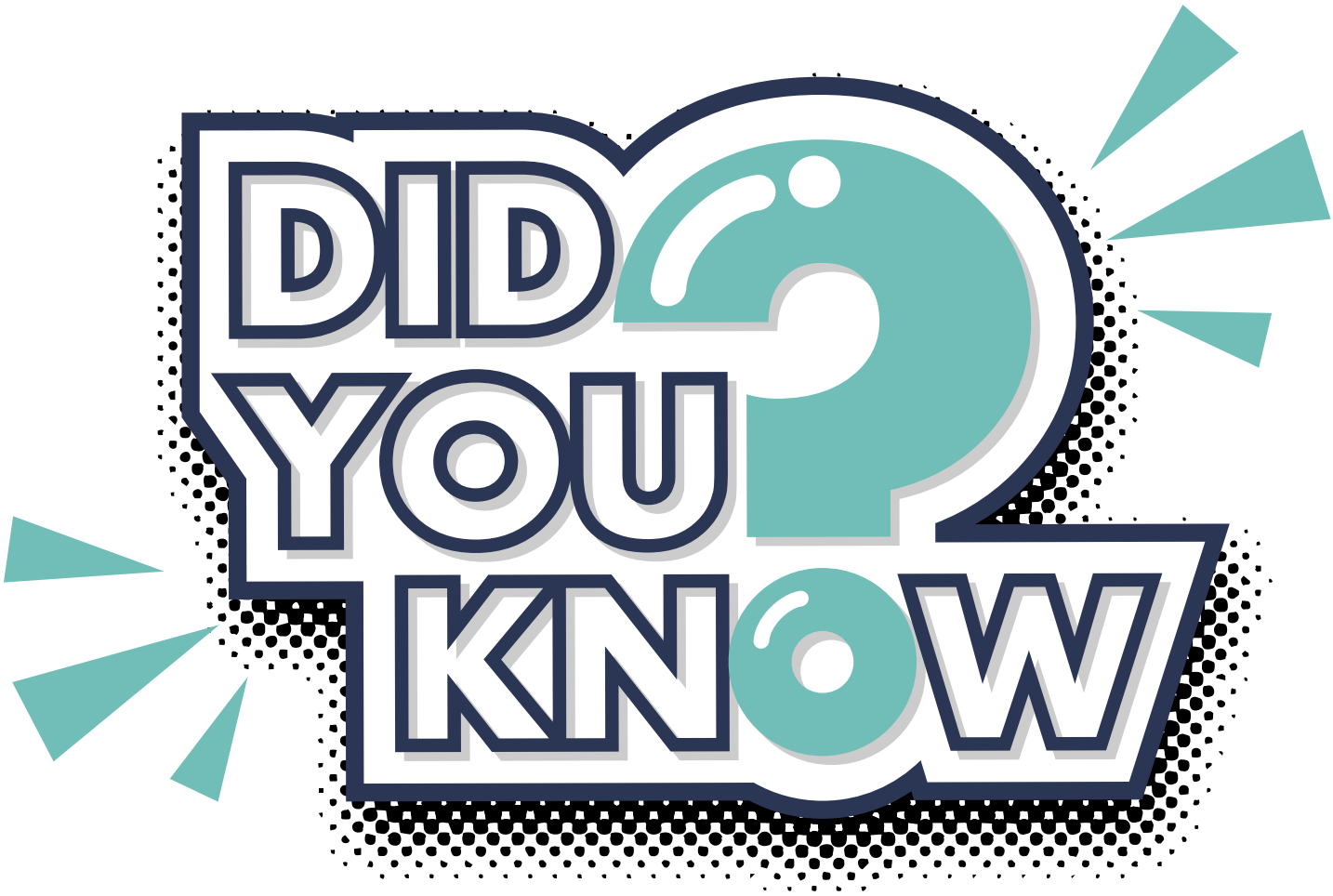


Fig 1.5: History of AI

AI might feel like a modern invention, but its history goes back decades! From early computers to robots in sci-fi movies, people have always imagined machines that can think and learn like humans. It's a story that started with a simple question and has led to mind-blowing progress.

Let's take a fun journey through the history of AI and see how it evolved into what we use today!

1.2 Fun Fact



1.2.1. Fun Fact 1: The Birth of AI!

Did you know that the idea of AI started way before computers even existed? In the 1950s, a scientist named Alan Turing asked a big question: **"Can machines think?"** 🤔
This led to the creation of the Turing Test, which checks if a computer can talk like a human without people realizing it's a machine!

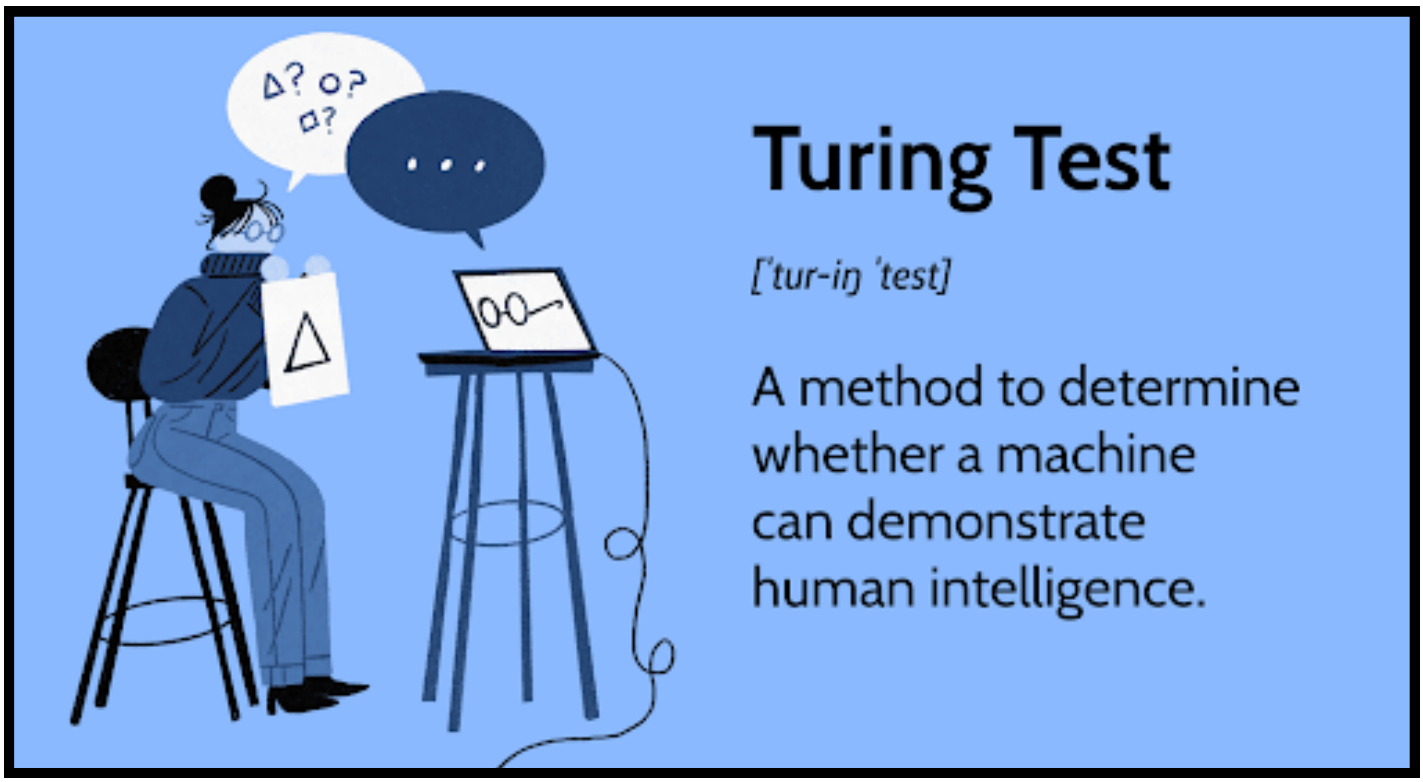


Fig 1.6: Turing Test

1.2.2. Fun Fact 2: The Birth of the AI Chatbot!

Did you know that AI chatbots have been around for much longer than you might think? In fact, the first chatbot, called **ELIZA**, was created way back in the 1960s – long before smartphones and Siri!
ELIZA was a simple program designed to talk with people like a therapist. It could ask questions and respond to answers in a way that made people feel like they were chatting with a real person! Although ELIZA wasn't super smart by today's standards, it was a huge step toward creating the AI chatbots we use today.

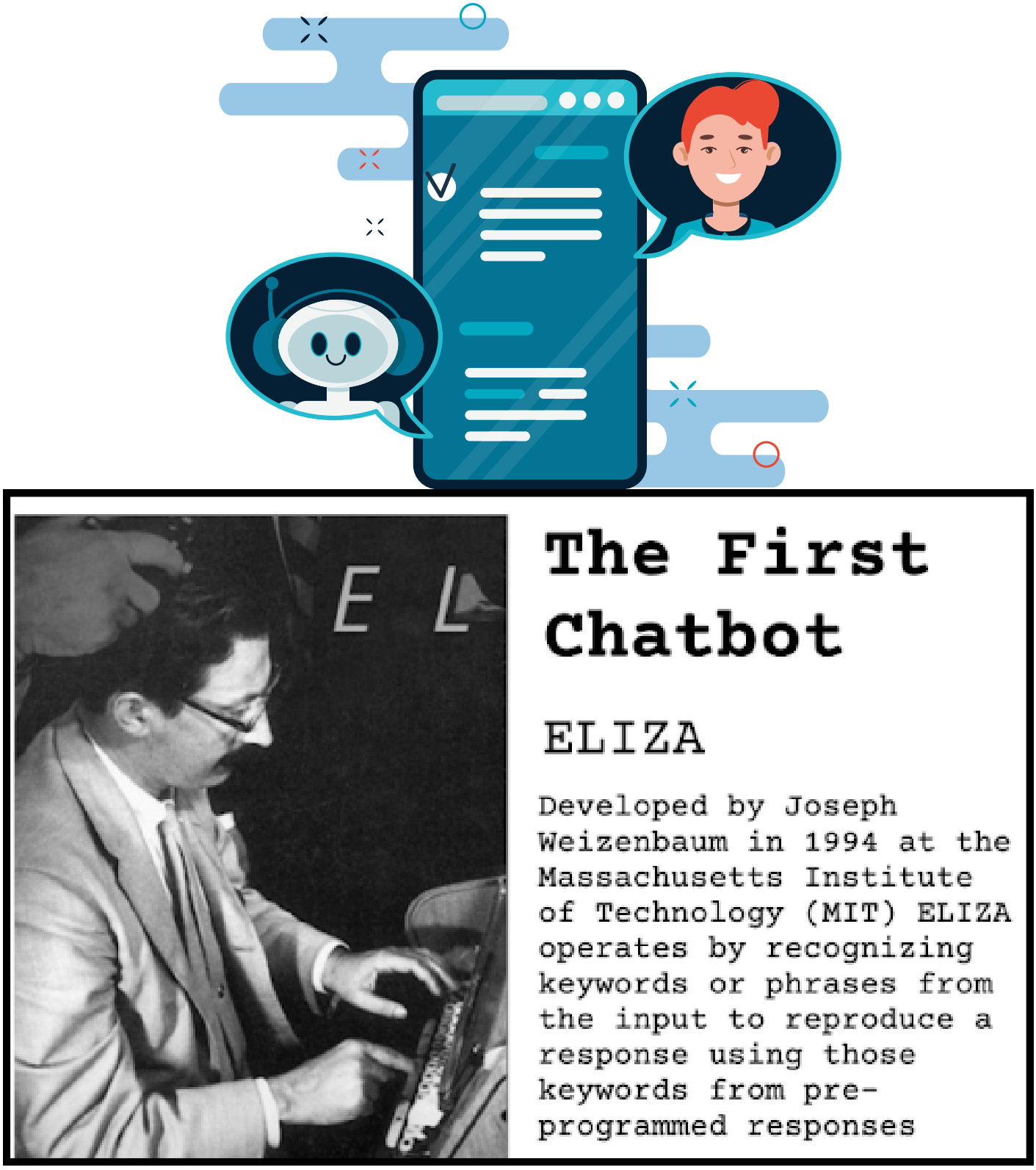


Fig 1.7 AI Chatbot

So, with all this in mind, let's get to the heart of the matter.

1.3. What is AI?

AI stands for Artificial Intelligence, which means the ability of a machine or computer to perform tasks that typically require human intelligence. This includes things like learning, reasoning, problem-solving, and decision-making.

1.3.1 What Exactly Is AI?

Okay, so we've seen AI in action, but what is it? , Artificial Intelligence (AI) is about teaching computers to perform tasks that usually require human intelligence. This means things like:

- **Learning:** Figuring things out from experiences and information.
- **Problem Solving:** Finding solutions to challenges.
- **Decision-Making:** Choosing the best course of action.
- **Understanding Language:** Comprehending what we say and write.
- **Recognizing Patterns:** Spotting similarities and trends.
- **Adapting:** Changing behavior based on new situations.

Think of it like giving a computer a brain that can learn and grow, not like a real human brain, but a digital one. AI is the art of creating smart machines.

Example:

Think of the below example voice assistant, like Siri or Alexa. When you ask, “What’s the weather today?” the assistant listens, understands your question, and responds with the correct answer. This is AI at work, as it understands language, processes information, and provides an answer—just like a human might.

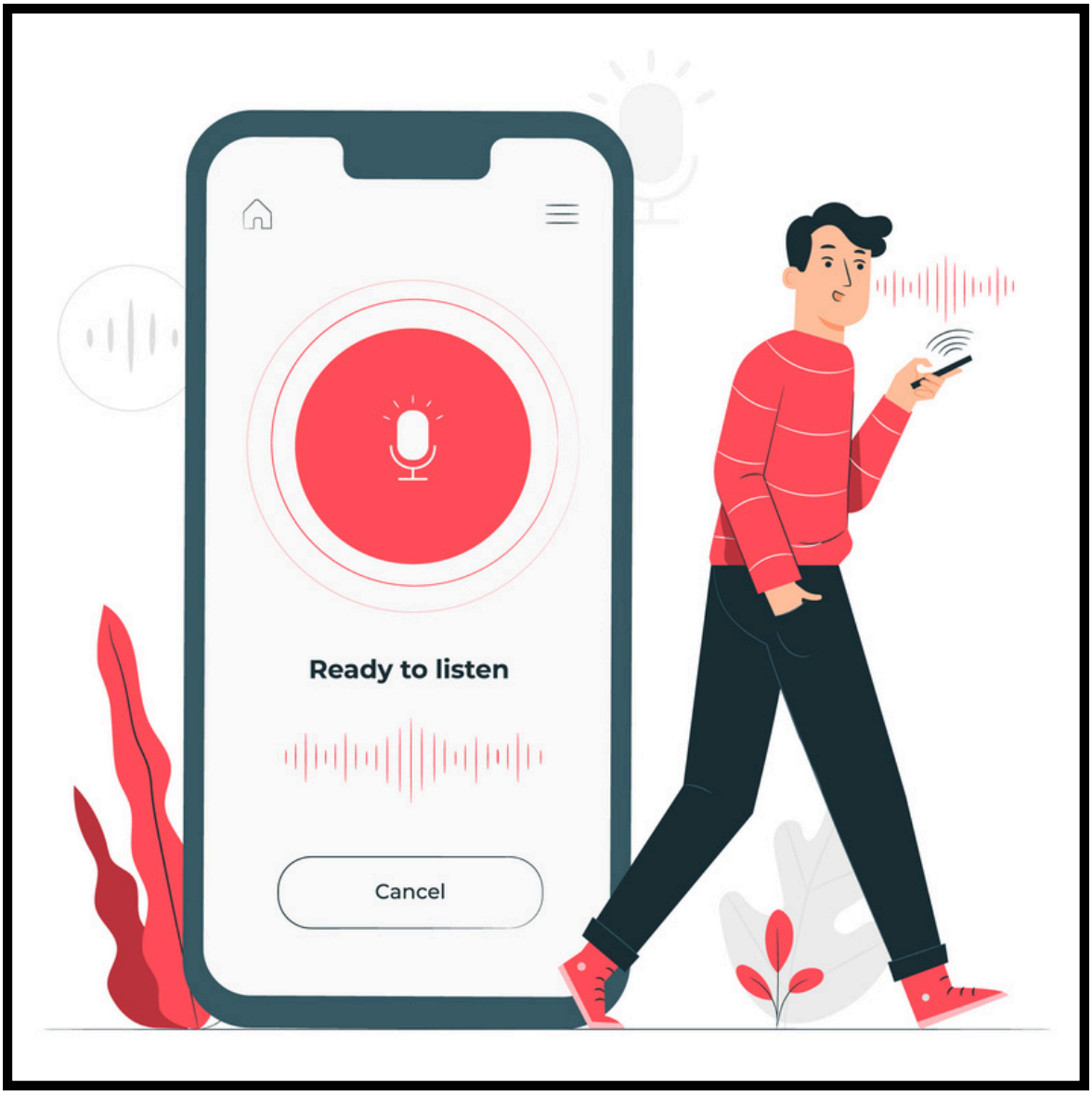
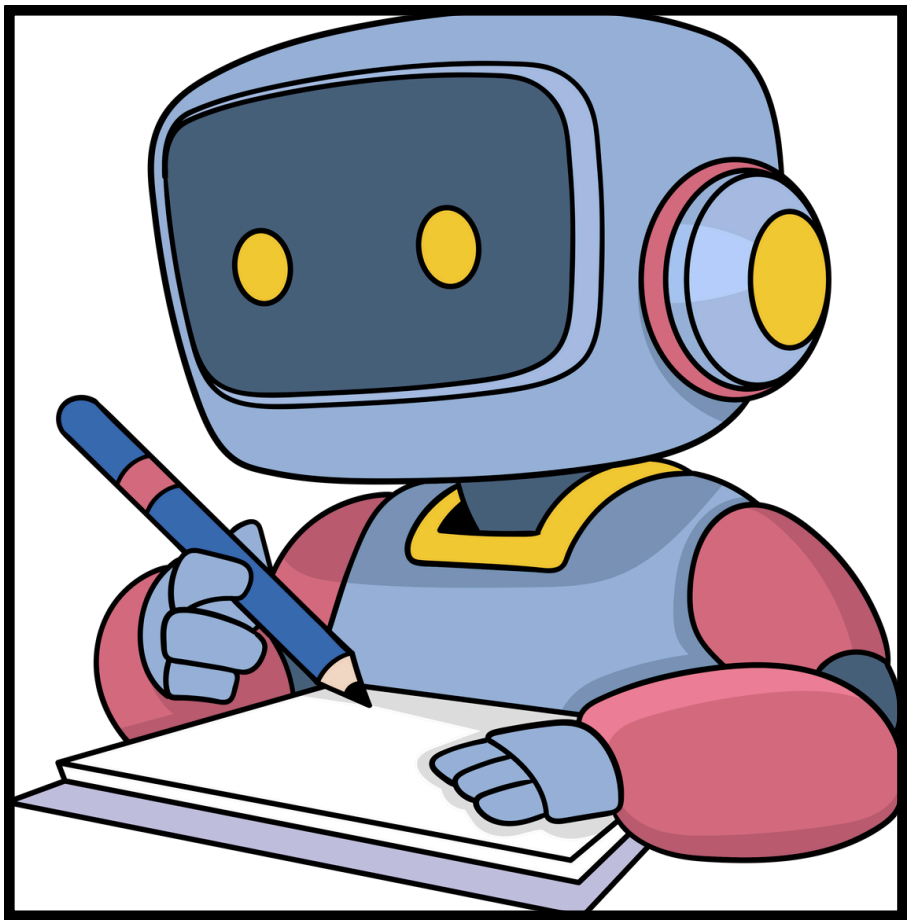


Fig 1.8 Voice assistant

1.4. How Does AI Actually Work?



Let's break down how AI works, step by step!

Step 1: Understanding AI

AI might seem like a magical tool that can answer questions, predict the future, or even recommend movies and songs you'll like. But how does it do all that? To understand how AI works, we need to dive into the core concepts.

Step 2: Training AI – Teaching It with Examples

To start, AI needs training. It's like teaching a student, who needs study materials. That's where the data comes in.

Imagine we're teaching an AI model to recognize different kinds of fruits. We'd feed it thousands of images of apples, bananas, grapes, and more. Each image would be labeled, so the AI knows what it's looking at. But images aren't the only thing AI can learn from! We can also give AI:

- **Text descriptions** – explaining the fruit's shape, color, and taste.
- **Numerical data** – such as size, weight, or sweetness level.
- **Audio data** – like the sound a fruit makes when peeled or bitten.

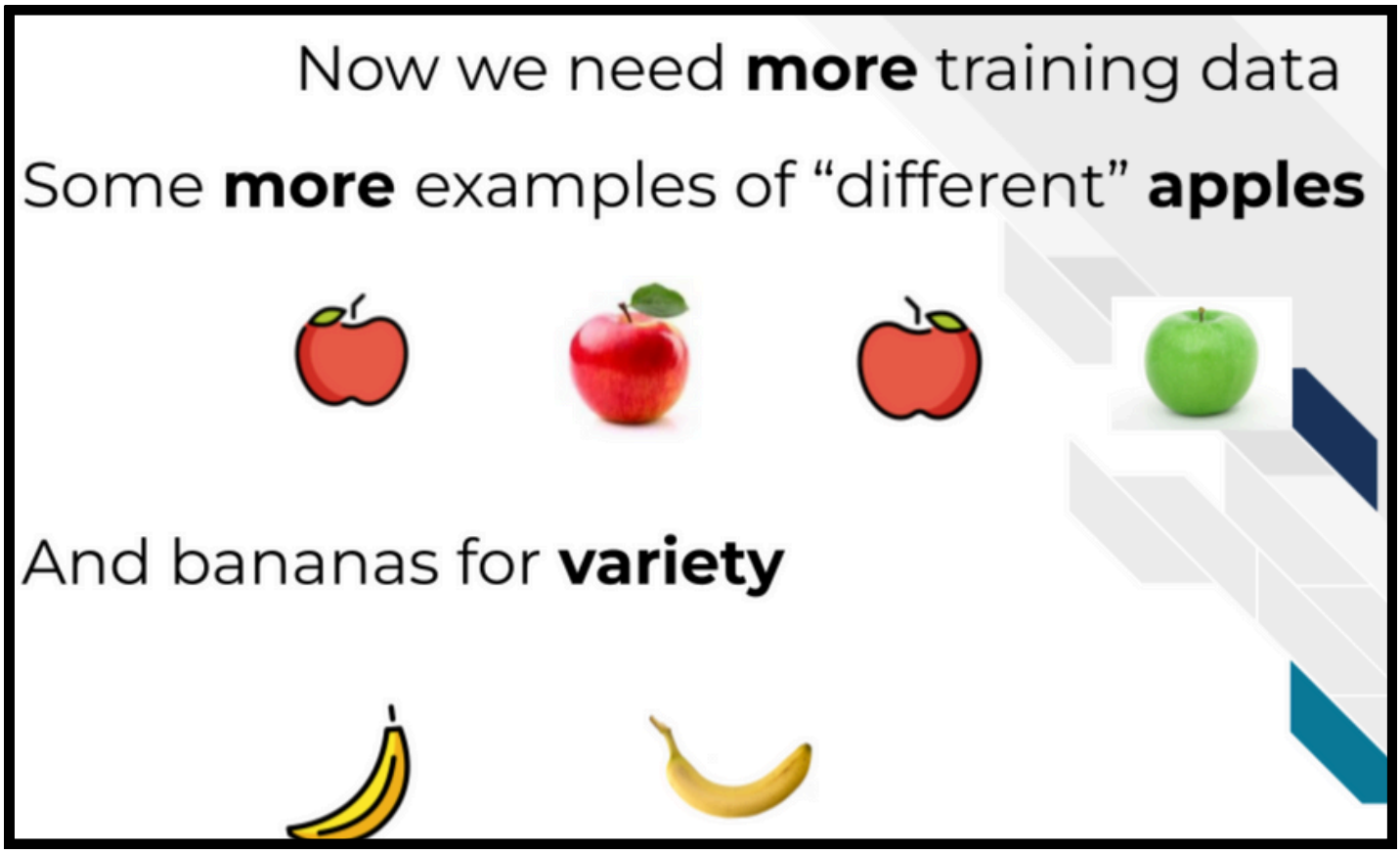


Fig 1.9 Training Data

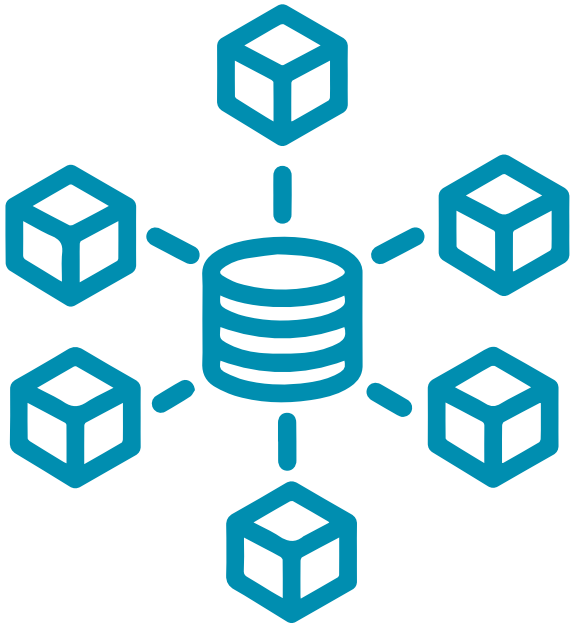


Fig 1.10

After receiving this data, what does AI do with it?

Step 3: Recognizing Patterns

Think about how you learned to tell an apple from a banana. Someone showed you different fruits and told you their names. AI learns the same way—by studying labeled examples, also called training data. It analyzes the images, text, numerical data, sounds etc. to look for unique patterns that define each fruit.

Visual Patterns:

- Apples: AI notices that apples are generally round or slightly heart-shaped and are often red, green, or yellow. It might spot the distinct shape of the stem and the dip on the top.

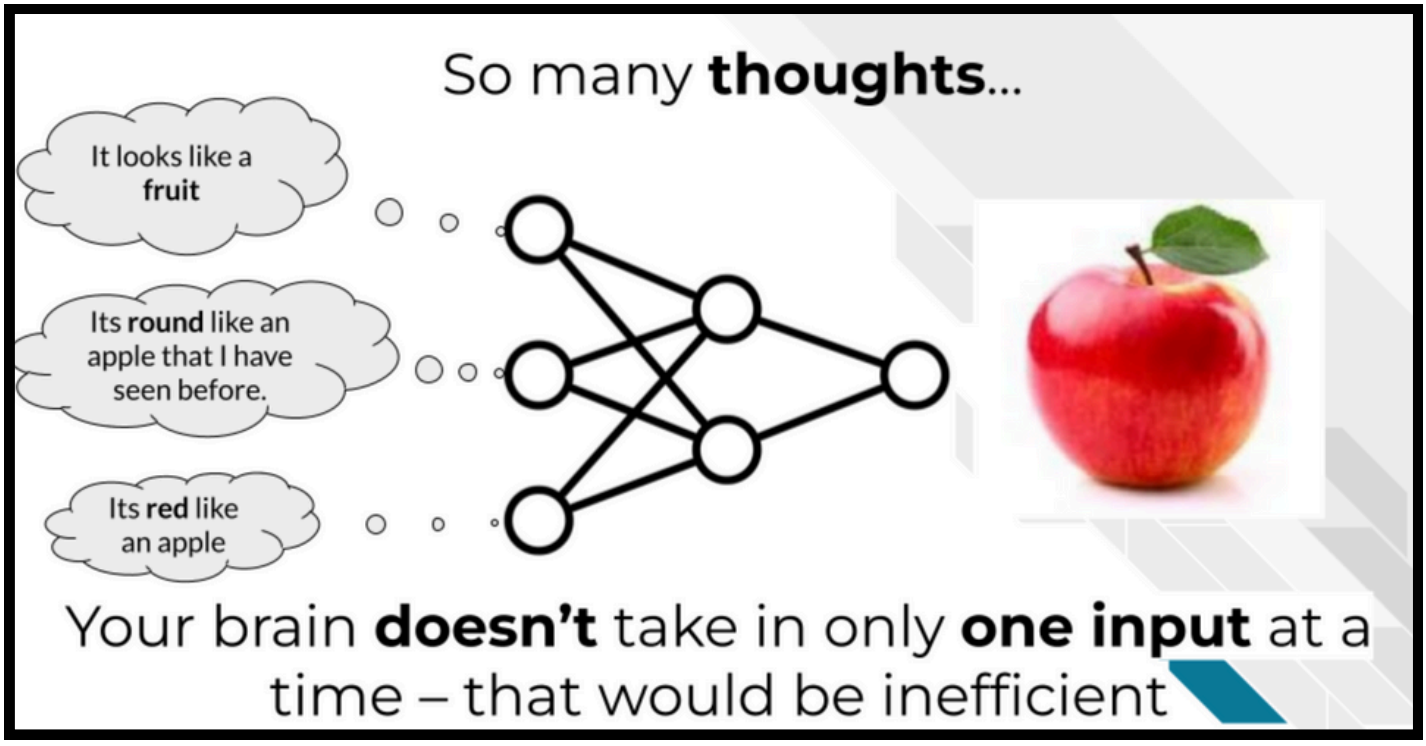


Fig 1.11 Recognizing pattern

But how do we know if the AI has learned what we have taught it?

Step 4: Testing AI – Does It Know What It's Learned?

After showing enough apples and bananas, you can test the model by giving it a new fruit and asking, "Is this an apple or a banana?" If the fruit looks like something the model has already seen, it will likely guess correctly. This is how AI knows that it has learned the patterns.

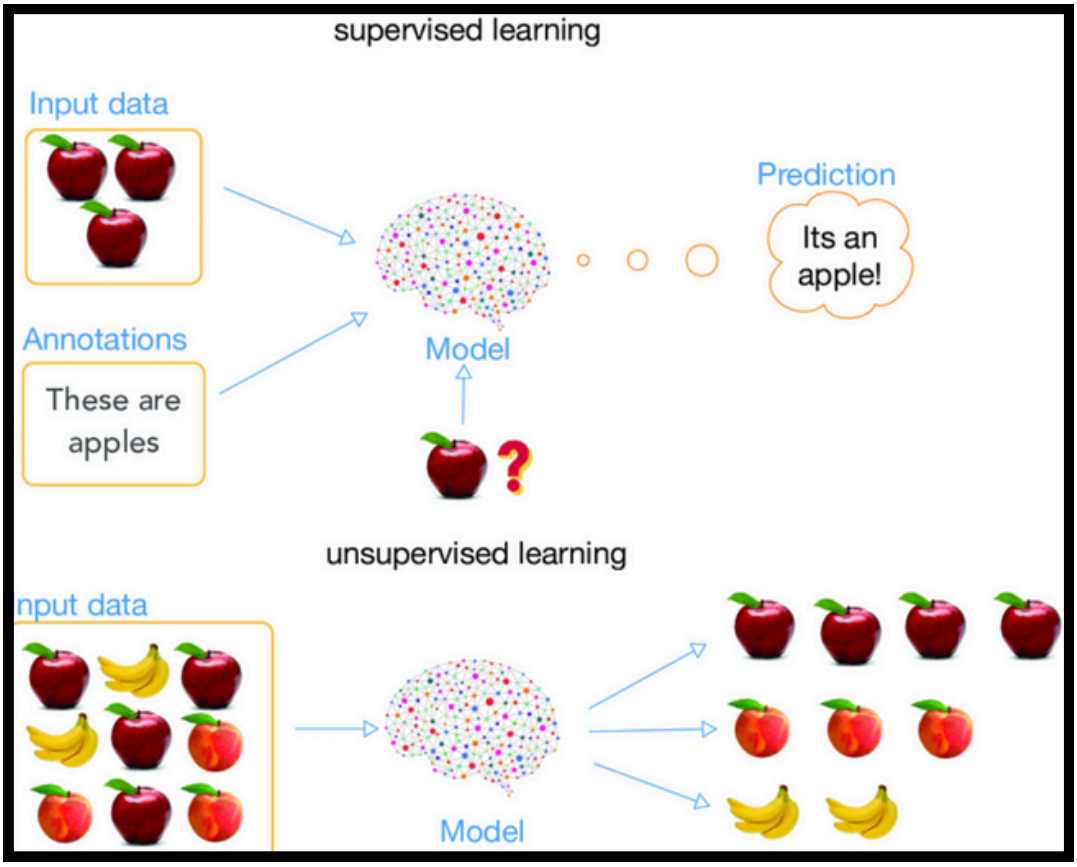


Fig 1.12 Testing the data

Step 5: What Happens If AI Sees Something New?

But what if you give it a green apple, and it’s never seen one before? The AI might get confused. That's because the model was only trained on red apples, not green ones! So, you’d need to give it more examples (more training data), including green apples, to improve its performance.

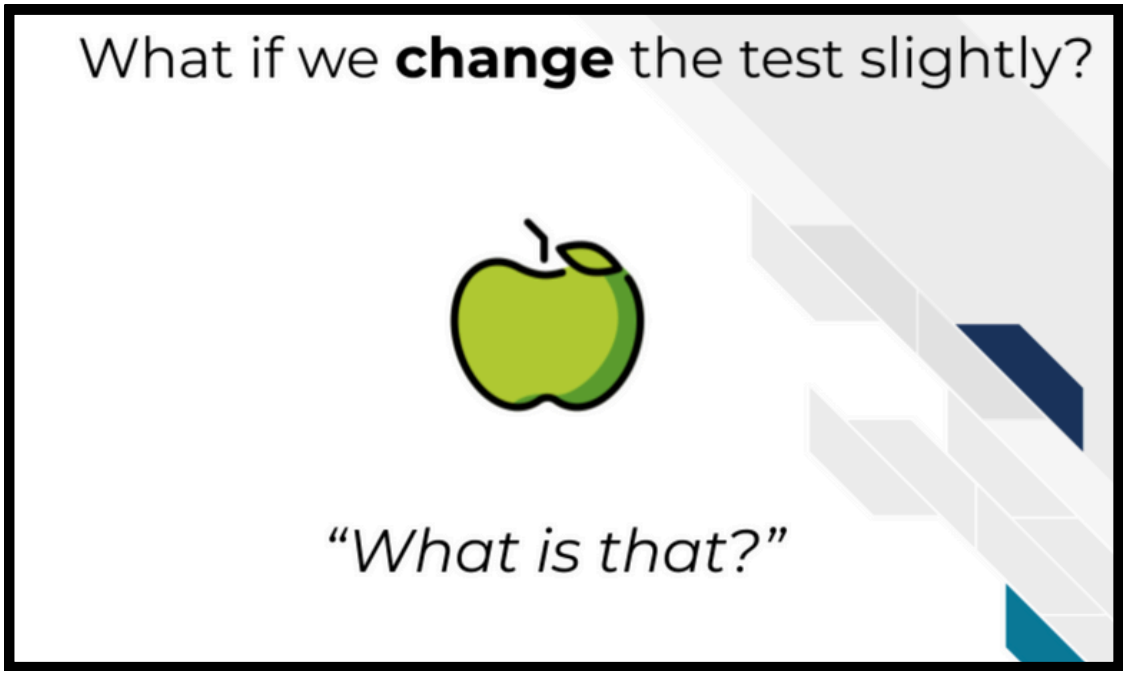


Fig 1.13 AI Learning challenge

1.5. The Importance of More Training Data

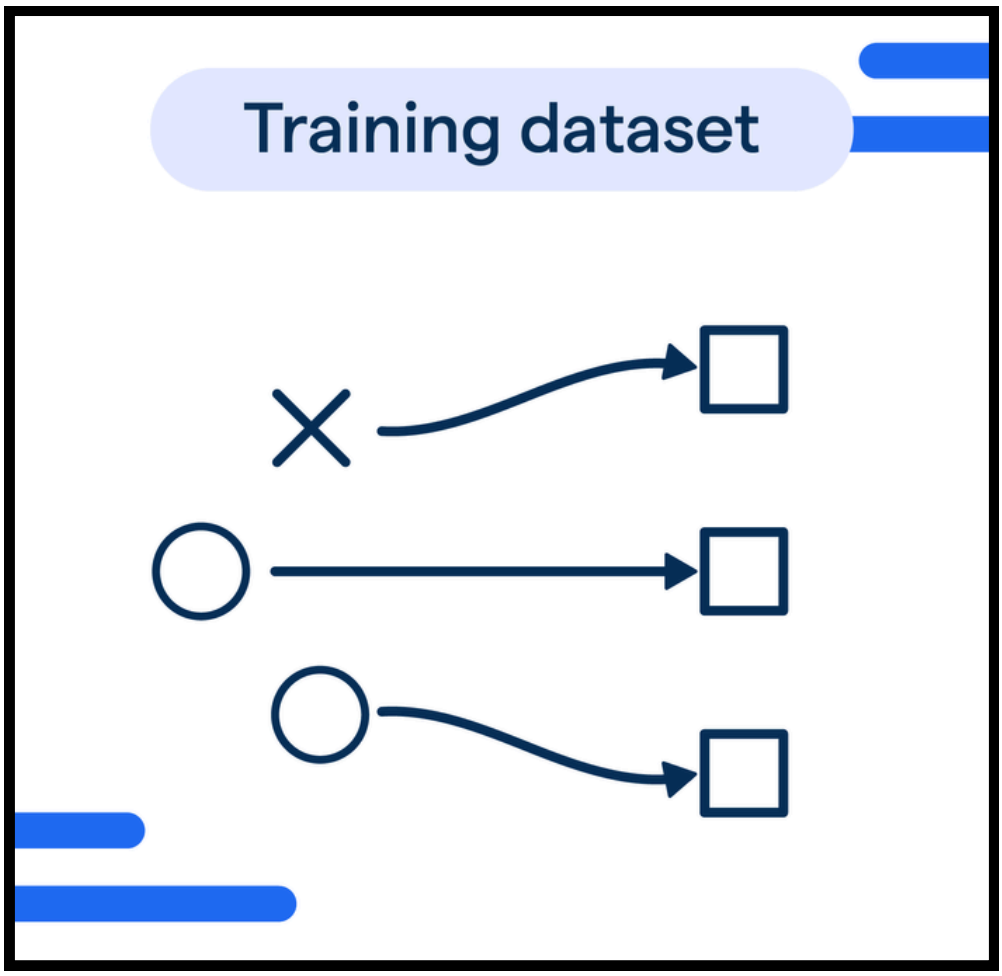


Fig 1.14 Training Dataset

However, even with more training, the model could still make mistakes. For instance, it might incorrectly label a pear as an apple because it wasn't trained on pears. This is where training data plays a crucial role in how AI performs. But how does AI learn these patterns? Well, there are a couple of different ways...

1.5.1. Two Ways to Learn: The Guided Tour vs. Exploring on Your Own

AI can learn in a couple of different ways, and we can think of them like this:

1.5.1.1. The Guided Tour

Example 1:

- Imagine you're learning about fruits with a teacher.
- The teacher shows you examples and tells you the names (e.g., “This is an apple”, “This is a banana”).
- AI can learn in a similar way. It's given data that's already labelled, like images of fruits with the label "apple", "banana", etc.
- So, AI knows what each thing is before it learns the pattern. This is like learning with guidance

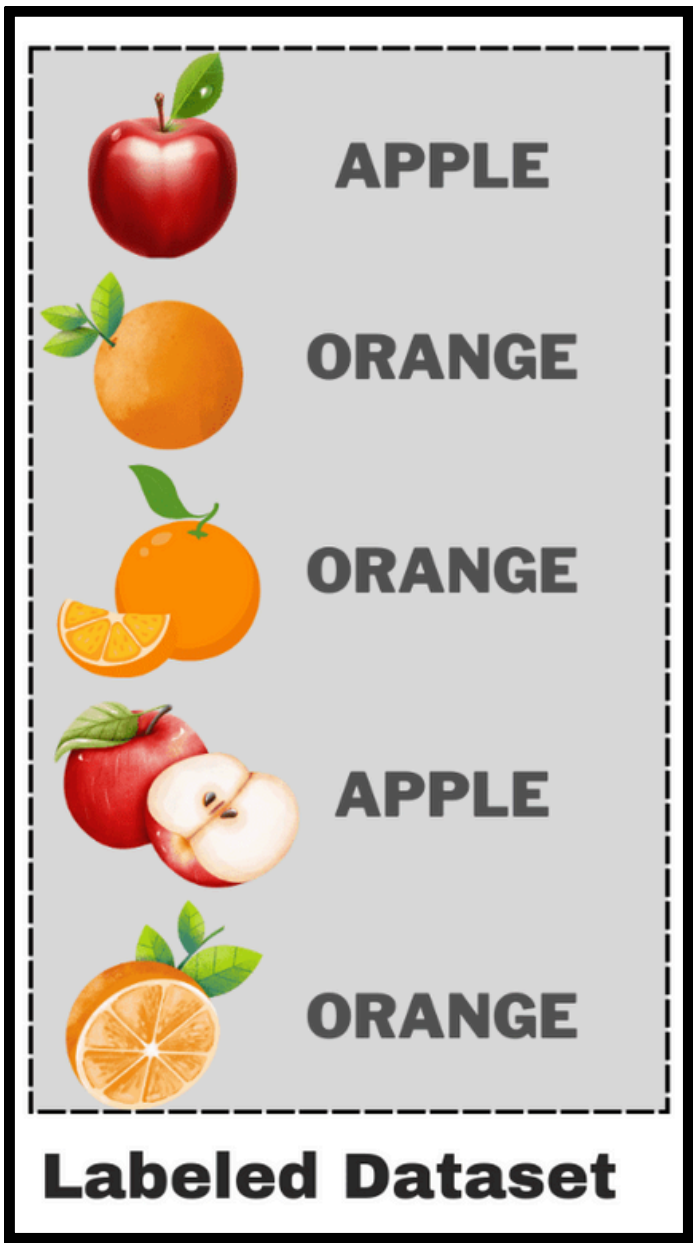


Fig 1.15 Labelled dataset

Example 2: Let's explore another example:

- Think about how you learn to tell the difference between cats and dogs.
- A teacher, or your parents, or maybe even a cartoon character might show you a picture of a fluffy animal and say “This is a cat.”

- They might then show you another picture of an animal with floppy ears and say, “This is a dog.”
- In this case, you were given labelled examples to understand the different characteristics of cats and dogs.
- Similarly, AI can also learn by being given labeled examples. For example, we could give AI labeled pictures of cats and dogs.

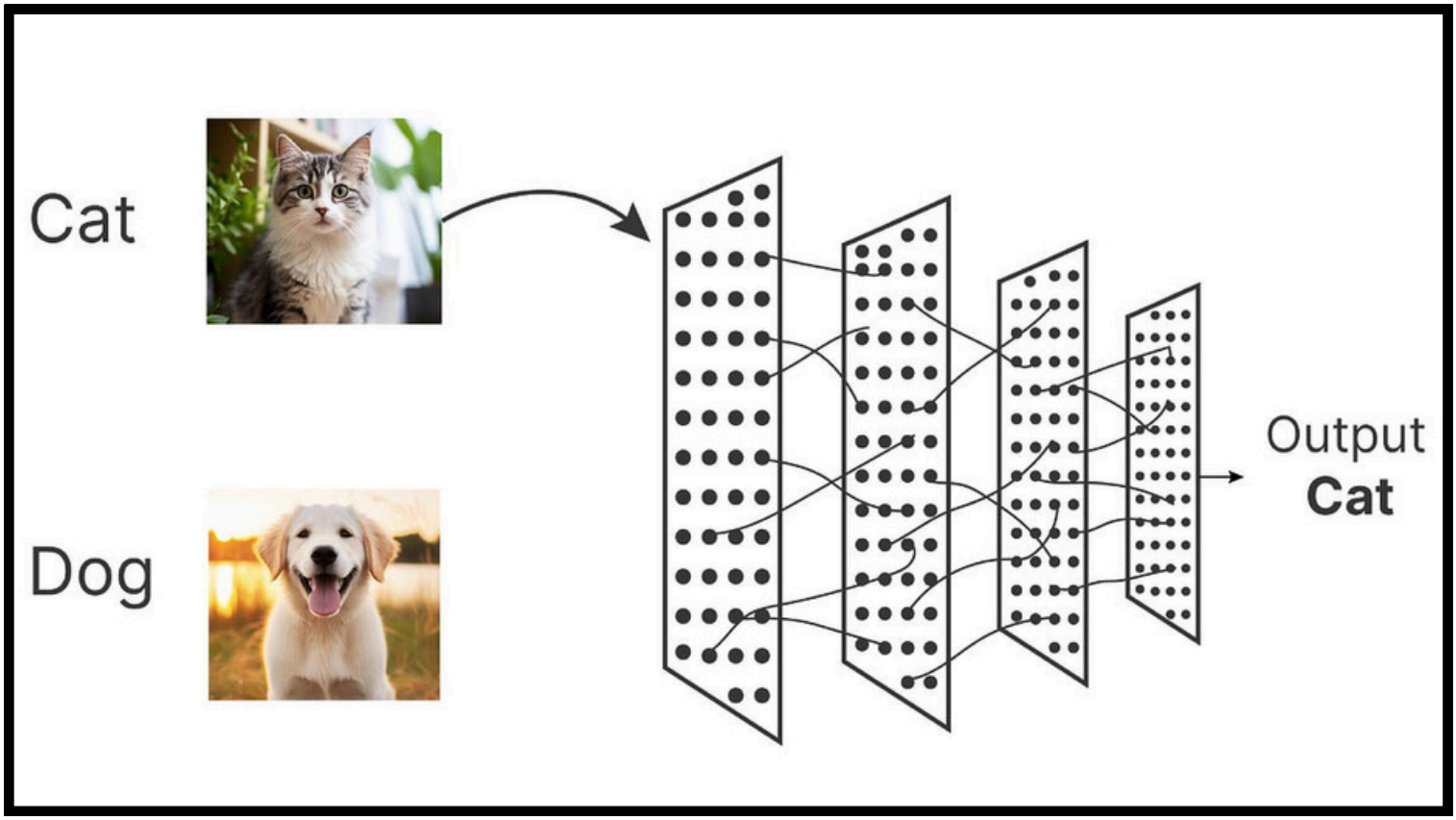


Fig 1.16 Training cat and dog

1.5.1.2. The Explorers

Example 1:

- Imagine you're given a huge pile of various fruits and asked to sort them, but no one is telling you what to look for.
- You just start grouping fruits together based on what looks similar, like color, shape, or size.
- AI can also learn by exploring data and finding patterns on its own, without labels.

It finds the unique groups by itself. This is like AI learning by exploring.

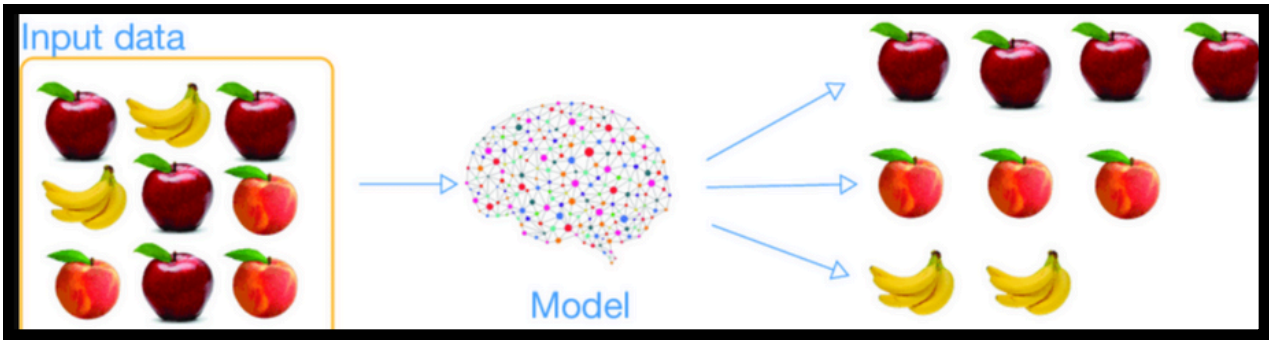


Fig 1.17 Unlabelled data

Example 2:

- Let's take another look at the cat and dog example Imagine you are given a huge pile of pictures of cats and dogs, and no one tells you which ones are cats and which ones are dogs.
- You just look at the pictures and start to group together the ones that look alike.
- You may notice that some have pointy ears, some have floppy ears, some have short fur, and some have long fur.
- You will eventually create different groups based on the common characteristics that you can spot by yourself.
- In the same way, if AI is given pictures of cats and dogs, without labels, AI can explore the images by itself and learn that different groups can be formed based on the common characteristics that can be spotted from these pictures.
- So AI is able to group similar kinds of data by exploring on its own without any help from anyone.

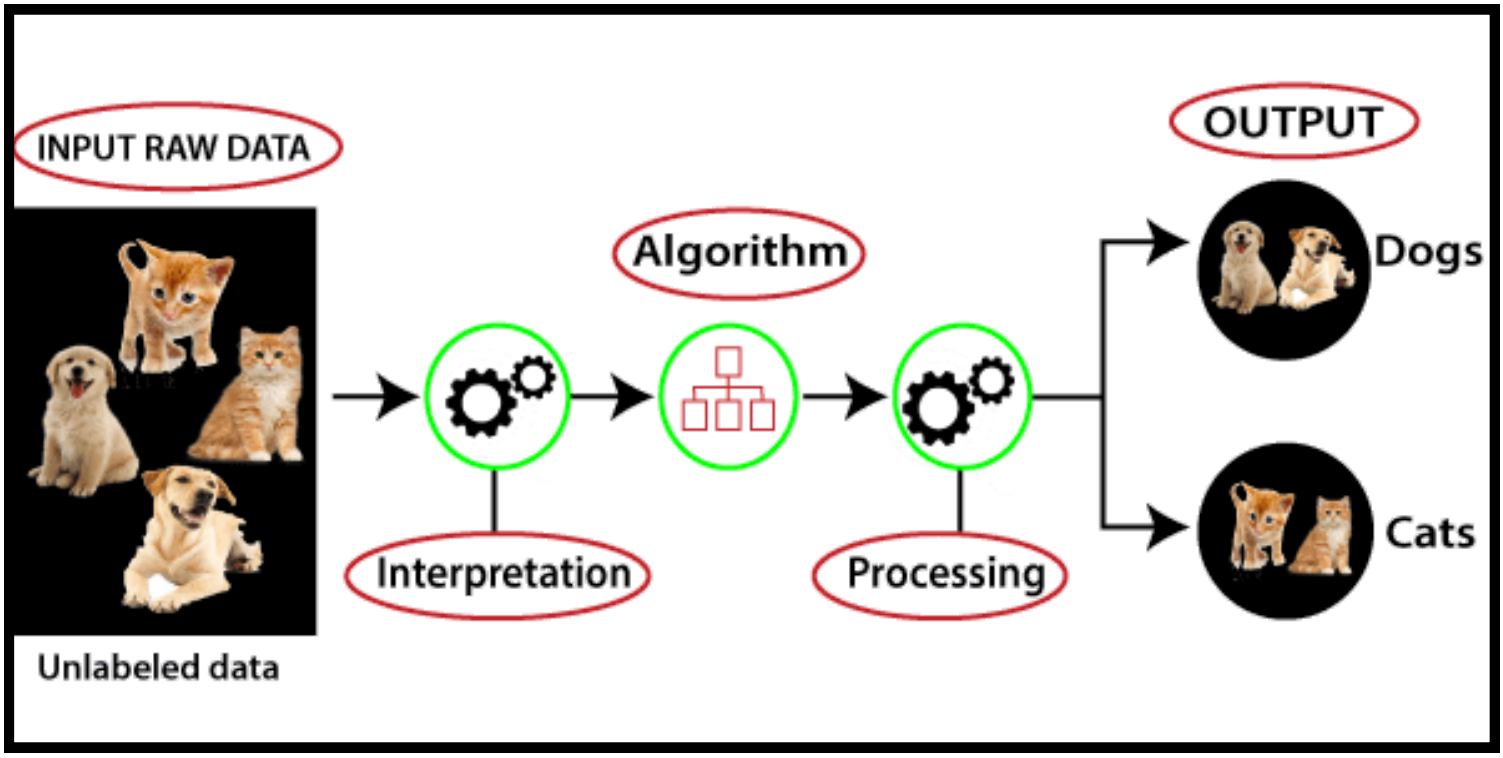


Fig 1.18Unlabelled data of cat and dog

1.6. Fun Activity: Find the Next Pattern!

Now it's your turn to play the detective!

Here’s your pattern of arrows! Can you figure out what comes next?

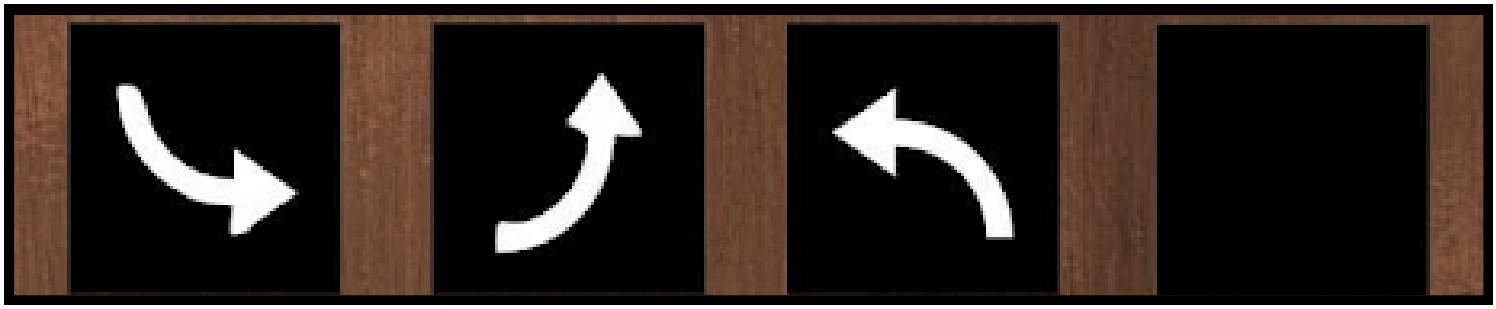


Fig 1.19

What do you think comes next in the sequence?

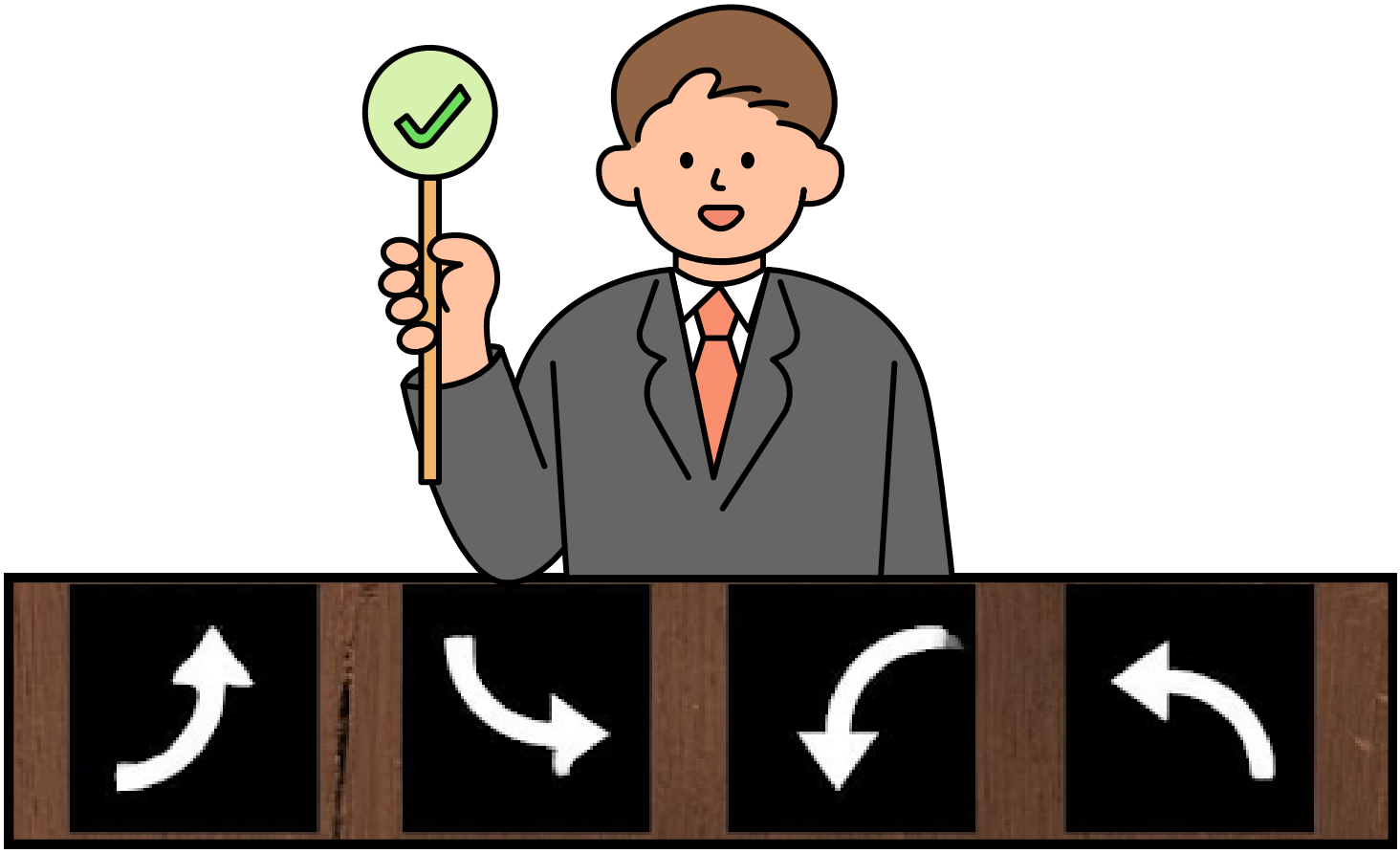


Fig 1.20

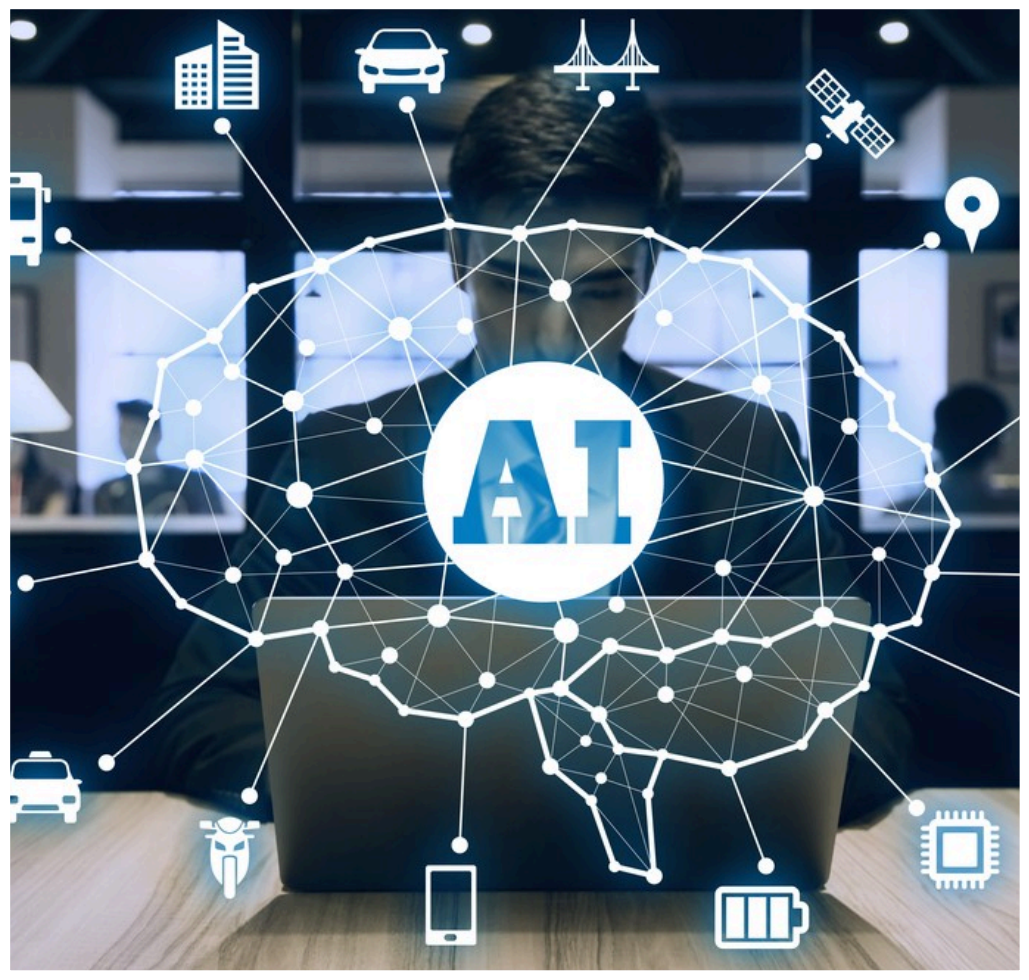
The correct answer is C.

Just like how you figured out the pattern with the arrows, AI learns by looking at many examples and recognizing patterns over time. The more examples it sees, the better it gets at predicting what comes next, just like you!

1.7. Key Takeaways

- AI is like a brain for computers. It helps them think and learn.
- AI learns by looking at lots of information (data).
- AI looks for patterns in data to understand things better.
- AI makes our smartphones, games, and other devices much smarter and more helpful!

MODULE 2



HOW AI IS EVERYWHERE

Module 2 Content

2.1 Morning Magic: AI Starts Your Day!

2.2 Getting to School: AI Guides the Way!

2.3 Ride-Sharing Apps (like Uber):

2.4 AI Keeps Your Day Moving!

2.5 AI in the Classroom

2.6 AI at Night: Wrapping Up Your Day

2.7 Your Challenge

2.8 The Future of AI: What's Next?

2.9 Icebreaker Activity: AI Tool Brainstorm

2.10 Quiz

02

Now that you've got a glimpse of how AI works, let's take things to the next level. Have you ever wondered how AI is secretly helping you every single day? It’s like having an invisible tech buddy who’s always working behind the scenes. From the moment you wake up to the time you go to bed, AI is there—making life easier, smarter, and more fun!

2.1. Morning Magic: AI Starts Your Day!

Beep! Beep! Your alarm rings. But wait—how does your phone know the best time to wake you up?

Figure 2.1 shows the AI-powered Sleep Tracking Alarm, designed to monitor sleep patterns and wake users at the optimal time

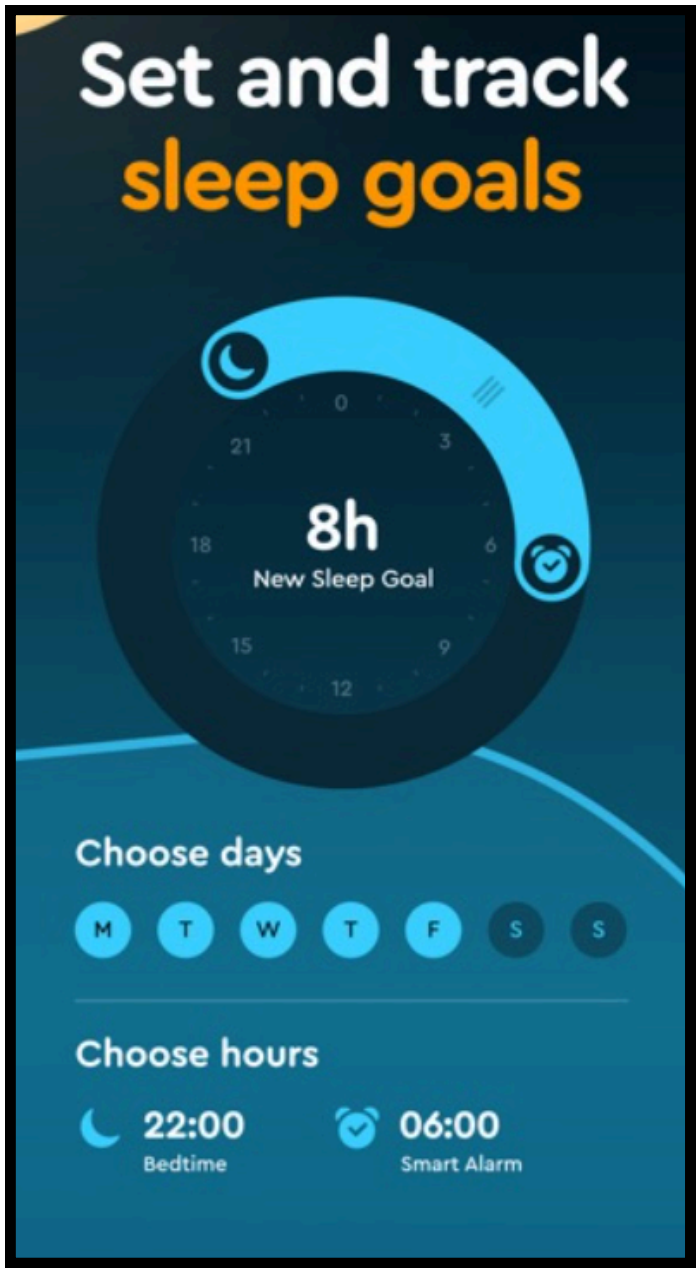
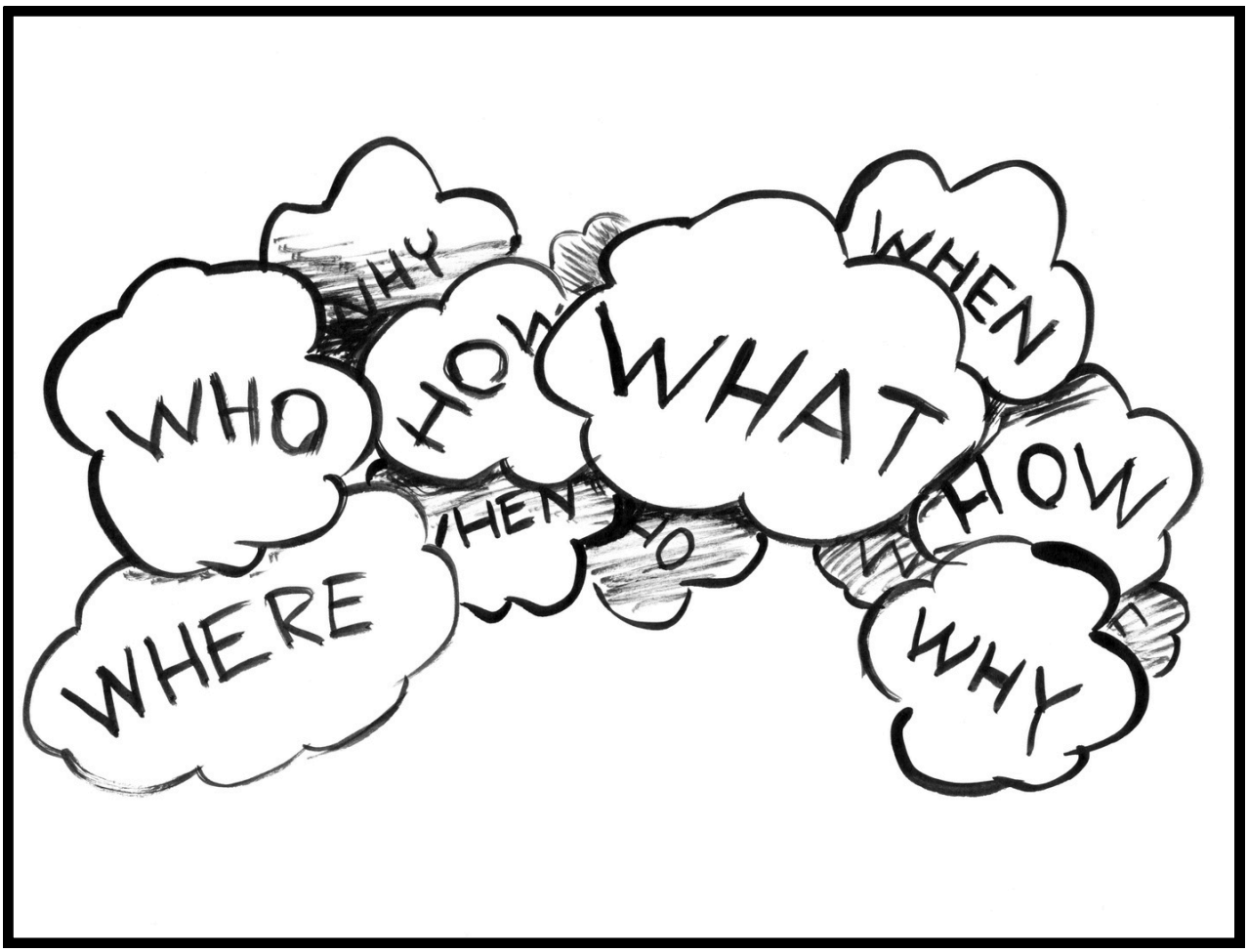


Fig 2.1 Sleep Tracking AI Alarm



How It Works:

- Sleep Tracking – Your phone or smartwatch monitors your movements and sleep cycles.
- AI Analysis – It studies your sleep patterns to figure out when you're in a lighter sleep stage
- Wakes You Up Right – It rings when you’re sleeping lightly, so you feel fresh and ready for the day

Once you're up, you ask, "Hey Google, what's the weather like today?"

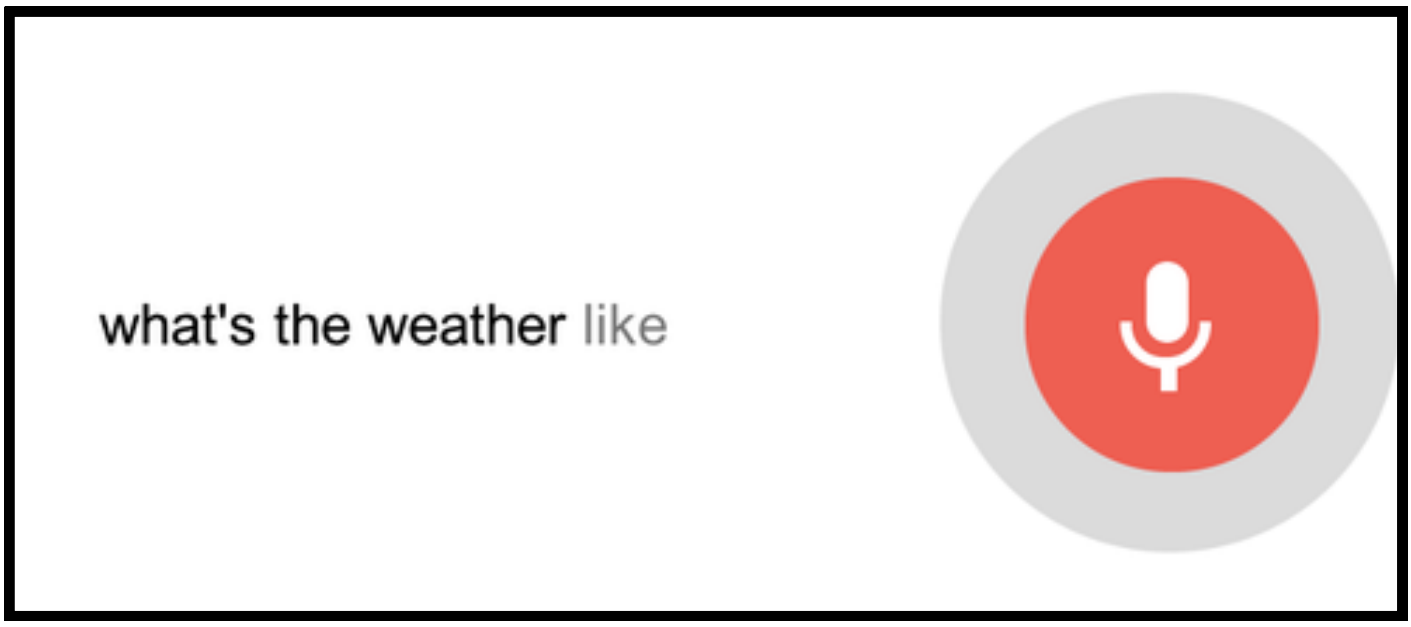


Fig 2.2 Google Voice Typing

How It Works:

- AI listens to your voice and understands your question.
- It searches for the latest weather update.
- In seconds, it tells you if you need an umbrella or sunglasses!

Figure 2.2 illustrates the Weather Forecasting system, which predicts weather conditions using advanced data analysis and modeling techniques

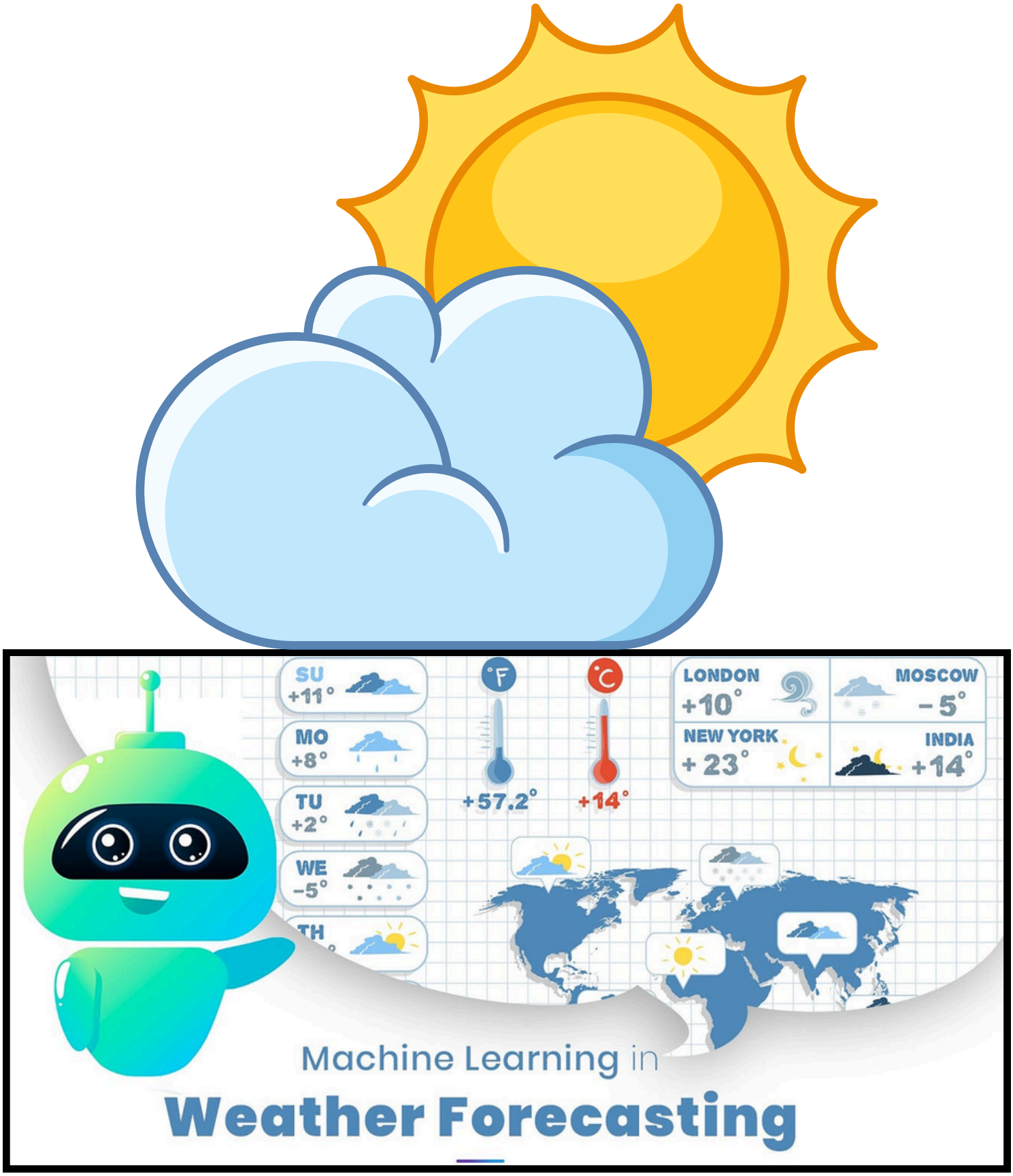


Fig 2.3 Weather Forecasting

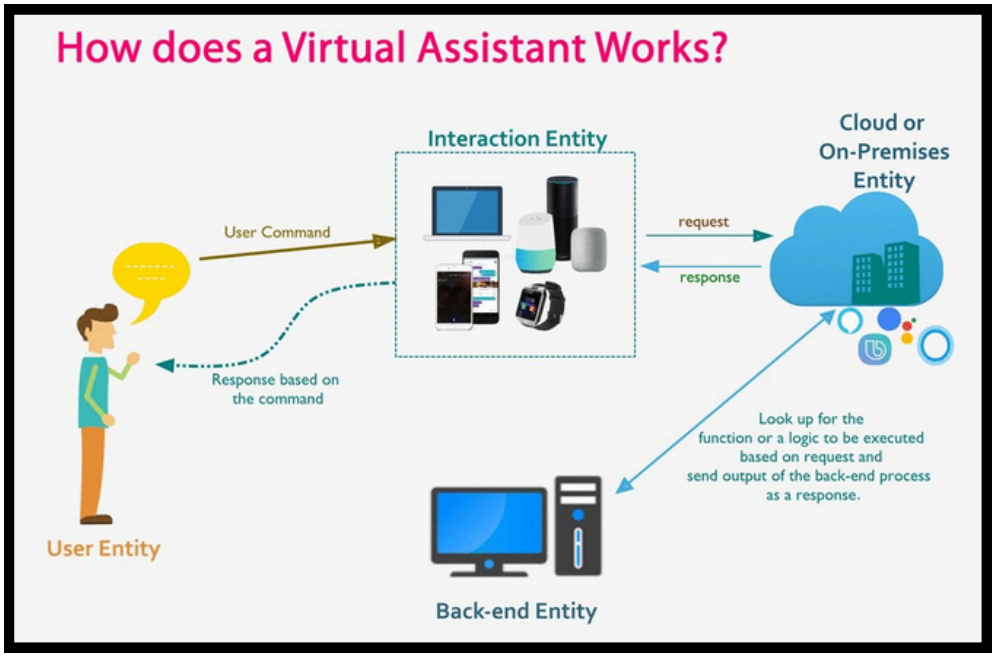


Fig 2.4 The Voice Assistant Process

How It Works:

- **You Talk:** You ask your voice assistant something, like "What's the weather?"
- **It Listens:** The voice assistant listens to your words and turns them into text, kind of like typing what you say.
- **It Understands:** Then, it tries to figure out what you meant by looking at the words you said.
- **It Thinks:** Once it knows what you want, it looks for the answer—like checking the weather.
- **It Talks Back:** Finally, the assistant changes the answer into voice and tells you what it found.

2.2. Getting to School: AI Guides the Way!

Rushing to school? If you use Google Maps, AI helps you find the fastest route, avoiding traffic. It even suggests shortcuts you didn't know about!

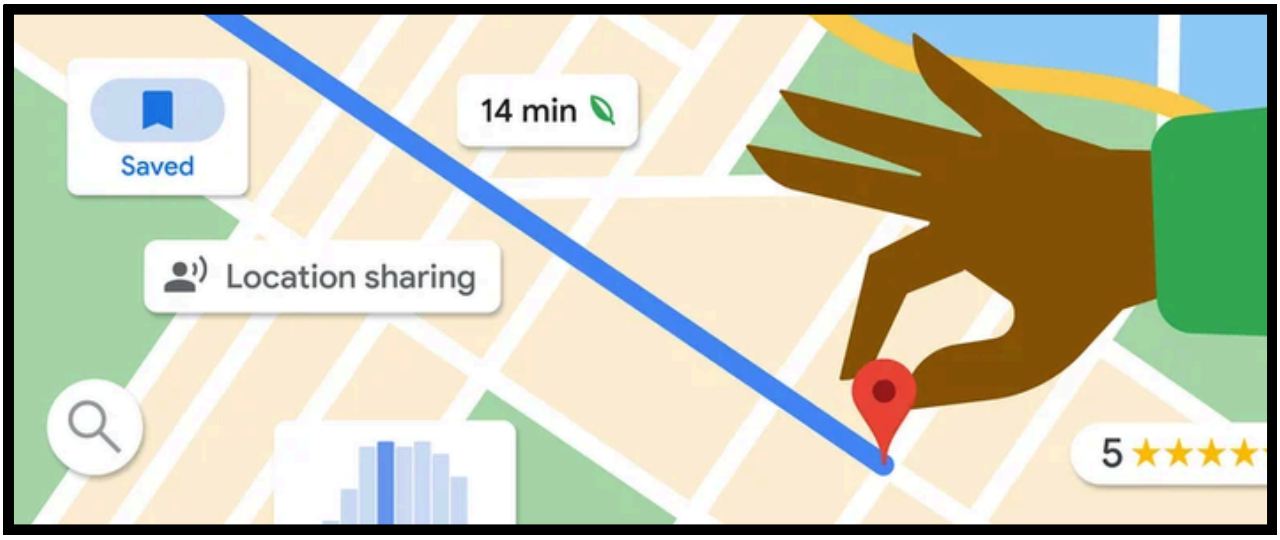


Figure 2.5 AI Navigation

How it works?

Google Maps:

- AI looks at real-time traffic data.
- It analyzes road conditions and calculates the fastest route.
- AI suggests shortcuts based on current traffic and previous trips.

2.3. Ride-Sharing Apps (like Uber):

Figure 2.6 Uber App

- AI tracks the location of your car in real time.
- It calculates the fastest route to get to you.
- AI predicts exactly when your car will arrive by considering traffic, road conditions, and distance.

2.4. AI Keeps Your Day Moving!

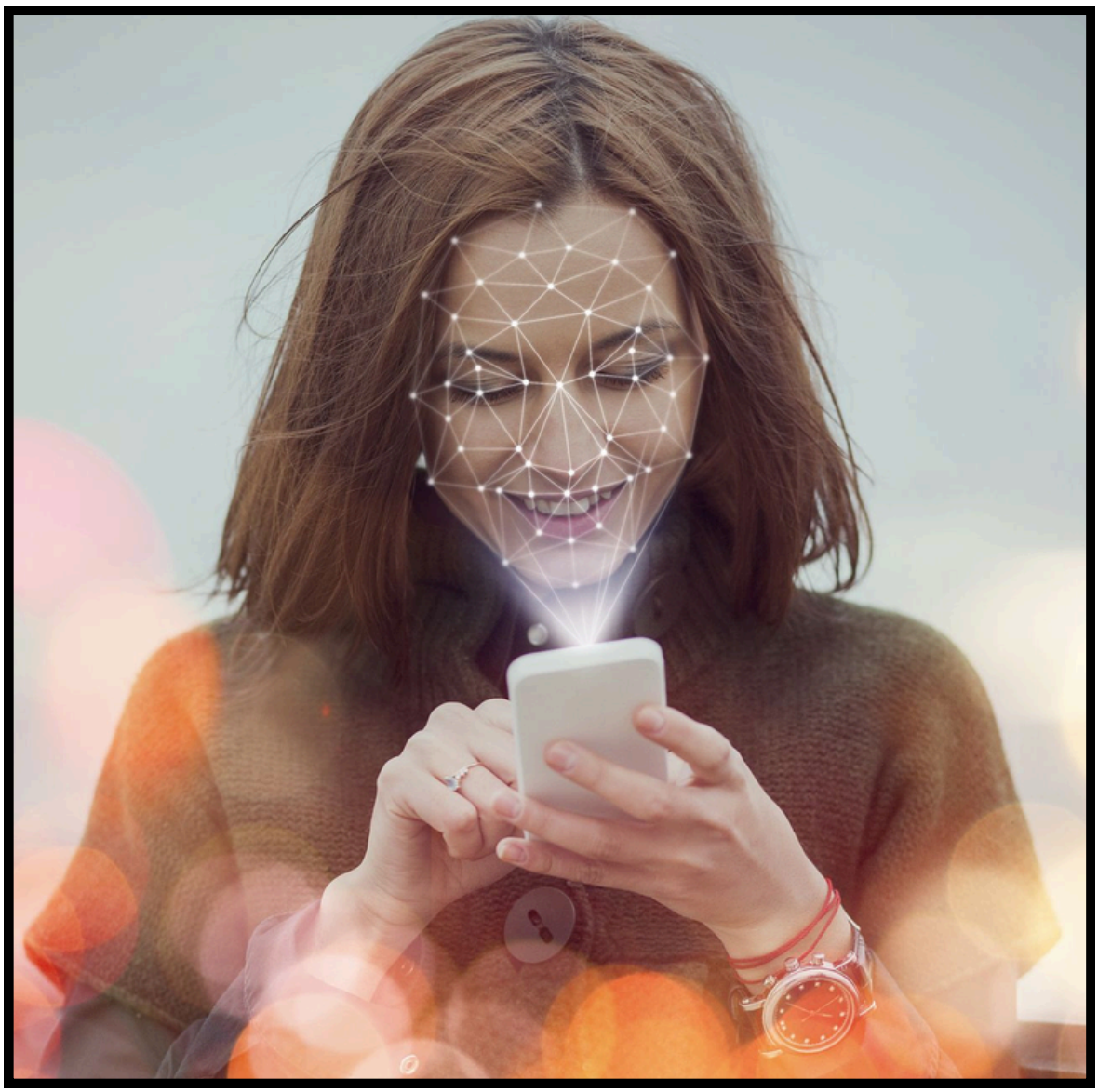


Figure 2.7 Phone Face Recognition.

You finally reach school, but AI isn't done helping you yet. As you walk in, you unlock your phone with Face Recognition.

2.5. AI in the Classroom

During lessons, AI-powered tools like Google Lens help you understand tough topics. Just snap a picture of a math problem, and AI breaks it down step by step.

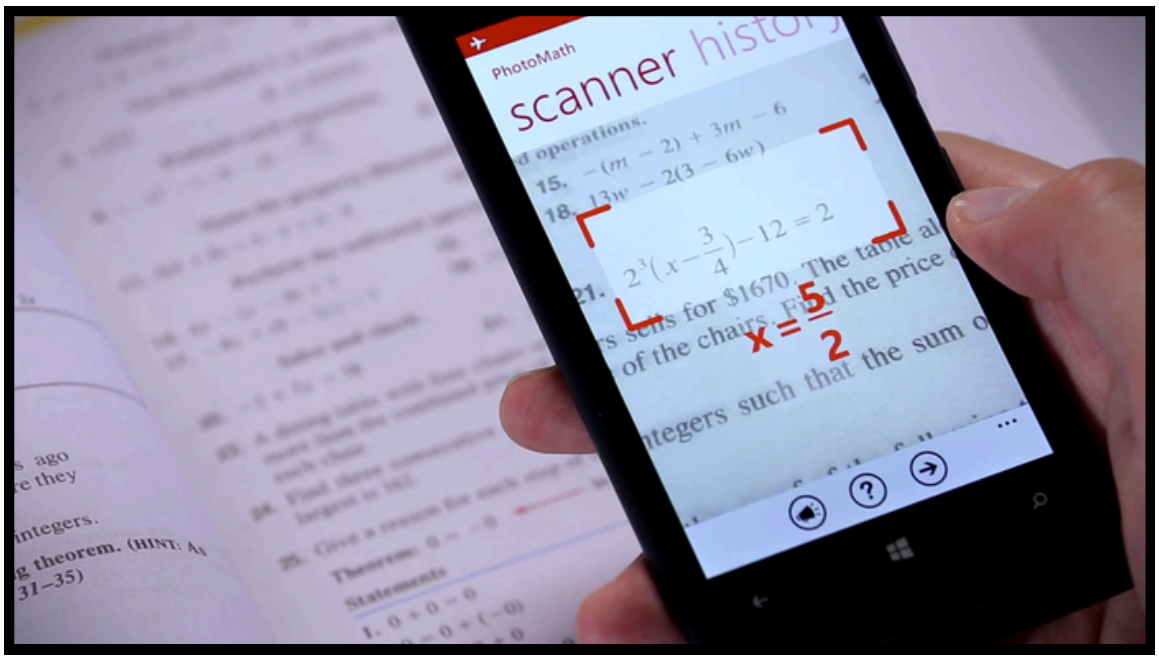


Fig 2.8 Google Lens: Simplifying Math Problems with AI

How it works?

- AI scans the image and recognizes text or equations.
- It analyzes the problem and finds the best solution.
- It gives you a step-by-step explanation so you can learn easily.

2.6. AI at Night: Wrapping Up Your Day

Fig 2.9 Smart Assistant

Before bed, you tell your smart assistant, “Turn off the lights,” and it obeys instantly. AI-powered smart homes adjust room temperature, dim the lights, and even play relaxing music to help you sleep better.

2.7. Your Challenge:

Here's your fun mission in points:

1. Look Around: Check your home and school for ways AI is helping you.
2. Find Three Ways: Can you spot three AI-powered things that help you every day?
3. Examples to Look For:
    - A voice assistant giving you weather updates.
    - An app recommending music or videos.
    - A learning app that helps you with schoolwork.
4. Share Your Discoveries: Tell everyone what you found! You'll be amazed at how AI is secretly working for you

2.8. The Future of AI: What's Next?

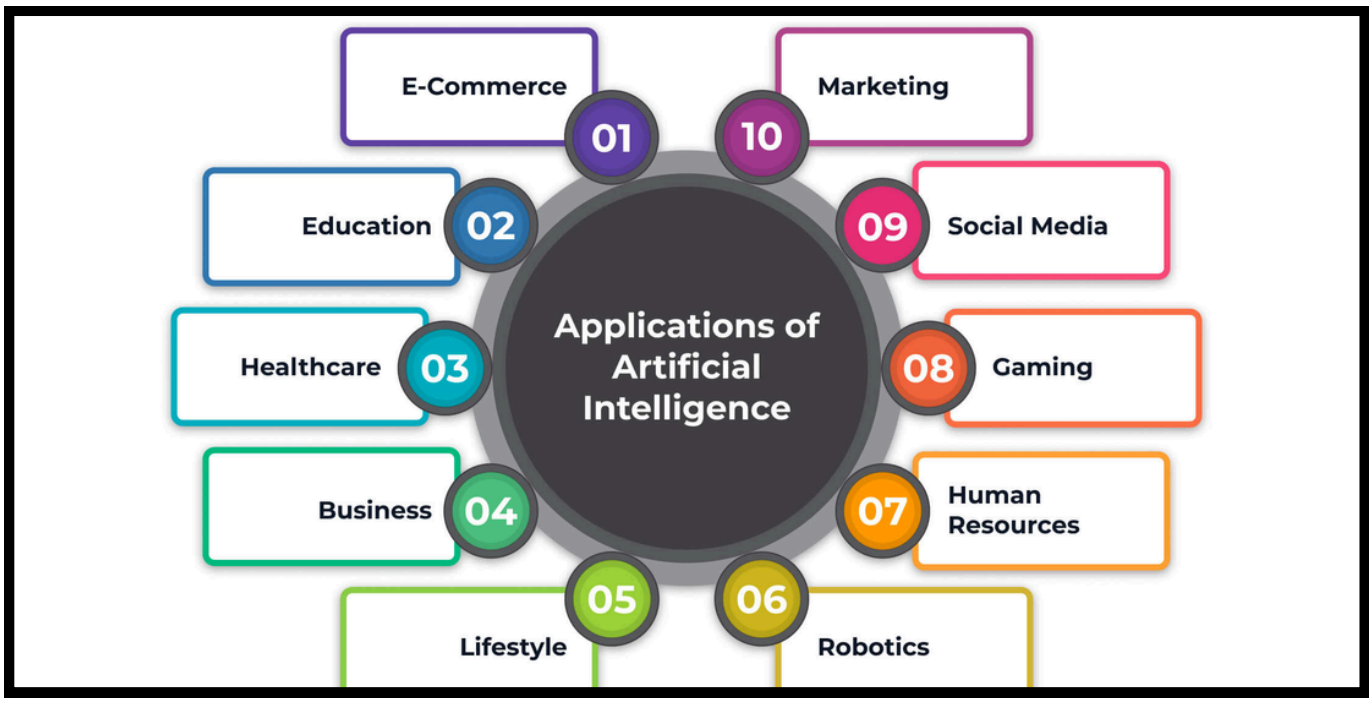


Fig 2.10

From self-driving cars to AI-powered chefs, the future of AI is full of amazing possibilities! Maybe one day, we'll have AI teachers in every school or robots that can do your homework for you

AI is everywhere, making life easier and more exciting. It's your invisible tech buddy, always learning, helping, and evolving. So, what do you think AI will do next?

We’ve reached the end of this module! But before we finish, let’s have some fun and get our creative gears turning with a quick activity. Ready? Let’s go!

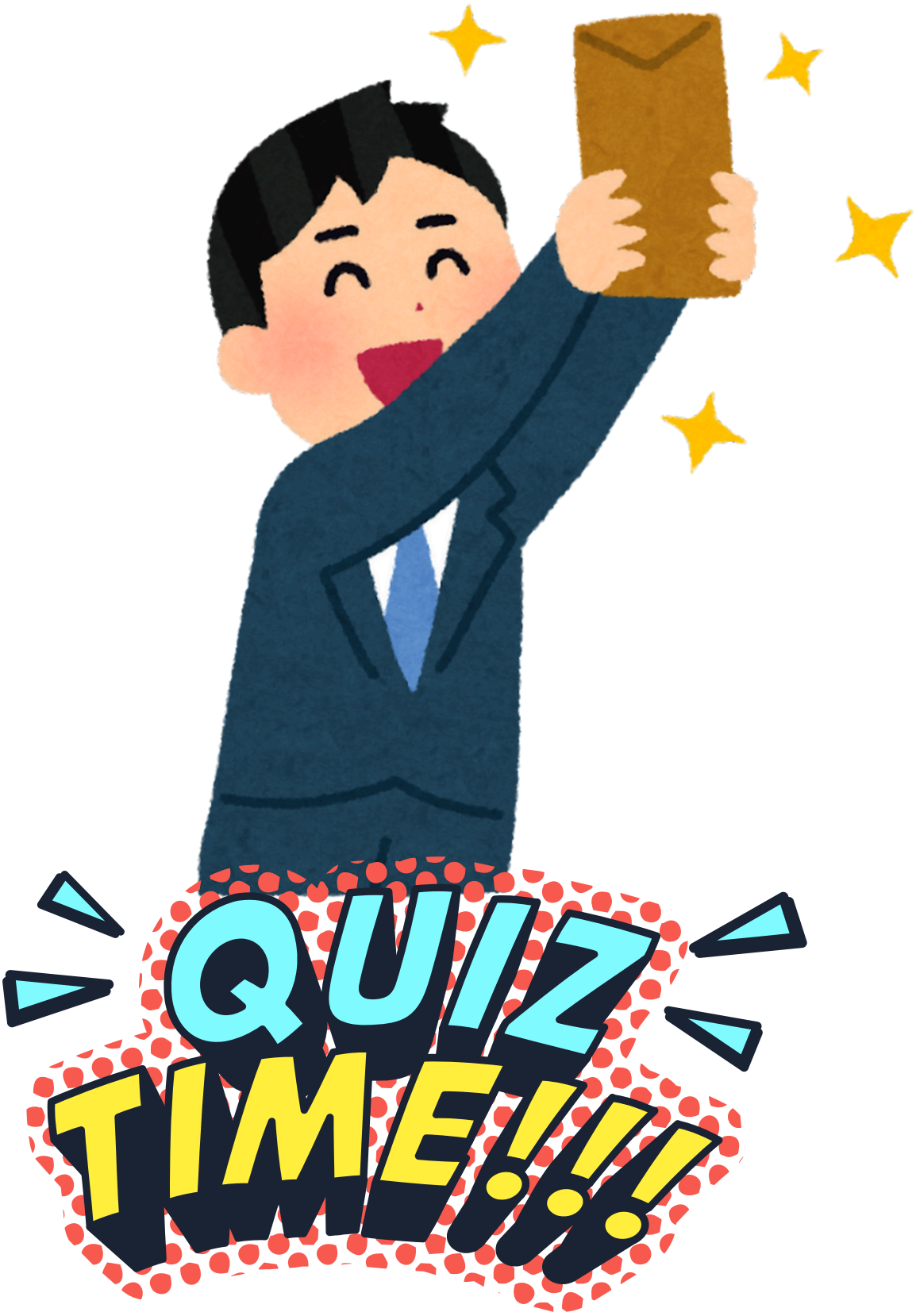
2.9. Icebreaker Activity: AI Tool Brainstorm

Objective:

Let’s get our brains buzzing with ideas about AI! This quick activity will help you think about your favorite AI tools and imagine your very own AI creation.

How It Works:

1. **Grab a Piece of Paper!**
   - Take out piece of paper, a pen. Ready? Let's go!
2. **List Your Favorite AI Tools:**
   - Write down any AI tools that come to your mind. These could be things like: Google Assistant, Siri, ChatGPT Spotify's Music Suggestions, Face Recognition on Your Phone, (Think about apps or tools you use often!)
3. **Pick Your Favorite!**
   - Out of the tools you listed, pick the one you love the most! Write down why you like it. What makes it fun, helpful, or cool?
4. **Create Your Own AI**
   - Imagine you could create your very own AI tool. What would it do? Would it help you with school? Make your favorite snacks? Tell you jokes? Write it down and give it a fun name!
5. **Share Your Ideas**
   - If you feel like it, share your AI list and your idea with the group! What's your favorite tool, and what new AI would you love to create?



Let’s Get Ready

1

NETFLIX

How does Netflix recommend movies you might like?

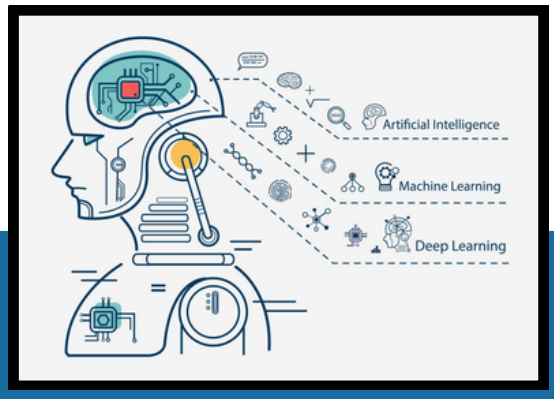
A) It randomly suggests popular movies

B) Uses AI to analyze watch history & preferences

C) It asks you directly through a survey

D) It assigns a person to monitor your choices

2



How does AI learn in an Unsupervised Way?

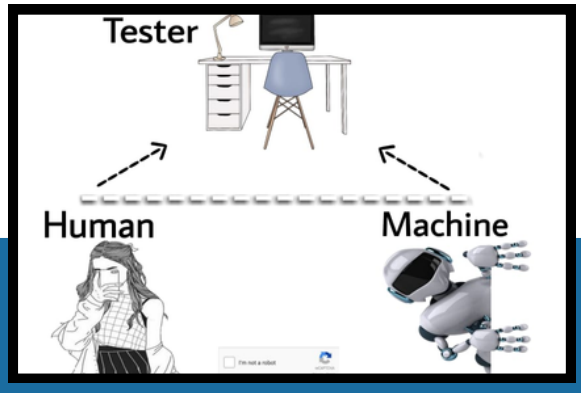
A) Analyzing data without labels & similar patterns

B) By following strict programming ruleS

C) By being told exactly what each piece of data is

D) By copying human actions

3



What is the primary purpose of the Turing Test?

A) To measure a computer's speed

B) To determine if machine can think like a human

C) To test AI's ability to recognize images

D) To check how fast AI can process data

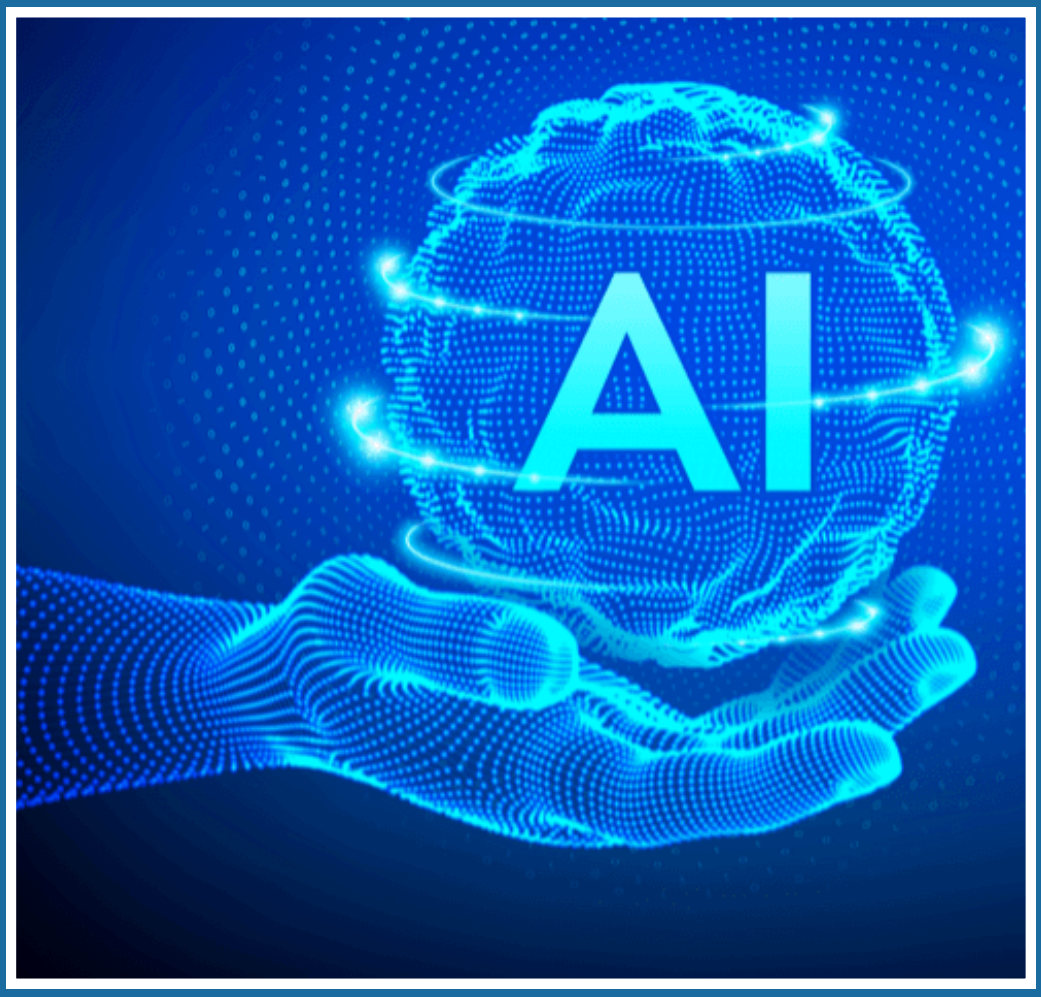
Right Answers

1 B) Uses AI to analyze watch history & preferences

2 A) Analyzing data without labels & similar patterns

3 B) To determine if machine can think like a human

MODULE 3



DIVING DEEPER – THE MANY FLAVORS OF AI!

Module 3 Content

3.1 Machine Learning

3.2 How Do Machines Learn?

3.3 Fun Fact

3.4 How Does Machine Learning Work?

3.5 How Does AI Learn?

3.6 Fun Challenge:

3.7 Hands-On AI: Try Teachable Machine!

3.8 How Machine Learning Works Around You

3.9 Fun Challenge:

3.10 Exploring Generative AI

3.11 AI Surprise Challenge!

3.12 What is a Prompt?

3.13 What's Next?

03

Hey there, AI Explorers! So far, we've discovered what AI is and how it's shaping the world around us. **But did you know AI isn't just one thing? It comes in different types, just like ice cream!** Some AIs are great at learning from data, while others can create brand-new things—each with its own superpower.

Right now, **two types of AI are making BIG waves: Machine Learning and Generative AI.** Let's dive in and explore these exciting AI flavors!

ICEBREAKER

Imagine you're an AI detective investigating how machines learn. I'm going to give you a few real-life scenarios, and you have to guess whether a human or an AI is making the decision.

1. A phone automatically unlocks when it sees your face.
2. A teacher grades an essay based on grammar and structure.
3. Netflix suggests a movie based on what you've watched before.

Think About It!

- Which of these tasks involve AI?
- How does AI learn to make decisions like humans?

The answers lie in Machine Learning, a branch of AI that helps computers recognize patterns, make predictions, and improve over time.

Ready to uncover the secrets behind how AI learns? Let's dive in

3.1. Machine Learning: Teaching Computers to Learn on Their Own

Think about how you learned to recognize a dog as a child. You saw different animals, and someone told you, "That's a dog," or "No, that's a cat." Over time, you understood what makes a dog a dog—fluffy fur, a snout, maybe a wagging tail. Machine Learning (ML) works in a similar way, except instead of a parent, it learns from data.

3.1.1. Rule-Based Learning vs. Machine Learning

For simple problems, computers can follow a set of rules. For example, a Roomba can be programmed to turn when it hits a wall. Ghosts in Pac-Man can be told, "If Pac-Man moves up, chase him up." This is called rule-based learning, where we explicitly define every instruction

But what if the problem is more complex? Imagine trying to teach a computer to recognize a person in a Zoom background. A person's shape, color, and position change every frame, making it impossible to write fixed rules. Instead, we use Machine Learning, where the computer learns from examples rather than predefined rules.
Take a look at the diagram below to understand the examples of AI and ML

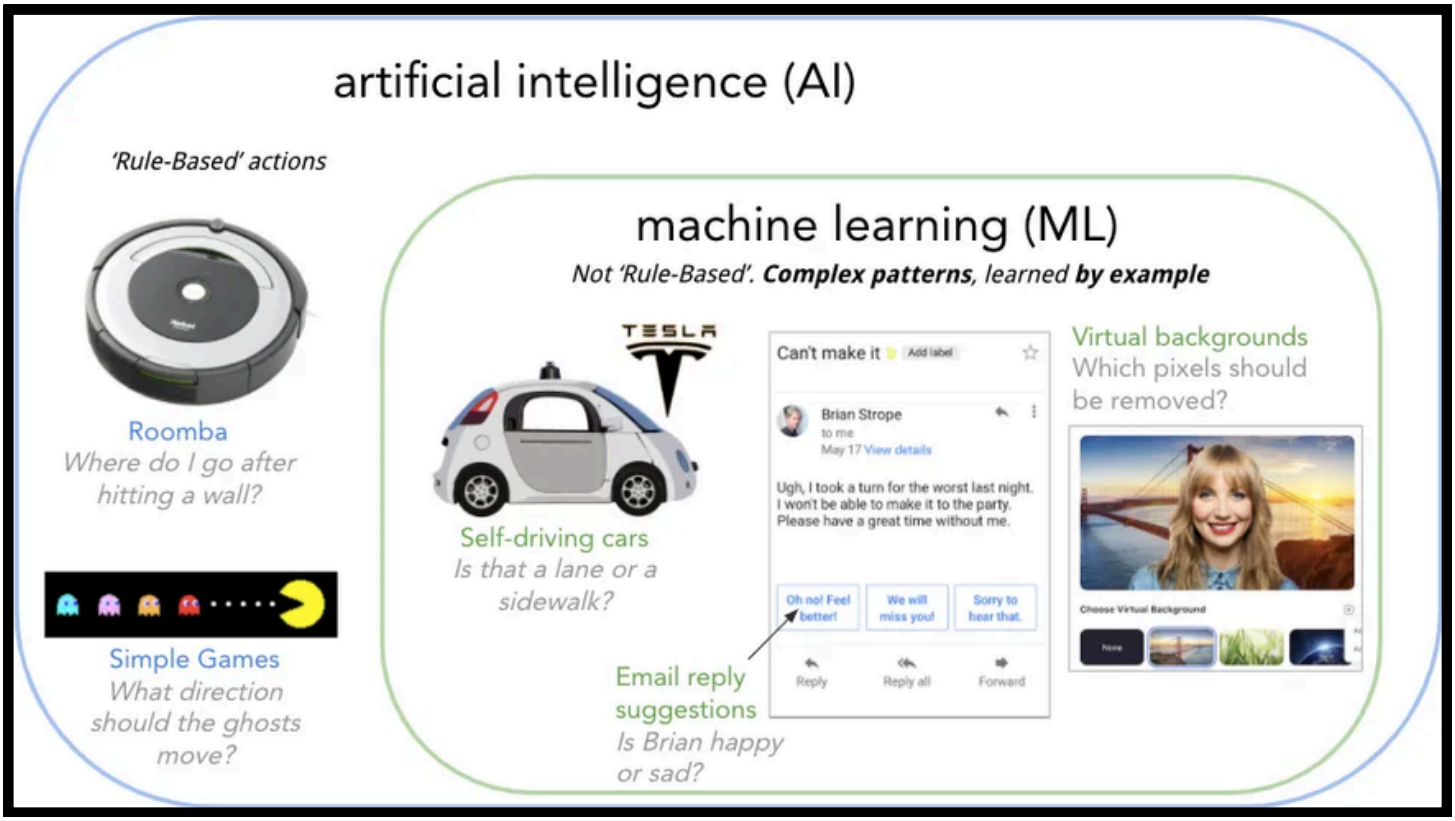


Fig 3.1 Example of AI and ML

3.2. How Do Machines Learn?

Just like how a baby learns to recognize a dog, an ML algorithm learns by being shown many labeled examples. It starts by making an initial guess—maybe "brown and fluffy" means "dog." But that would mistakenly classify a brown fluffy cat as a dog! To improve, the algorithm adjusts its guess, checking which features (like snouts or ear shapes) lead to better accuracy. Over many iterations, it refines its definition until it can correctly identify dogs it has never seen before.

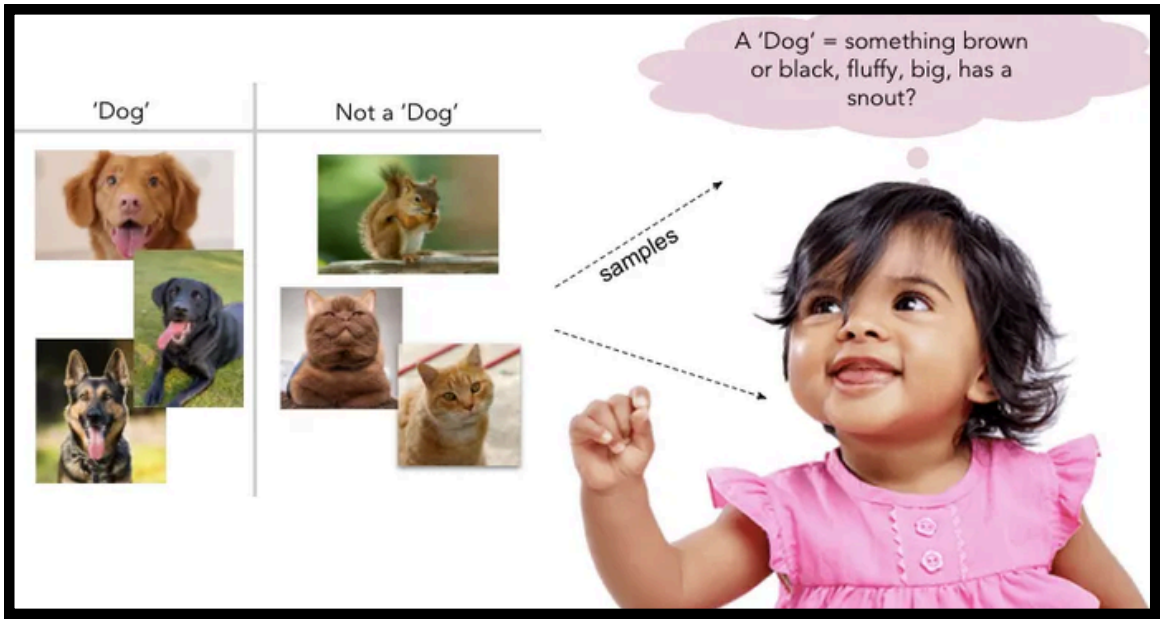


Fig 3.2 Human babies learn many concepts by example.

Figure 3.2 illustrates how human babies learn many concepts by example, observing patterns and refining their understanding through experience.

3.3. Fun Fact

The Term Machine Learning
Did you know the term “Machine Learning” was coined in 1959 by Arthur Samuel? He was a pioneer in teaching computers how to improve at tasks through experience, much like how we humans learn!

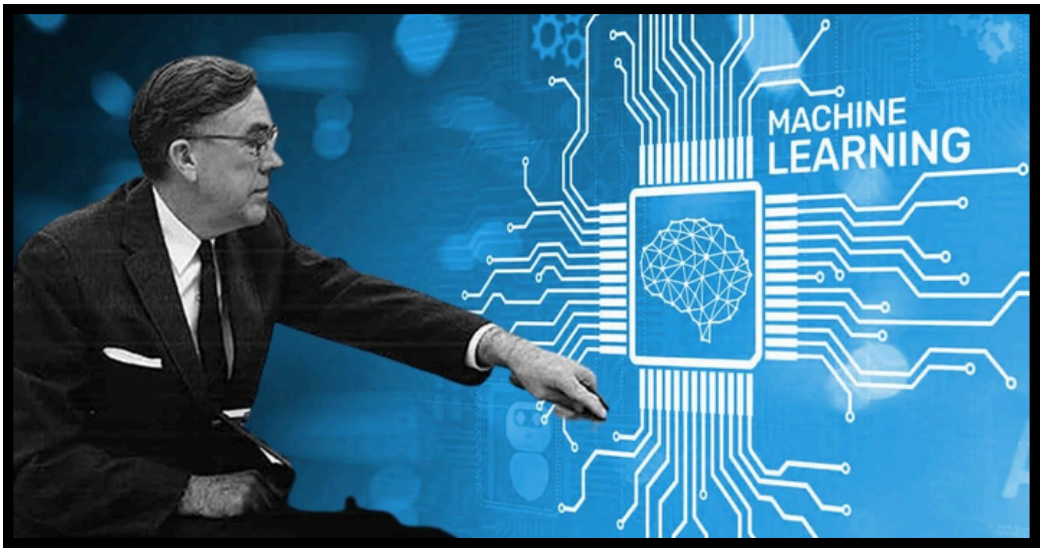


Fig 3.3 Arthur Samuel – The pioneer who coined "Machine Learning"

3.4. How Does Machine Learning Work?

Let’s break it down into three simple steps:
1 Collecting Data: Machines need examples to learn. The more data they have, the better they get!

Fig 3.4 Collecting Data – Machines learn better with more examples.

Example: A machine learning model trained to recognize handwritten digits needs thousands of examples of numbers written in different styles.

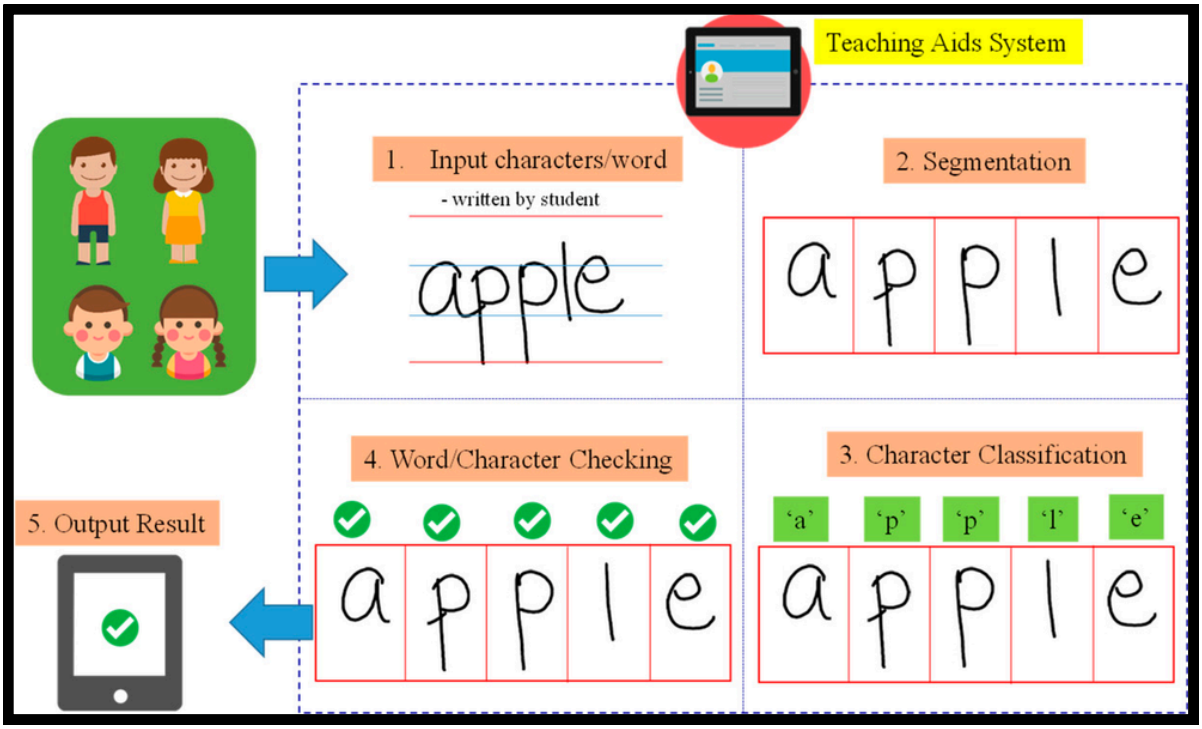


Fig 3.5 Training a Machine Learning Model to Recognize Handwritten Digits.

2 Training the Model: The computer studies the data and tries to recognize patterns.
Example: If we show a machine many pictures of dogs and cats, it will start spotting differences like fur patterns, ear shapes, and tails!

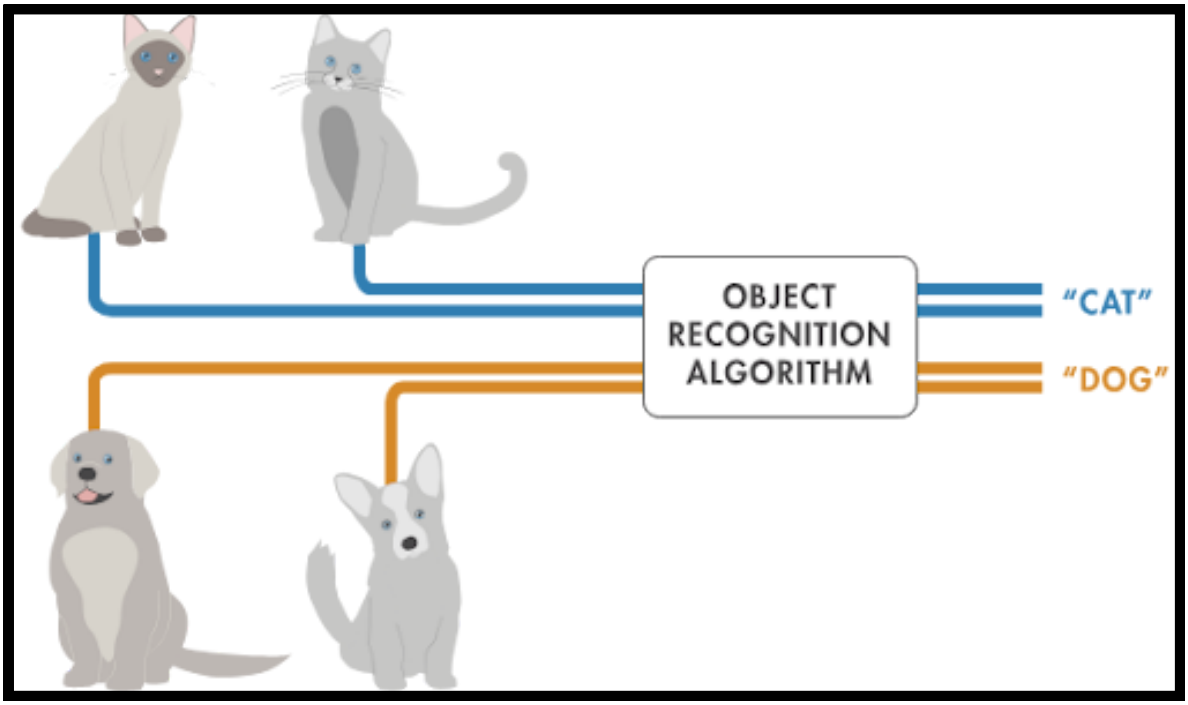


Figure 3.6 shows how machines spot differences by learning patterns

3 Making Predictions: Once trained, the machine can make predictions when given new data.
Example: When you upload a new photo, your phone can automatically tag your friends because it has learned to recognize their faces!

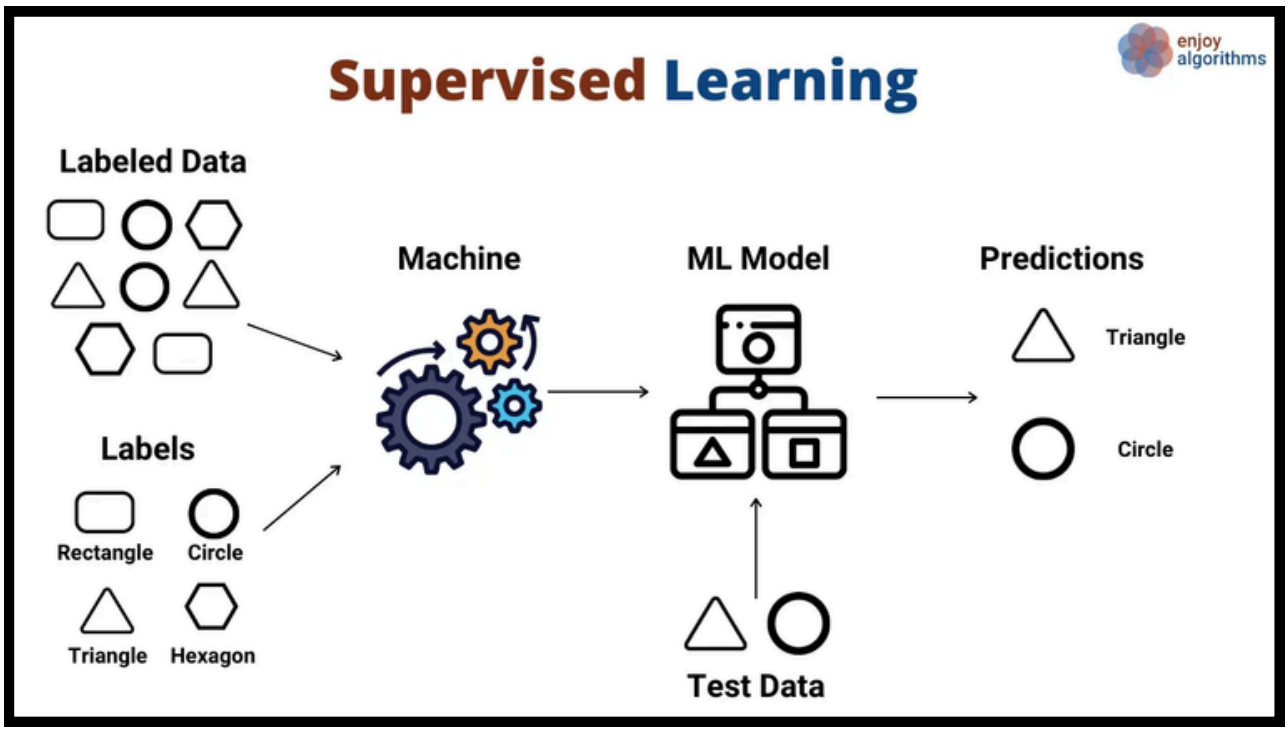


Fig 3.7 Machine Learning Model Predicting images

3.5. How Does AI Learn?

Imagine you have a big box of fruits—apples, bananas, oranges, and grapes. You want to teach your little robot friend, Robo, how to recognize them. But how should we teach Robo?
Robo says, "I want to learn! But how do I know which fruit is which?"

Note: Remember our Guided Tour from Module 1? That lesson showed us that giving clear examples with labels helps AI understand what things are—just like a teacher helps you learn new words.

3.5.1. The Guided Tour: Learning with a Teacher (Supervised Learning)

We start by showing Robo some animals and telling him their names.
We show him a cow and say, "This is a cow!"
We show him an elephant and say, "This is an elephant!"
We show him a camel and say, "This is a camel!"
Robo looks at these animals carefully. He notices that cows have four legs and a short tail, elephants are big with trunks, and camels have humps on their backs.
Now, let's test Robo! We show him a new animal that has a hump on its back.
Robo thinks for a moment and then says, "It looks like the camel I saw earlier. I think this is a camel!"
That is correct! Robo learned by looking at examples and matching them with answers. This way of learning is called Supervised Learning because Robo had a teacher helping him, just like when a teacher gives you examples in class.

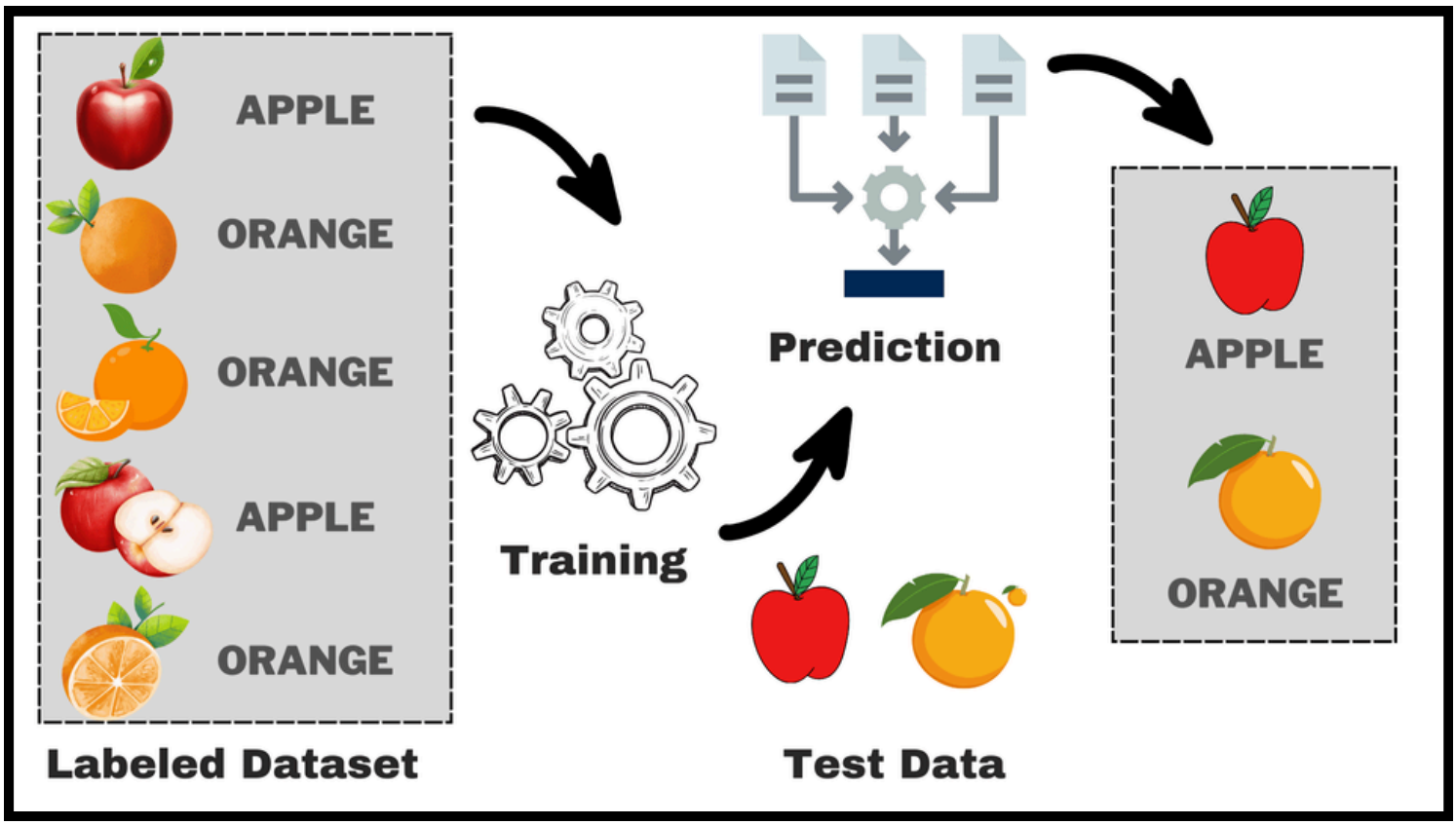


Fig 3.8 Supervised Learning

3.5.2 The Explorers: Learning on Their Own (Unsupervised Learning)

Now, what if we do not tell Robo the names of the fruits? Instead, we just give him a big pile of mixed fruits and ask him to put similar ones together.

Robo looks at the fruits and thinks, "I do not know their names, but I see that some are round and red, some are long and yellow, and some are oval and yellow. Maybe I can put similar ones in groups!"

- He puts all the round red fruits in one group. (Apples)
- He puts all the long yellow fruits in another group. (Bananas)
- He puts all the oval yellow fruits in a third group. (Mangoes)

Even though Robo does not know the names of the fruits, he has sorted them by their similarities. This way of learning is called Unsupervised Learning because Robo had to figure it out on his own, just like when you try to solve a puzzle without help.

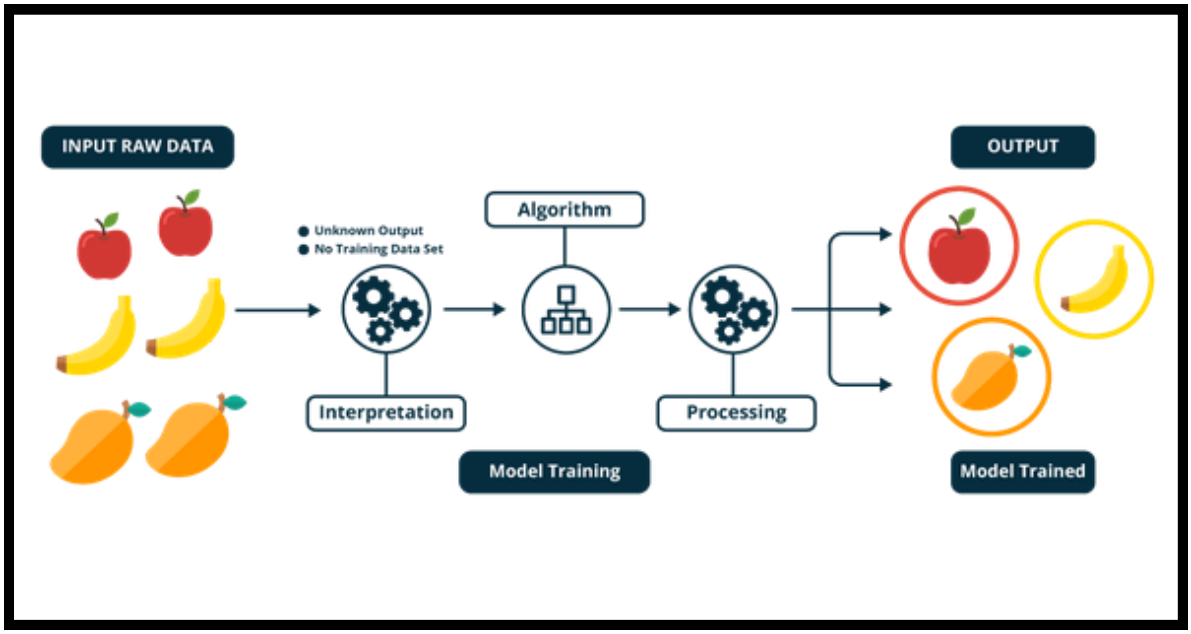


Fig 3.9 Unsupervised Learning

3.6. Fun Challenge:

Supervised or Unsupervised?
Now, it's your turn! Look at the image carefully. Based on what's happening, can you tell whether this is Supervised Learning or Unsupervised Learning?

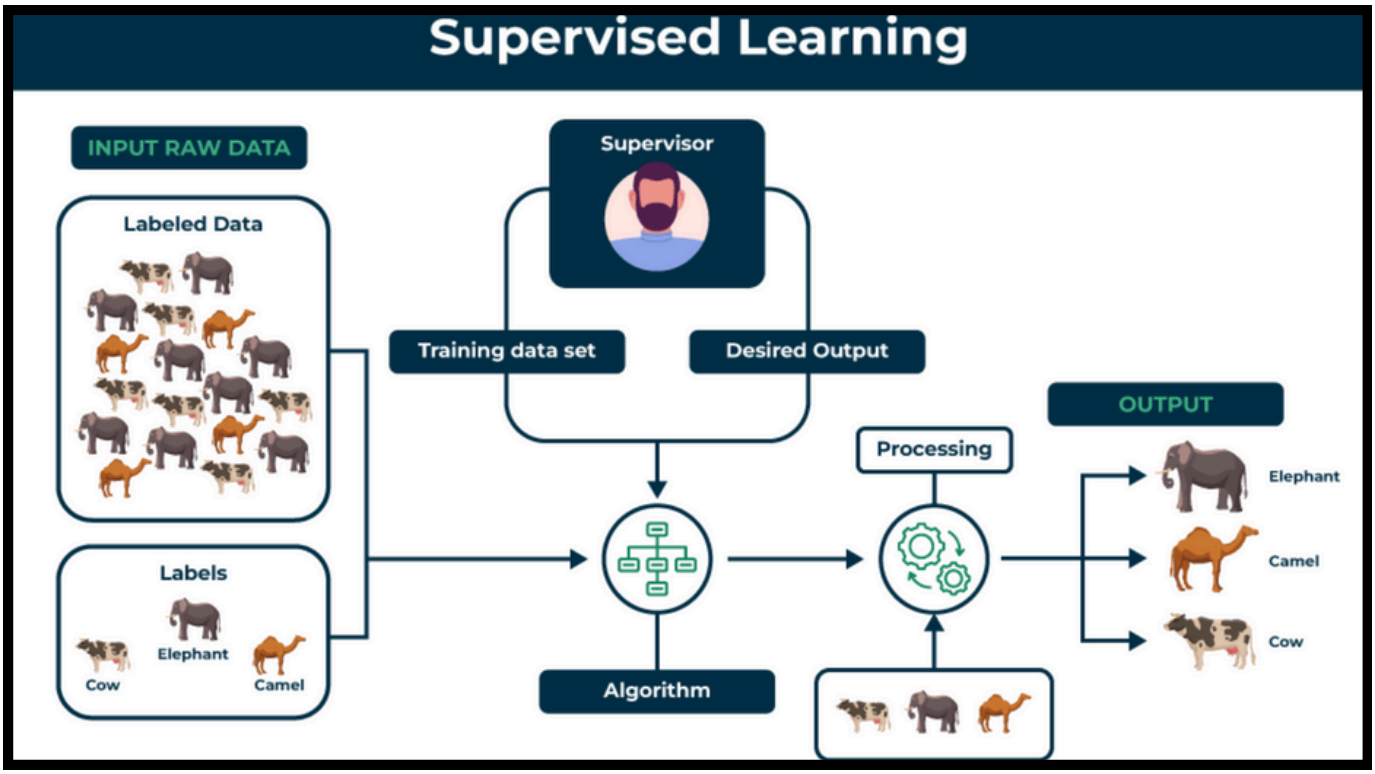


Fig 3.10 Supervised Learning

Think about it:

- Is the AI being given labeled examples (with answers) to learn from?
- Or is it figuring things out on its own, without any guidance?

Now we are going to build this go to google

3.7. Hands-On AI: Try Teachable Machine!

Today, we’re diving into something super cool—Teachable Machine! This is where YOU get to train AI to recognize things like sounds, pictures, or even poses!

Look at that output!

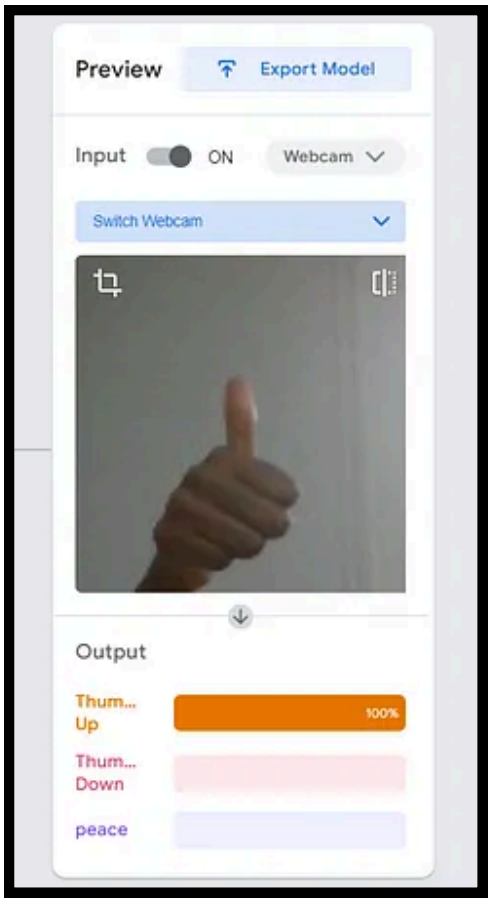


Fig 3.11

This is exactly what we're going to create today!

Sounds exciting, right? Well, hold on tight because we're about to build and train our very own AI model!
Did you enjoy that? Awesome! Now, it's time to roll up your sleeves and learn how to do it all by yourself!

Attention! Before we dive in, grab your laptop, open Google, and get Teachable Machine ready. Ready, set, let's go!

Step 1: Visit Teachable Machine

Go to Teachable Machine in your web browser and click on Get started.

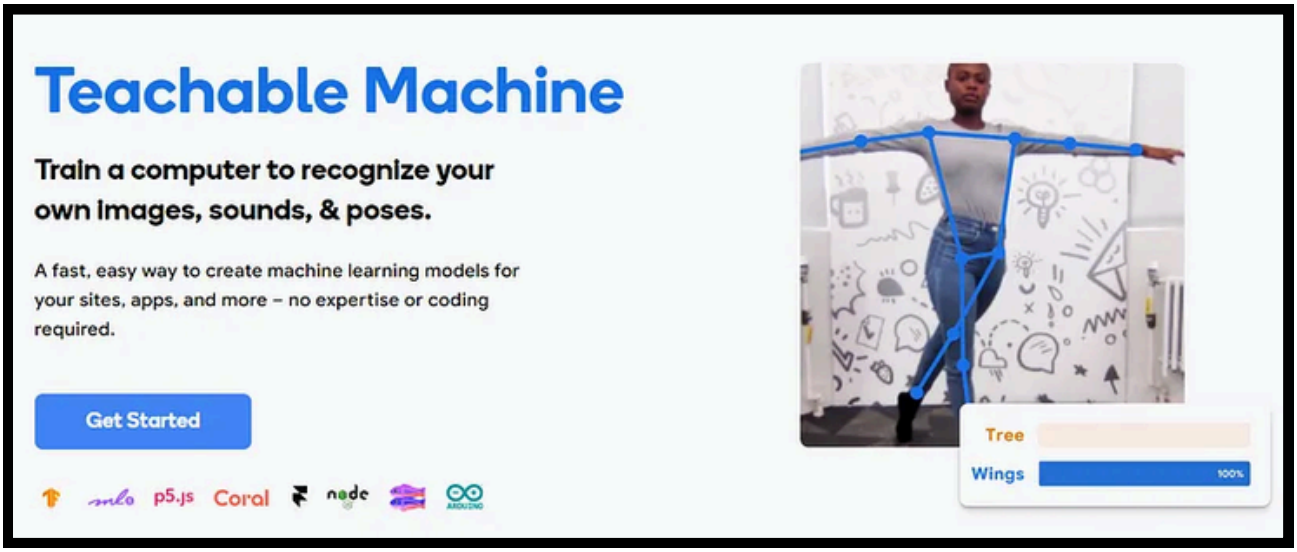


Fig 3.12

Step 2: Choose What to Teach

You can train an AI model to recognize different objects, like hand gestures, facial expressions, or even drawings!

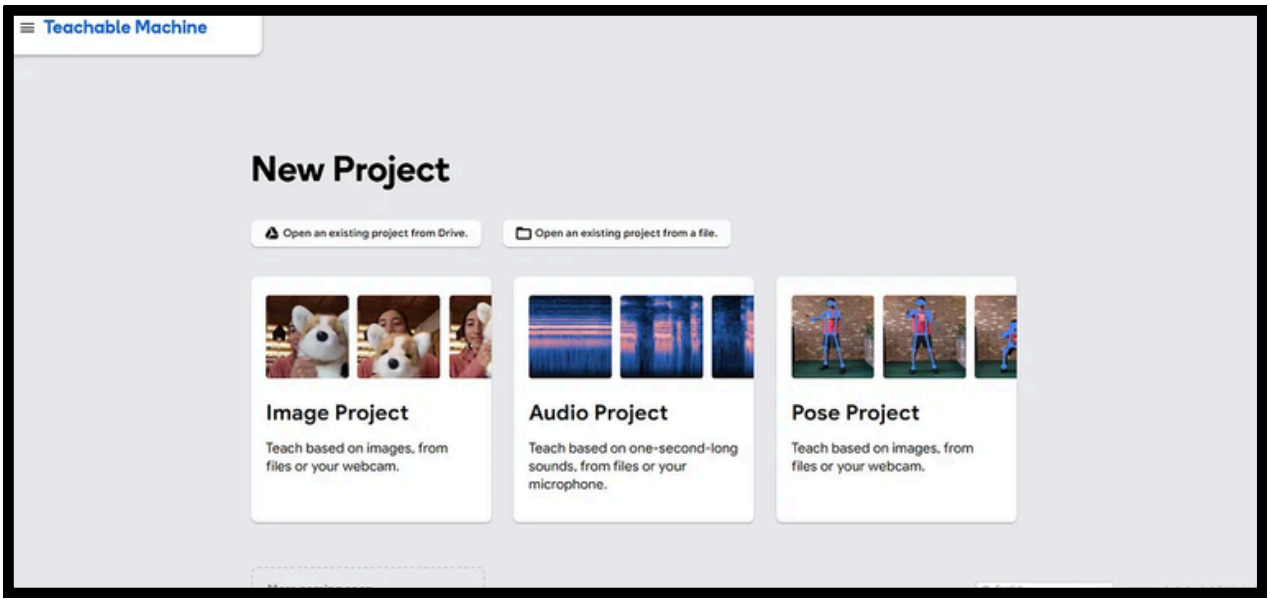


Fig 3.13

Step 3: Collect Training Data

Click Image Project → Standard Image Model.
Take multiple photos of different objects or gestures (e.g., thumbs up vs. thumbs down).

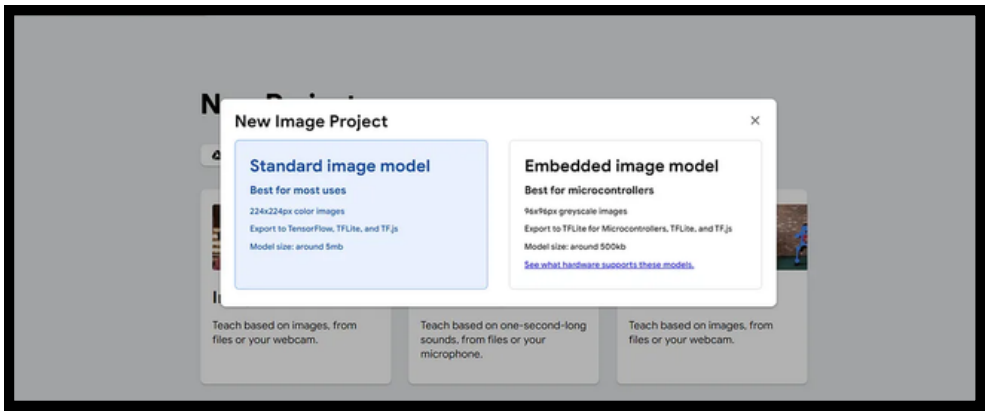


Fig 3.14

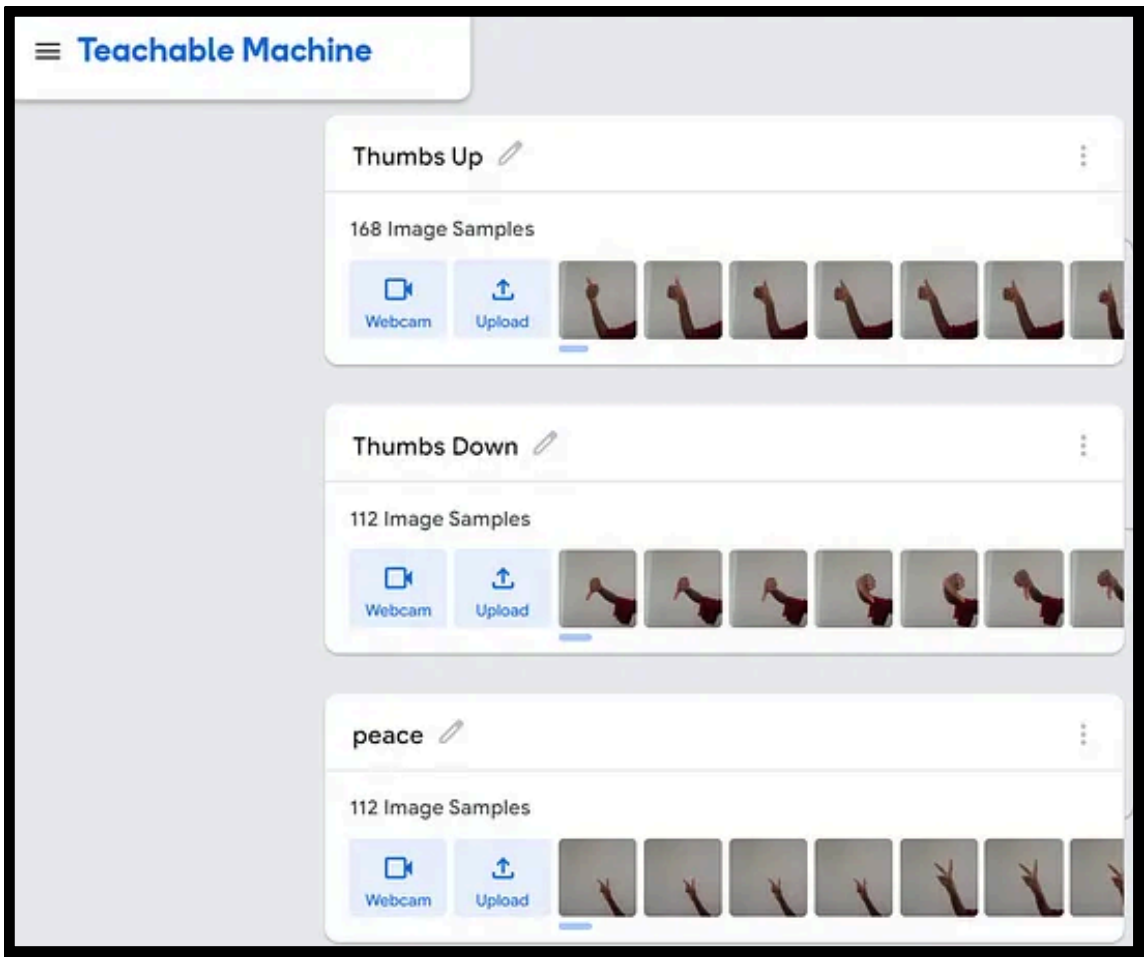


Fig 3.15

Step 4: Train the AI

Click "Train Model." The AI will start learning the patterns in your images.

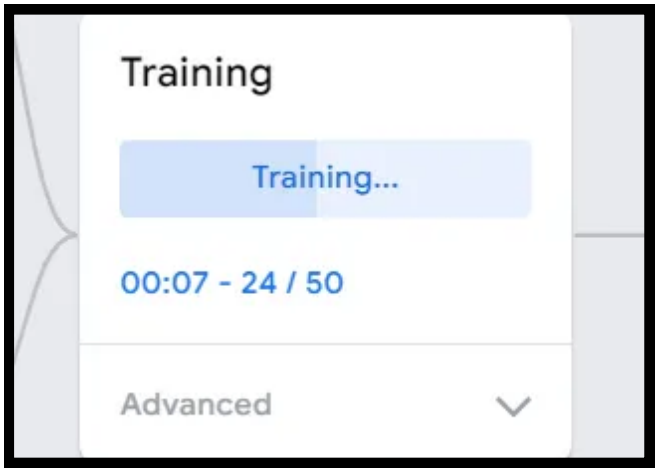


Fig 3.16

Step 5: Test Your AI!

Show a new image or object, and see if your AI can correctly predict what it is.

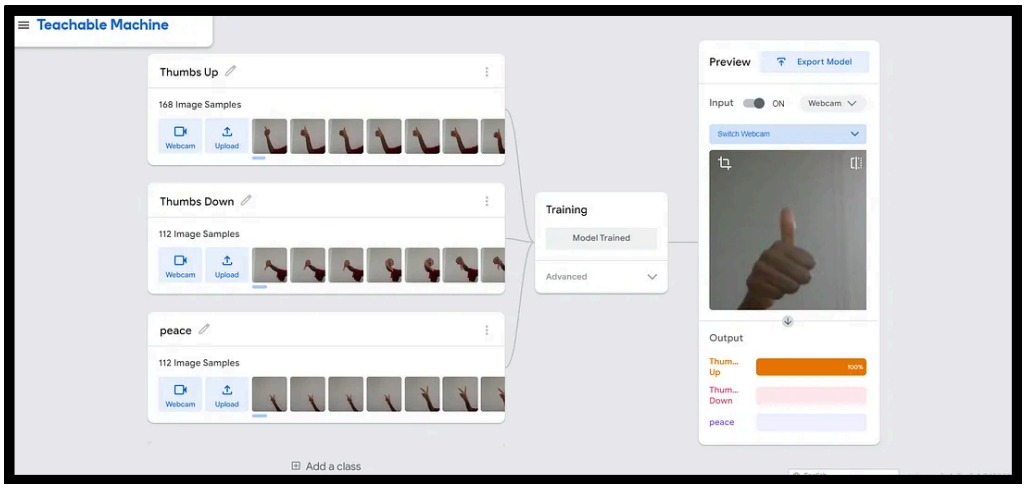


Fig 3.17

Think About It:

- Did your AI model make the right predictions?
- What happens if you show an image it hasn't seen before?
- How could we improve the model?

By playing with Teachable Machine, you're experiencing Supervised Learning firsthand! The AI learns from examples (labeled images) and then makes predictions on new data.

Fun Challenge: Try training a model with different objects or even drawings. Can your AI recognize your hand signs or favorite toy?

3.8. AI in Action: How Machine Learning Works Around You

Did you know Machine Learning (ML) is quietly working behind the scenes to make your everyday life smoother? Let's explore some real-world applications.

3.8.1. Spam Filter

How It Works:

- Scanning Emails – The AI reads incoming emails and looks for suspicious patterns.
- Spotting Spam – It checks for keywords, sender reputation, and past user reports.
- Filtering Messages – If an email looks spammy, ML automatically oes it to the spam folder.

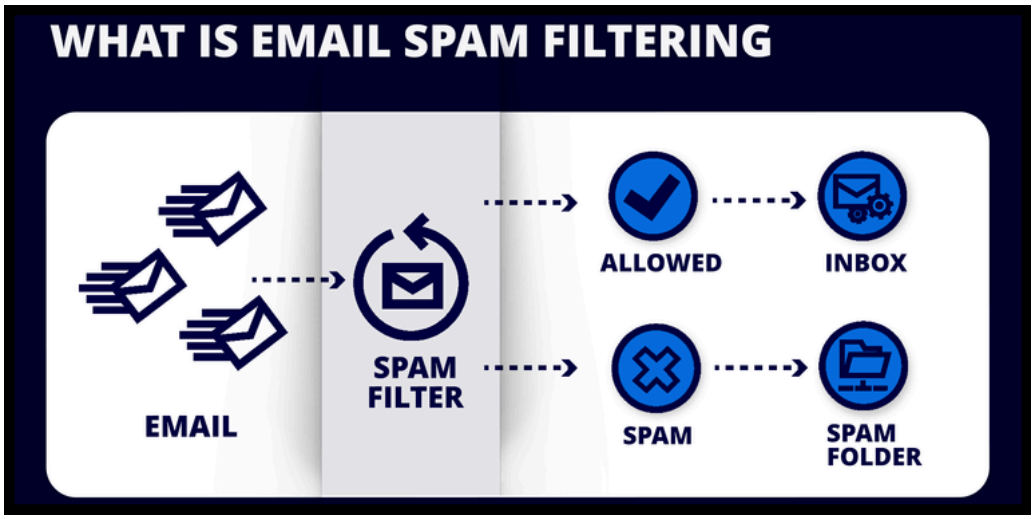


Fig 3.18

3.8.2. AI-Powered Voice Assistants

Machine Learning is everywhere. Whether it's helping you avoid spam, chatting with your voice assistant, driving cars, or picking your next binge-watch, AI is working behind the scenes to make your life easier.

How It Works:

- Listening to Your Voice – AI-powered assistants like Siri and Alexa understand speech.
- Learning Over Time – They analyze past interactions to improve responses.
- Giving Smart Answers – Whether setting reminders or playing music, ML helps them get better at knowing what you need.

Fig 3.19

3.9. Fun Challenge:

Can You Spot the Pattern?
Take a look at the sequence below:

What color should come next?

3.10. Exploring Generative AI

We've already learned how AI can recognize patterns and make predictions using Machine Learning. If you guessed red🔴, you just used pattern recognition—just like AI! The more patterns you observe, the better your predictions become. Now, let's take it a step further and explore Generative AI.

- AI helps answer questions and make decisions based on data.
- Generative AI goes beyond that—it creates something new, like artwork, music, or stories.

Let's dive into how it works!

- **Generative AI: Creating Something New!**
- **Instead of just recognizing or predicting, it makes entirely new things.**

3.10.1. What is GEN AI?

Imagine you teach a robot how to paint by showing it many pictures. Over time, the robot learns patterns and starts creating its own unique artwork! That's what Generative AI does—it learns from lots of examples and then makes something brand new! It can draw, write, make music, and even create funny jokes!

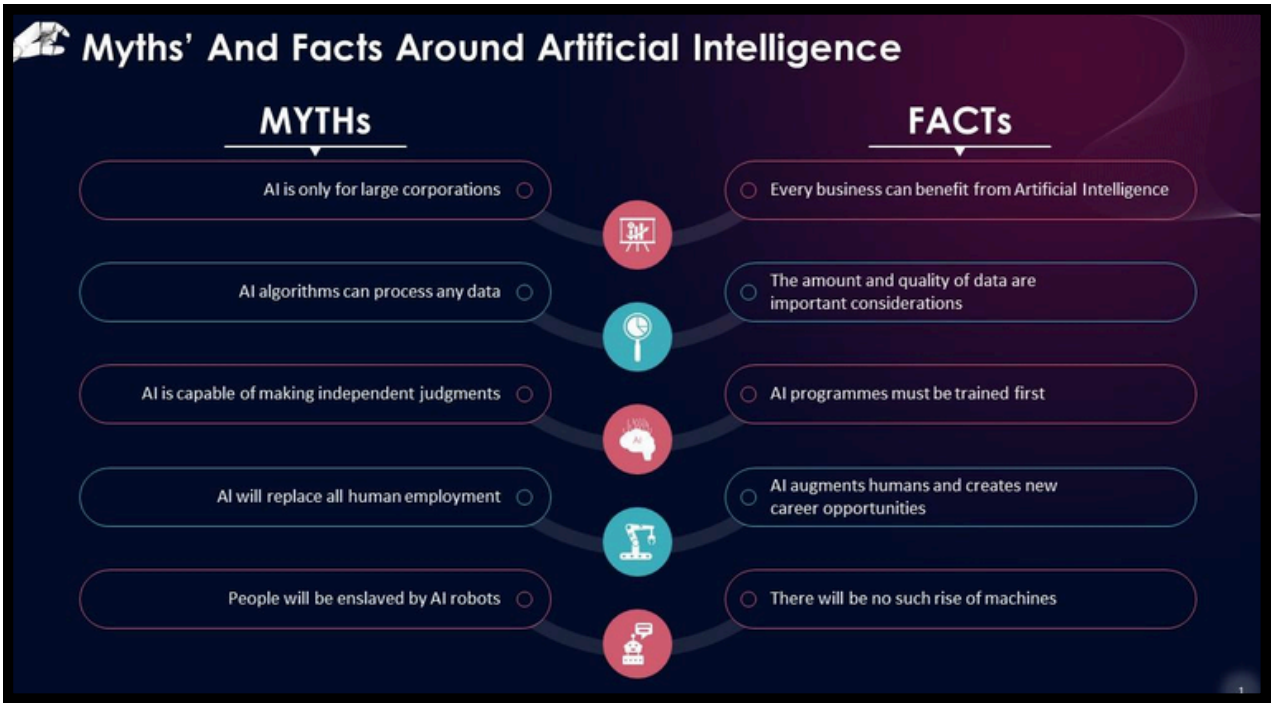


Fig 3.20 Myth Vs Fact of GEN AI

3.10.2. How Does Gen AI Work?

Generative AI follows a few important steps to learn and create new things, just like how you learn to draw, write, or play music!

✅ Step 1: Collecting and Preparing Data

Gen AI starts by looking at lots of examples—pictures, stories, music, or anything it needs to learn. Just like when you learn to draw by looking at different drawings!

✅ Step 2: Learning from Data

The AI studies the examples and finds patterns. It learns what makes a cat look like a cat, how sentences fit together, or what sounds go well in a song.

✅ Step 3: Training the AI

The AI practices by using special computer programs, like deep learning models. It keeps improving, just like how you get better at a game after practicing many times!

✅ Step 4: Creating Something New!

After learning, AI can now create its own pictures, stories, or music! It doesn't copy—it makes new things based on what it has learned.

✅ Step 5: Getting Better with Feedback

AI keeps improving! If something doesn't look or sound right, it makes changes and tries again. Just like when you erase and redraw a picture to make it better!

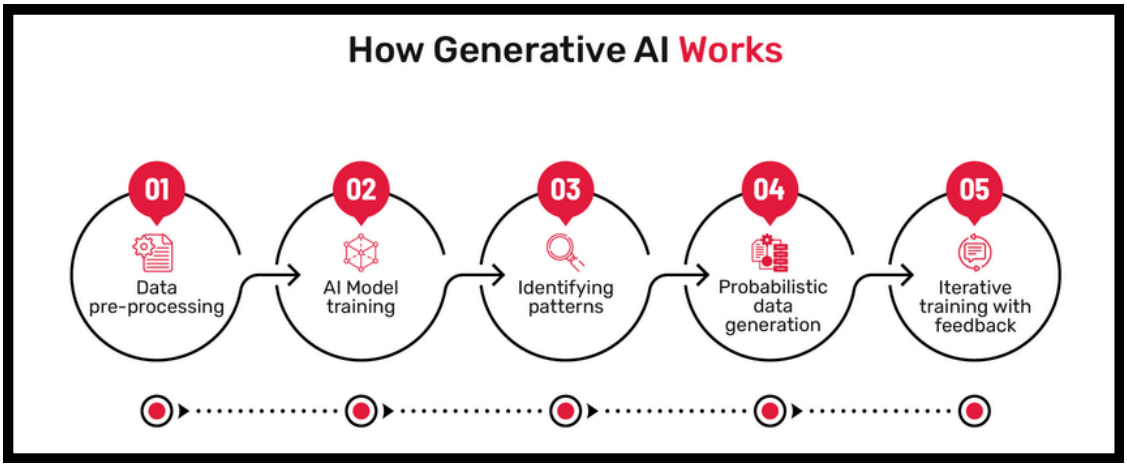


Fig 3.21 How GEN AI Works

3.10.3. Create Art & Stories with Generative AI!

Want to make cool pictures or stories using AI? Follow these easy steps!

Choose a Tool

Pick the right AI tool for what you want to create:

📸 **For AI Art:**

- Craiyon – Free and easy for drawing fun images!
- Deep Dream Generator – Creates dreamy, artistic pictures.

📝 **For AI Story Writing:**

- Story Generator by AI Dungeon – Fun for interactive storytelling.
- Canva's Magic Write – Helps write creative stories.

Step-by-Step Instructions

✅ **Step 1: Open the Website**
Go to one of the websites above based on what you want to create.

✅ **Step 2: Type Your Idea (Prompt)**
Find the text box and type what you want the AI to make. This is called a prompt!
👉 Example: "A cute robot playing soccer in space."

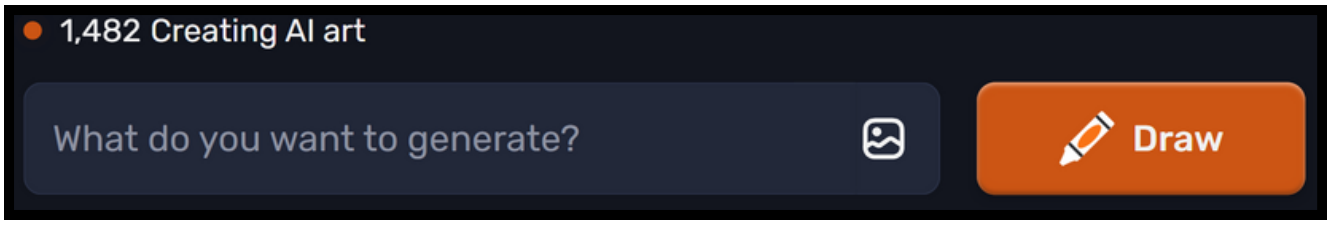


Fig 3.22 Creating a Prompt

✅ **Step 3: Click 'Generate'**
Press the button to let the AI work its magic! Wait a few seconds for your picture or story to appear.

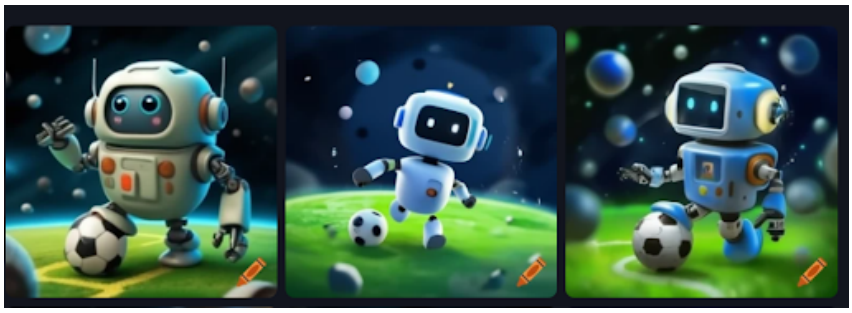


Fig 3.23 Generating Image from Prompt

✅ Step 4: Save & Share

If you like your creation, you can download or take a screenshot. Share it with friends and family!

Example Prompts to Try

🖼️ For AI Art:

- **"A colorful dragon flying over a castle at sunset."**
- **"A futuristic city with glowing neon lights."**

📖 For AI Story Writing:

- **"Write a short adventure about a lost pirate finding treasure."**
- **"Create a funny story about a talking dog who loves pizza."**
- **Now, go ahead and have fun making your own AI creations!**

3.11. AI Surprise Challenge!

Let's have some fun with AI! Follow these simple steps:

Step 1: Pick a Mystery Word

Ask a friend or family member to give you a random word (e.g., "ocean," "robot," "dragon").

Step 2: Create a Fun AI Prompt

Use your mystery word to write a creative description.

- Example:
  - Word: Ocean → "A tiny mermaid finds a glowing treasure."
  - Word: Robot → "A robot chef making the best pizza."

Step 3: Generate & Guess!

Use an AI tool to create your image or story:

- Images: Craiyon
- Stories: AI Dungeon

Show your creation to friends and ask: "Can you guess my mystery word?"

3.12. What is a Prompt? The Secret to Great Generative AI!

A prompt is a message or instruction you give to an AI to tell it what to do. It can be a question, command, or even an image or sound. The AI uses your prompt to come up with a response, like answering a question

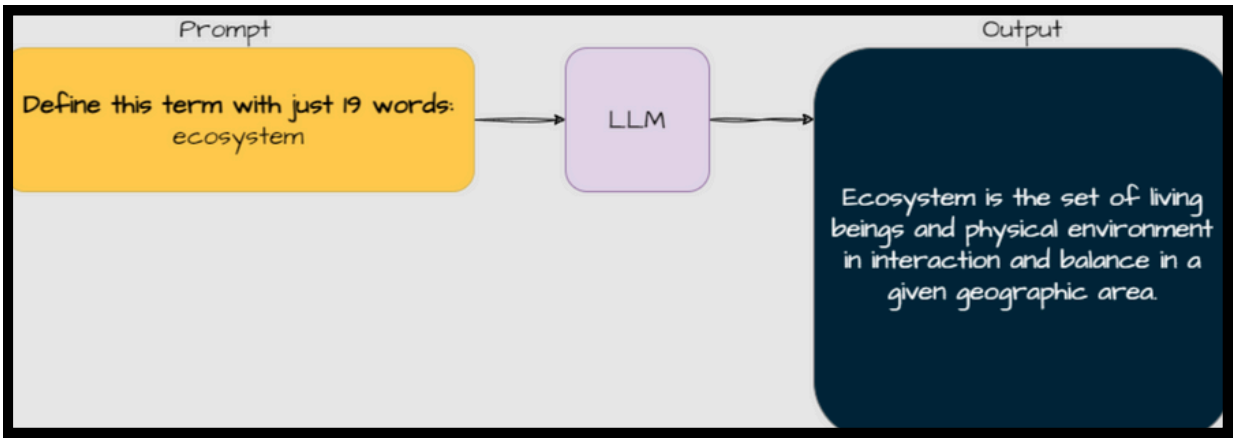


Fig 3.24 Understanding prompt

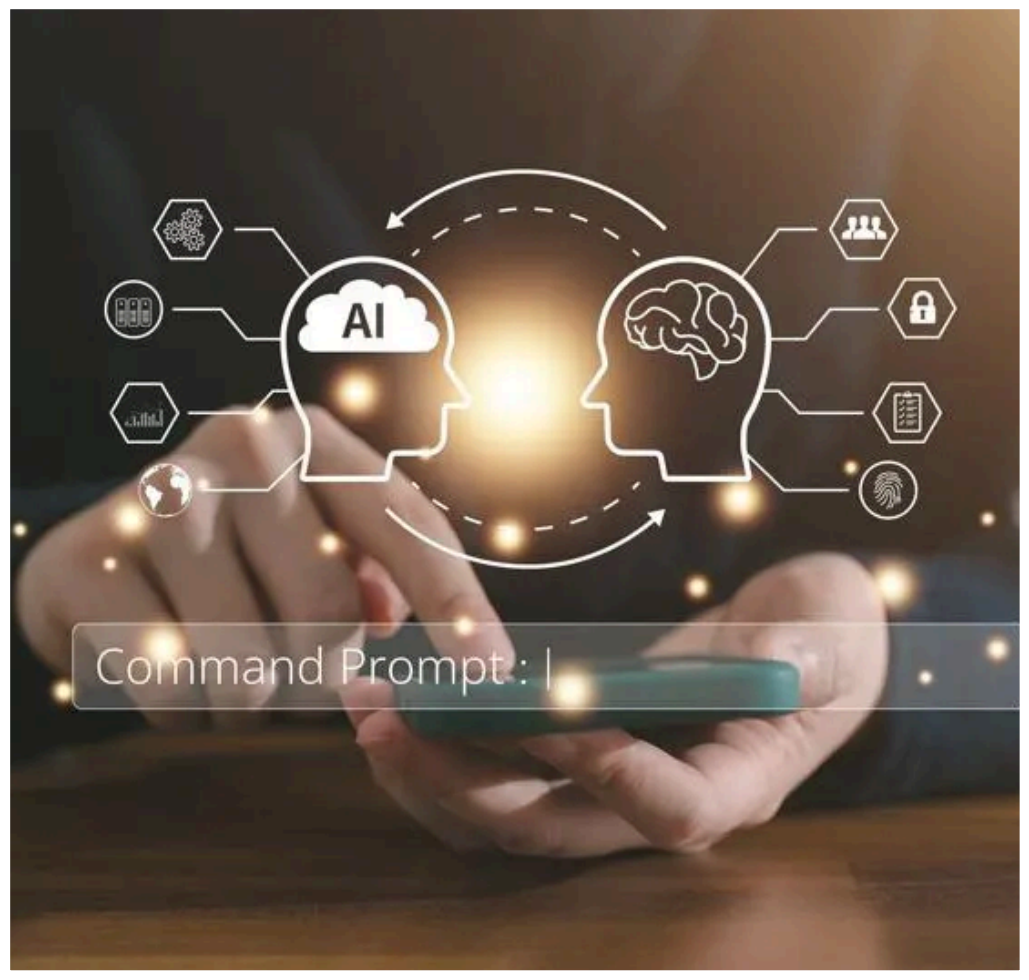
In the next part, we'll learn more about how prompts work and how GEN AI uses them to do things like answer questions or create stories. We'll also share some tips on how to write great prompts. By understanding these tips, you'll know how to talk to AI in the best way, so it can help you even more!

3.13. What's Next?

In our next module, we're going to become PROMPT ENGINEERING SUPERHEROES! You are going to learn all the tips and tricks of the trade. We'll explore:

- How to create AI Prompts and the steps involved
- Learn how to improve your Prompt by adding more details
- Learn how AI remembers what has been said so far

MODULE 4



PROMPT ENINEERING

Module 4 Content

4.1 What is Generative AI?

4.2 What is a Prompt?

4.3 Fun Fact

4.4 How Does Generative AI Work?

4.5 Your Mission: Google AI Studio Tour!

4.6 What Can Generative AI Create?

4.7 Types of Prompts

4.8 Challenge Time: Discover World Records!

4.9 Tips & Tricks for Clear Prompting

4.10 Chain Prompts:

4.11 Aggregate Responses:

4.12 What Can Generative AI Create?

4.13 How to Use AI Right: Be a Smart User!

4.14 Unlocking the Power of Multimodal AI

4.15 Challenge: AI-Powered Video Detective!

4.16 What's Next?

04

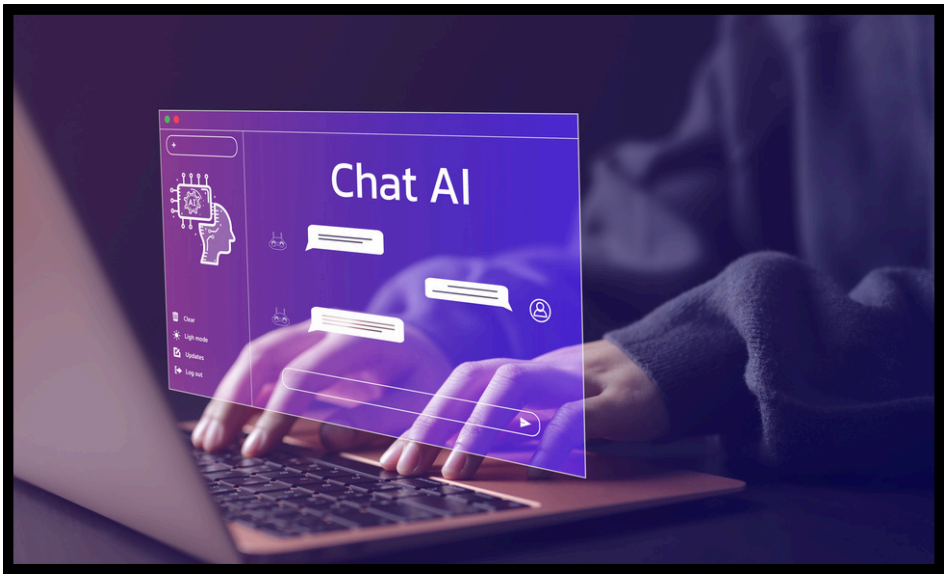


Fig 4.1

In this module, we'll dive into an exciting topic: prompt engineering. This is where you learn how to create the perfect questions or instructions to get the best responses from Generative AI (sometimes called AI that can create things). Ready to learn how to be a pro at using AI?

But before we get into that, let's quickly recap what Generative AI is and how it works with prompting.

4.1. What is Generative AI?

Generative AI refers to artificial intelligence systems that are capable of creating new content, such as text, images, music, or even videos, by learning from large datasets.

Imagine you have a super-smart robot friend who can help you with almost anything—whether it's answering questions, telling stories, creating art, or even making music. But, there’s a catch: to get the best answers or creations, you need to ask your robot friend the right questions. This is called prompting

4.1.1. Difference between traditional AI and GEN AI

Traditional AI follows specific rules to do tasks like sorting data or answering simple questions. It can't create new things—it just does what it's told.

Generative AI (Gen AI) is smarter and can create new stuff, like writing stories, drawing pictures, or making music. It learns from lots of examples and then makes something original from scratch.

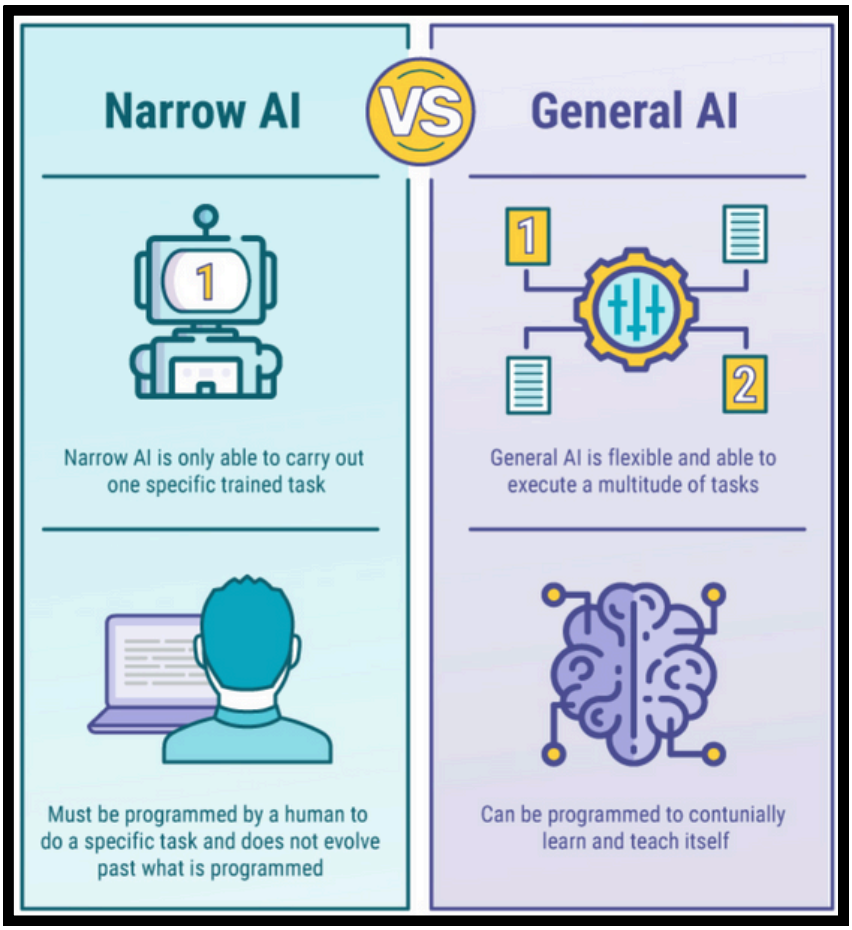


Fig 4.2 Narrow AI Vs Gen AI

4.2. What is a Prompt?

A prompt is like a question or instruction you give to AI. The clearer and more specific your prompt is, the better the result! It's like giving your friend clear directions on how to do something, so they get it right.

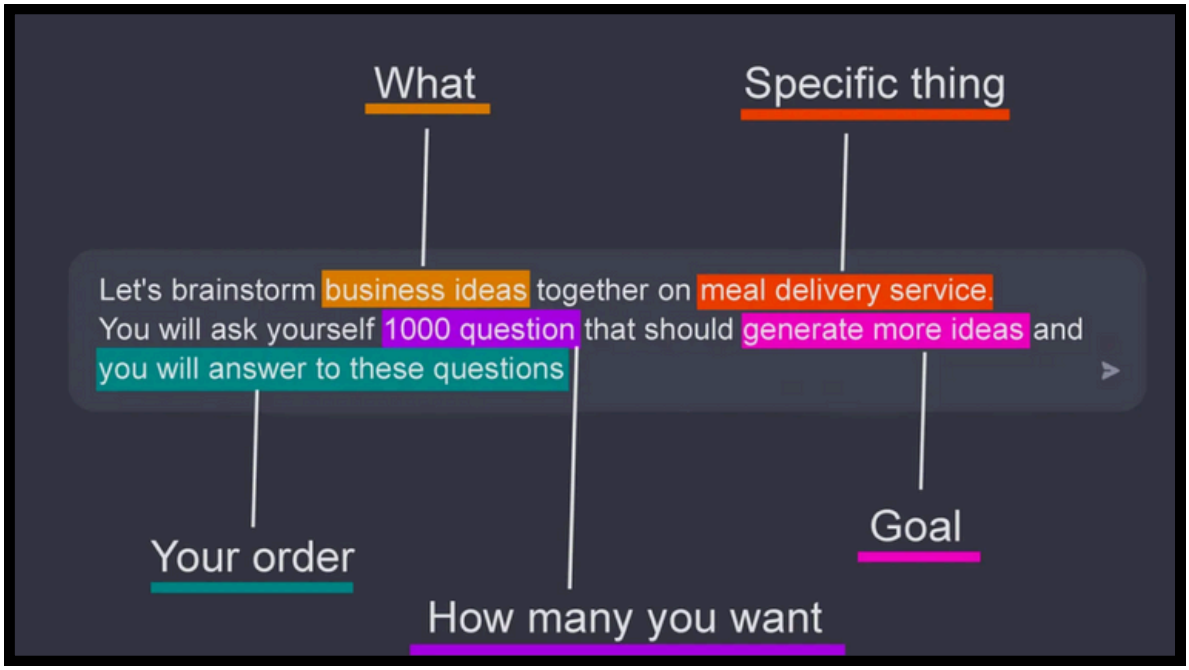


Fig 4.3 Well-Crafted Prompt:

Think about asking for a specific ice cream flavor. If you say "I want a yummy ice cream," that could mean anything! But if you say, "I want a chocolate ice cream with sprinkles," now your friend knows exactly what you want.

4.3. Fun Fact

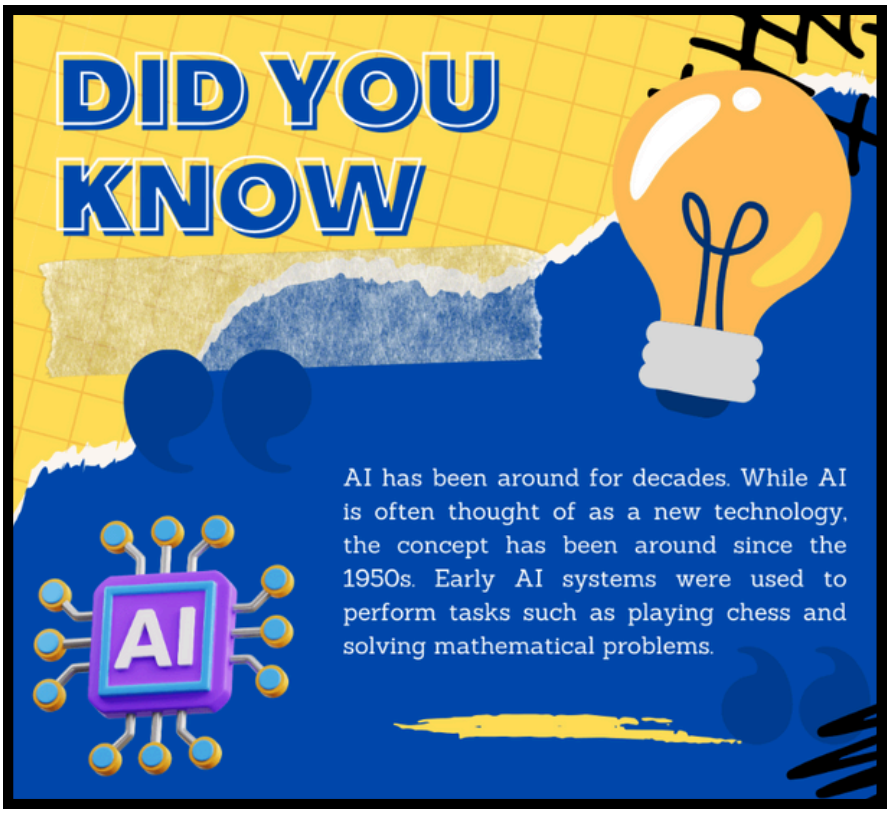


Fig 4.4 Fact

4.4. How Does Generative AI Work?

1. You give AI a prompt.
Example: "Write a story about a dragon and a princess."

2. AI reads and thinks about your prompt.
It uses what it knows (from books, articles, and tons of information) to come up with an answer.

3. AI gives you the result.
It could be a story, a picture, a song, or even a helpful explanation.

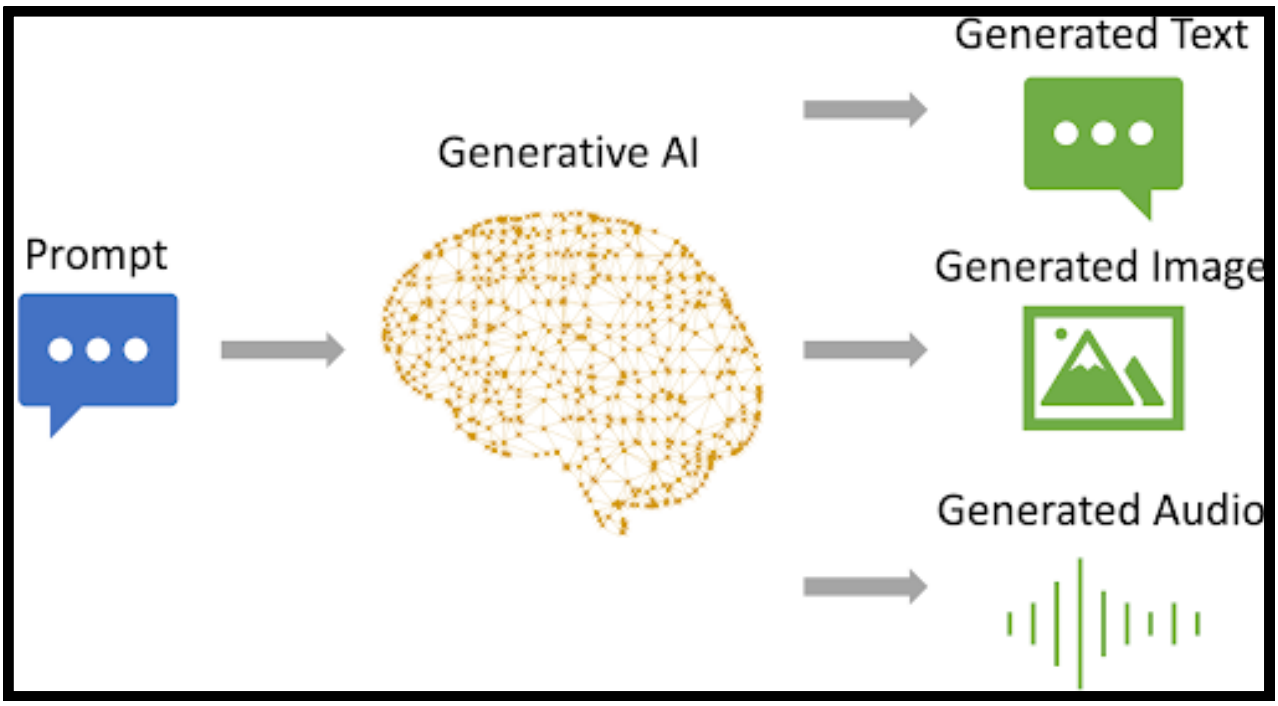


Fig 4.5 How Does AI works?

Now it's time to learn how to ask the right questions to get exactly what you want from this powerful tool.

4.5. Your Mission: Google AI Studio Tour!

Welcome to your Google AI Studio adventure, where you'll get hands-on experience mastering the art of crafting the perfect prompts! Here's your mission:

Playground – Experiment with different prompts and see what works best!

Step 1: Visit Google AI Studio

Open a web browser and go to Google AI Studio.

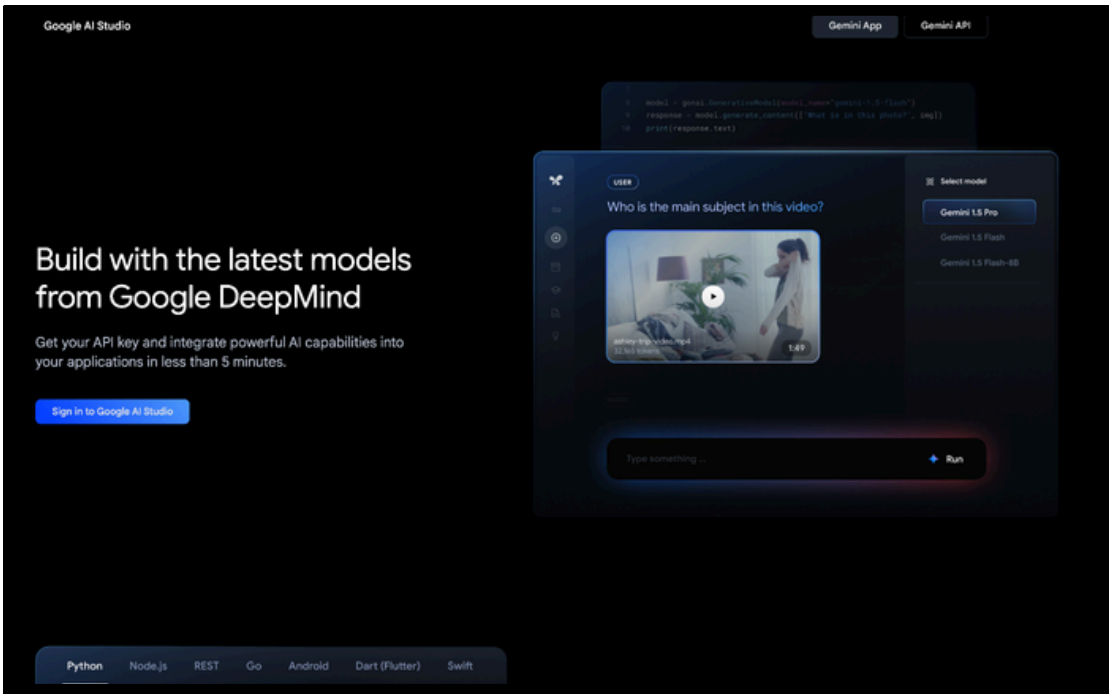


Fig 4.6 Visit Google AI Studio

Step 2: Log In

Click the Sign In button and use your Google account to log in.

Fig 3.11 Myth Vs Fact of GEN AI

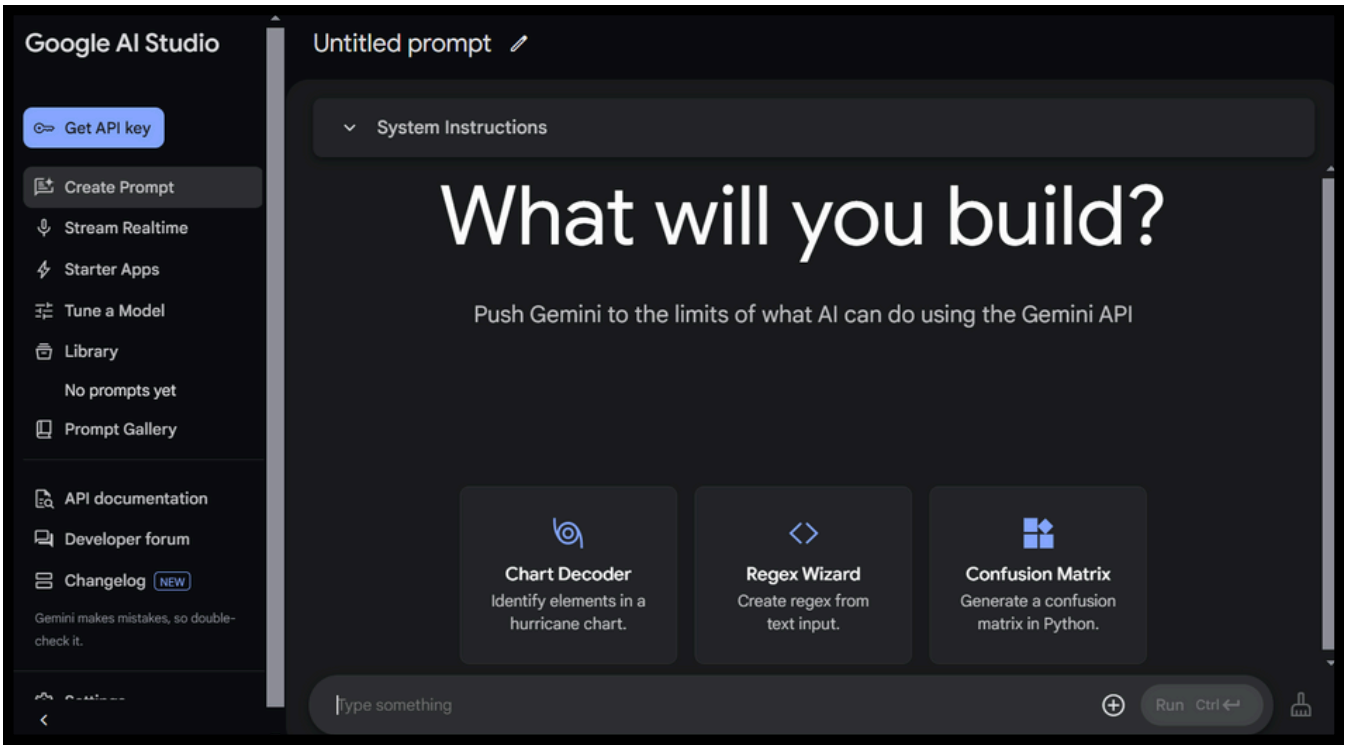


Fig 4.7 Login into Gooogle AI studio

Step 3: Explore the Tools

Once you're in, you'll be able to explore the cool tools available to you. The first choice you'll make is which model to use:

- Gemini 2.0 (Recommended): This is the most advanced model for creating multi-modal responses. It can generate text, images, audio, and videos—perfect for experimenting!

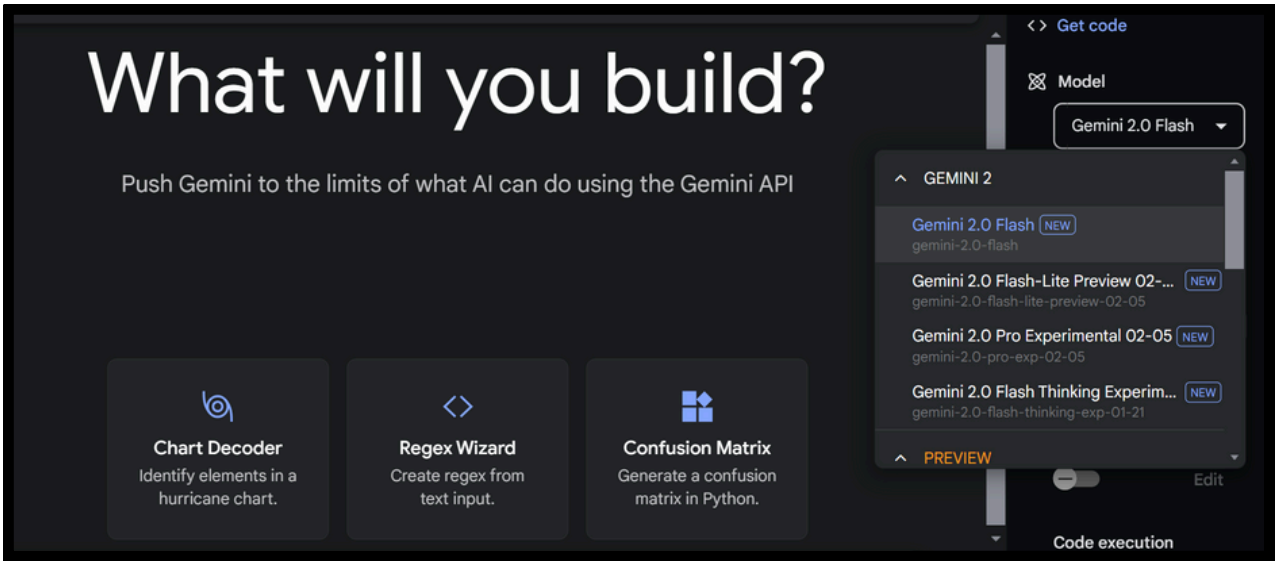


Fig 4.8 Choose the model

Step 4: Adjust the Temperature

Here's a fun part: adjusting the Temperature of your AI responses.

- Lower Temperature: Responses will be more predictable and focused.
- Higher Temperature: Responses will be more creative and sometimes unexpected!

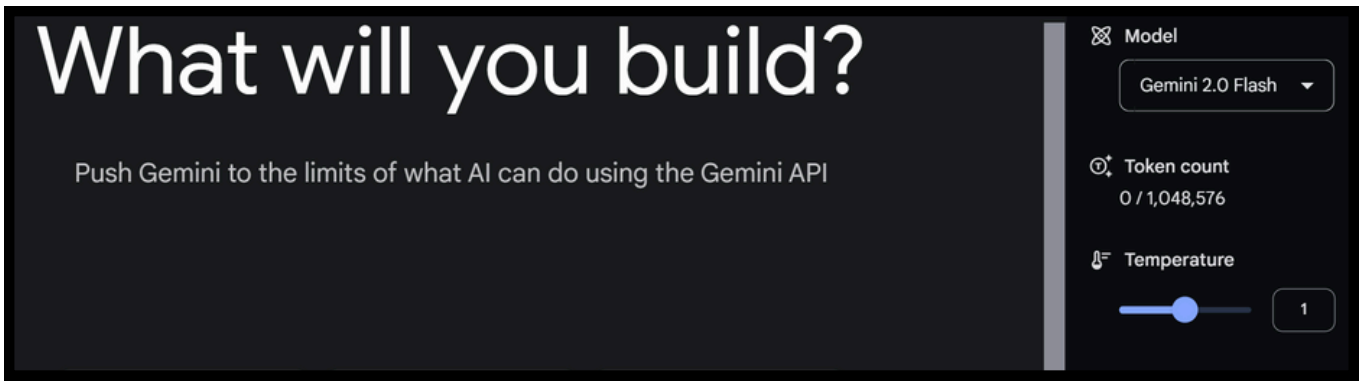


Fig 4.9 Adjust the temperature

Step 5: Click on "Create Prompt"

Now that you're all set up, click on the Create Prompt button to start crafting your own prompts.

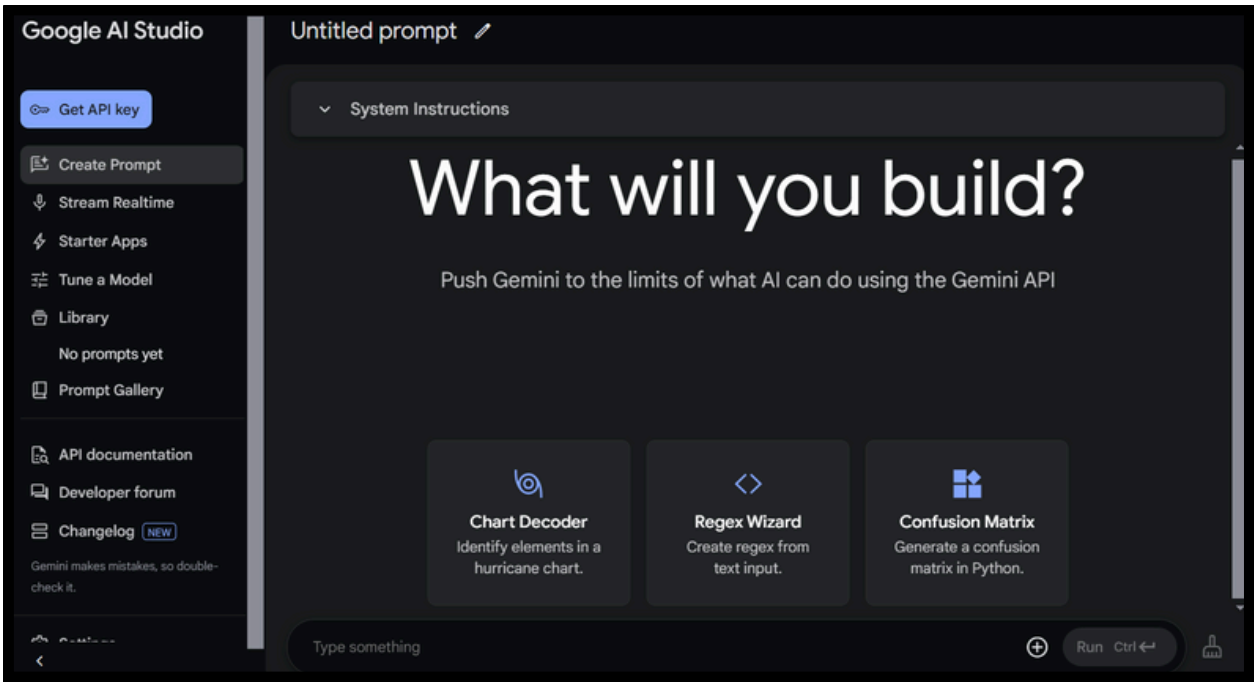


Fig 4.10 Create the prompt

4.6. What Can Generative AI Create?

Generative AI Exploration Challenge

Objective:

Use AI to generate creative ideas and projects based on objects or scenes you choose. Then, refine and improve those ideas to make them your own!

How to Start:

1. Pick an Object or Scene:
2. Find an object or scene around you (like a toy, pet, or place you like).
3. Generate an Idea with AI:
4. Take a picture of it or describe it to the AI. Then, ask:
5. "Can you give me a fun game or project idea based on this?"
6. Refine the Idea:
7. The AI will give you an idea. Now, make it your own!
    - Modify it to make it more exciting.
    - Think about what would make it more fun or interesting.
    - Adjust the idea to fit what you have available.
8. Test Your Idea:
9. Try out your new project or game!
    - Does it work?
    - What can you improve?
    - Refine it based on your testing.

4.7. Types of Prompts

Once you've explored Google AI Studio and experimented with different AI models, you'll notice that how you ask a question or give instructions affects the quality of the response.

This is where prompting techniques come in! There are different ways to guide AI to get the best results, and they can be grouped into three main types.
Let's learn about them!

4.7.1. Zero-Shot Prompting:

Zero-shot prompting is when we ask the model to do something without giving any examples. It has to use its knowledge to figure out what to do.

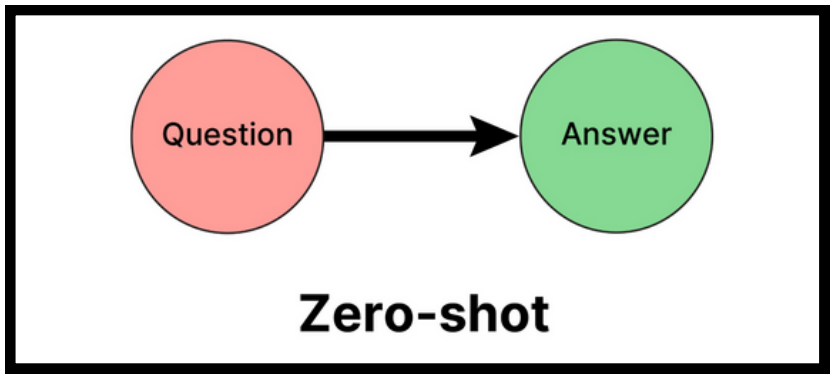


Fig 4.11 zero shot prompting

Example

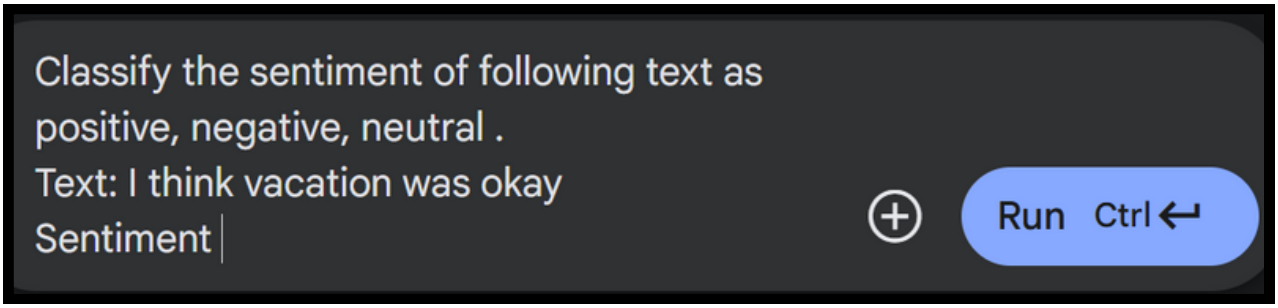


Fig 4.12

Output

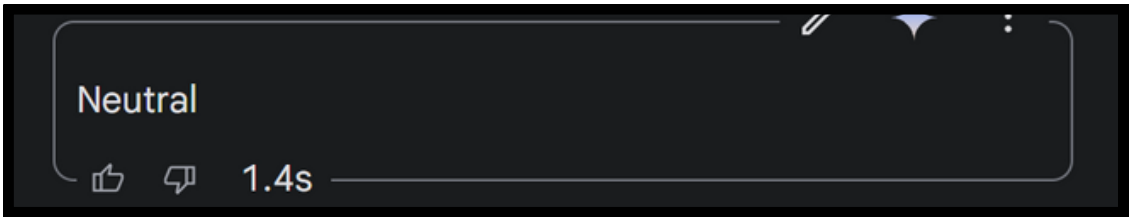


Fig 4.13

Zero-shot is good for simple tasks, but for more complicated ones, the model might struggle because it has no examples to follow.

4.7.2. One-Shot Prompting:

One-shot prompting gives the model one example before it completes the task. This helps the model understand what's expected.

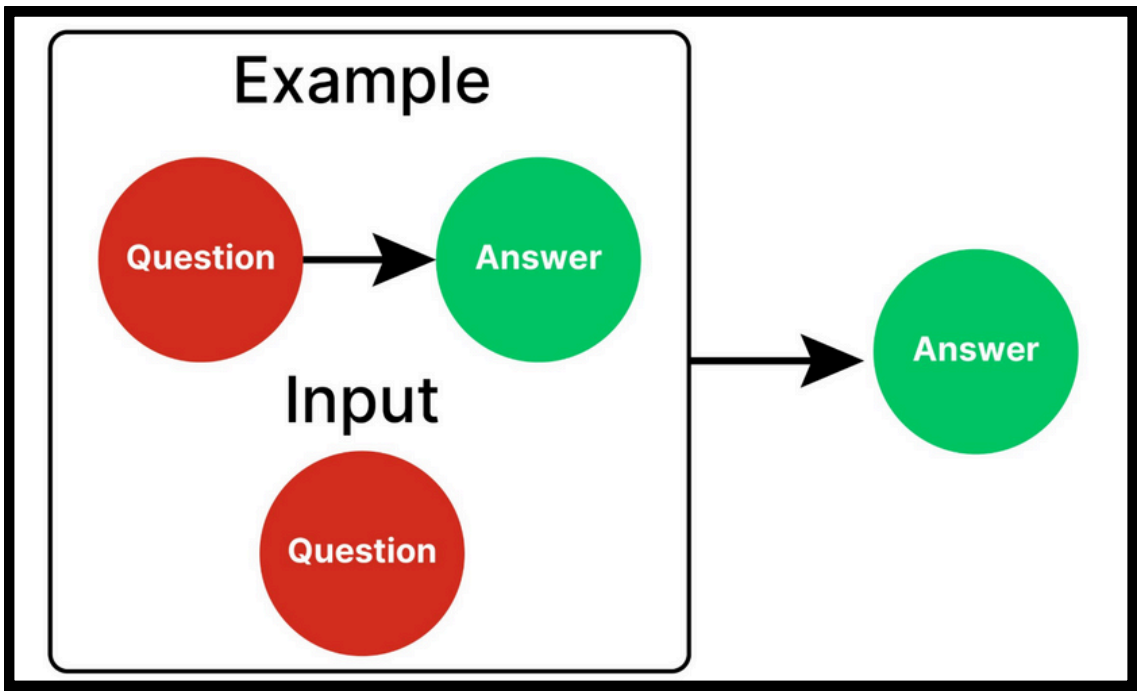


Fig 4.14 One-Shot Prompting:

Example

Fig 3.11 Myth Vs Fact of GEN AI

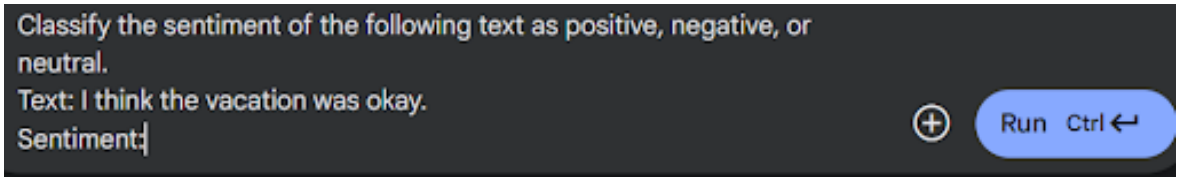


Fig 4.15

The model has one example to follow, so it can now confidently classify the sentiment of the new text.

OUTPUT:

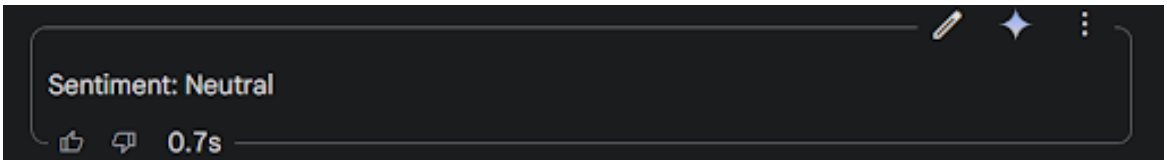


Fig 4.16

One-shot is helpful for tasks that need a bit of extra guidance.

4.7.3. Few-Shot Prompting:

Few-shot prompting gives the model several examples (usually 2-5) to help it understand the pattern. This method improves the model's performance on more complex tasks.

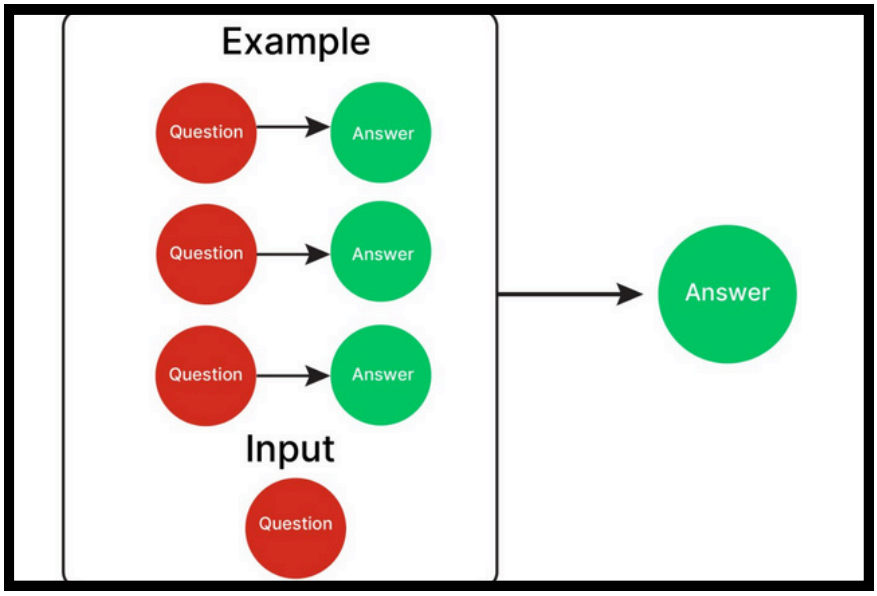


Fig 4.17 Few-Shot Prompting:

Example

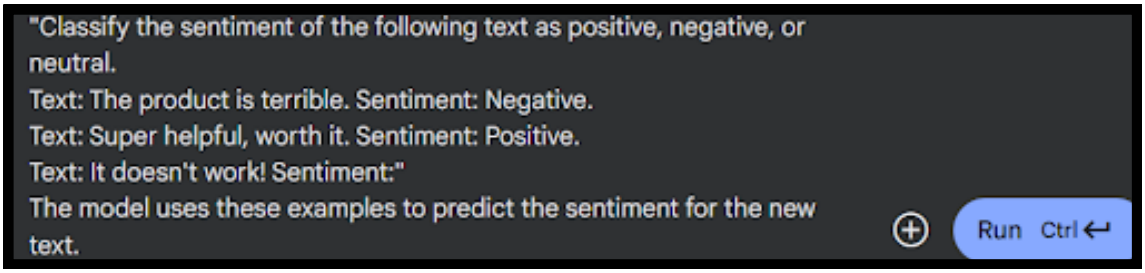


Fig 4.18

Output

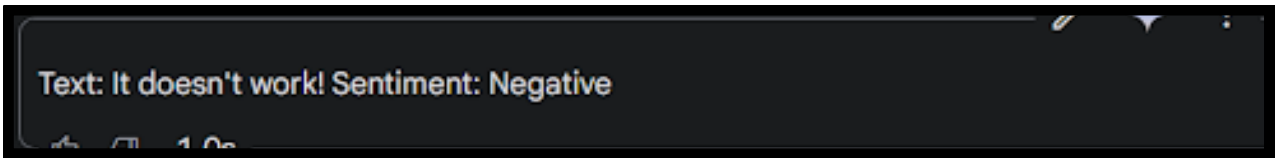


Fig 4.19

Few-shot prompting works best for tasks that need more detail or where the model needs to recognize patterns from several examples.

4.7.4. Choosing the Right Prompting Technique:

- **Zero-shot:** Use for simple tasks where the model likely has enough background to figure it out on its own (e.g., basic questions, simple classifications).
- **One-shot:** Use when you need to give the model a little more guidance to get the right answer (e.g., simple classifications but with some ambiguity).
- **Few-shot:** Use for complex tasks where the model needs several examples to understand what's being asked (e.g., tasks requiring precision or pattern recognition).

4.8. Challenge Time: Discover World Records!

Your Mission: Let’s see how you can use AI to uncover world records related to objects or scenes around you.

- **Step 1:** Think about interesting world records. For example, what's the largest tree, the fastest animal, or the tallest building?
- **Step 2:** Find an object or scene around you (like a book, a toy, or a plant) and take a picture of it.
- **Step 3:** Use the different types of prompts to get answers from AI.

Zero-Shot Prompt:

- “Tell me about any world records related to this object.”
- (Upload your photo and see what AI says!)

One-Shot Prompt:

- “For example, the tallest building is the Burj Khalifa. Now, tell me about world records related to this object.”
- (Upload your photo again and check!)

Few-Shot Prompt:

- “Here are some world records:
- The fastest car is the Bugatti Chiron.
- The longest snake was over 32 feet long.
- Now, tell me about world records related to this object.”
- (Upload your photo and compare the results!)

4.9. Tips & Tricks for Clear Prompting

Now that you've learned about the different types of prompts, here are three fundamental strategies to help you create the best prompts:

Step 1: Be Clear and Specific

- A good prompt should be easy to understand. Avoid vague words.
- Example of a confusing prompt:
- "What is the biggest?" (Biggest what? Animal, planet, building?)

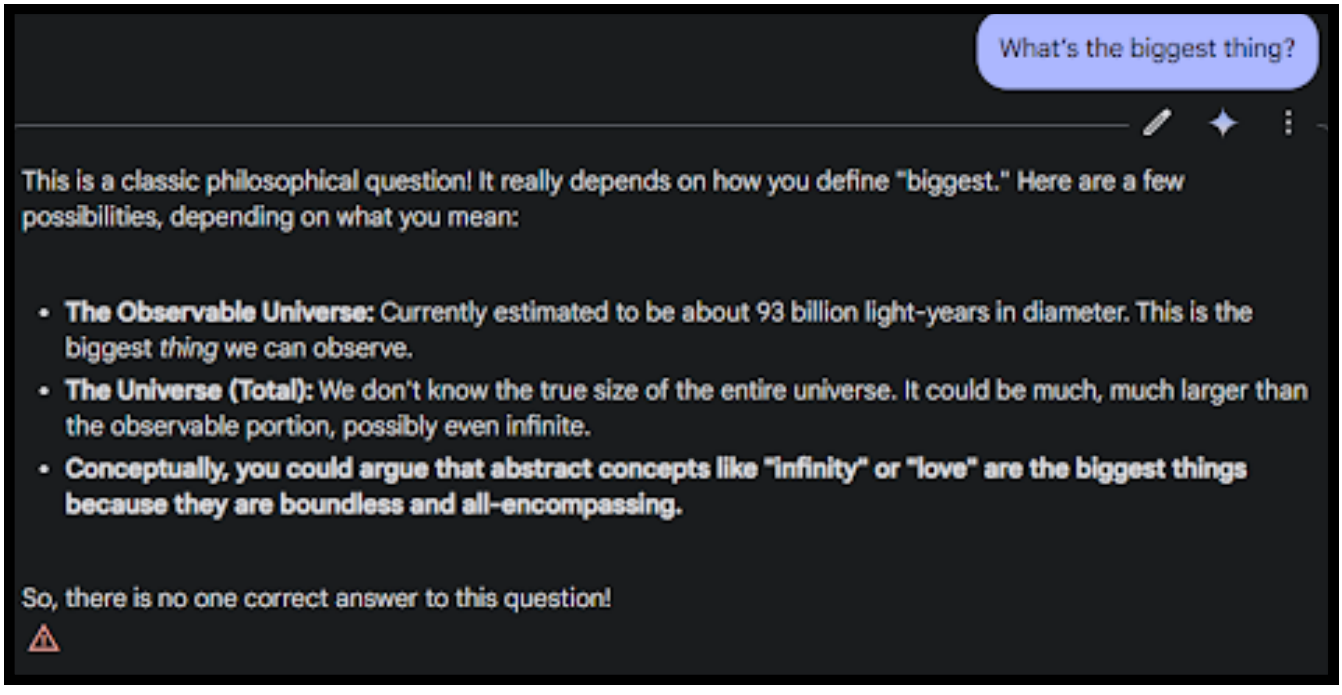


Fig 4.20

Example of a clear prompt:

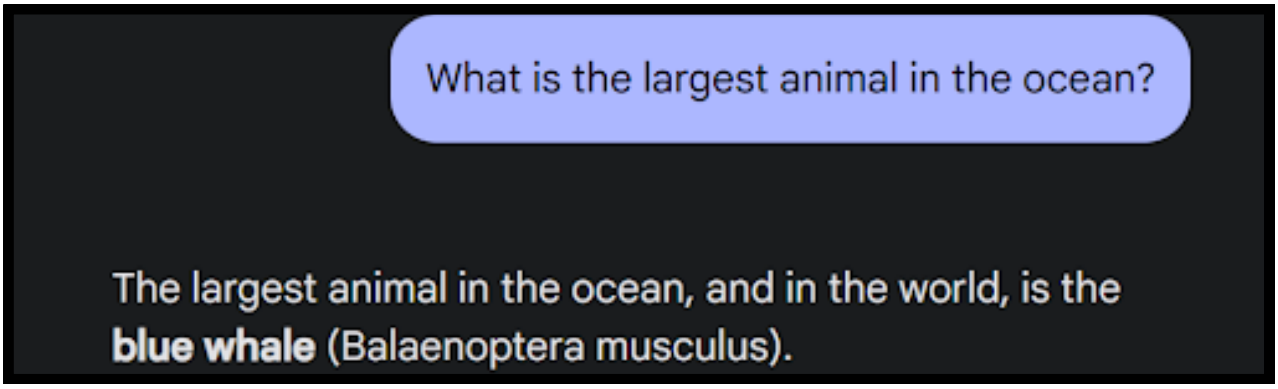


Fig 4.21

Step 2: Use System Instructions

System instructions help define the model's behavior or role for the task at hand, setting the tone and context for the interaction.

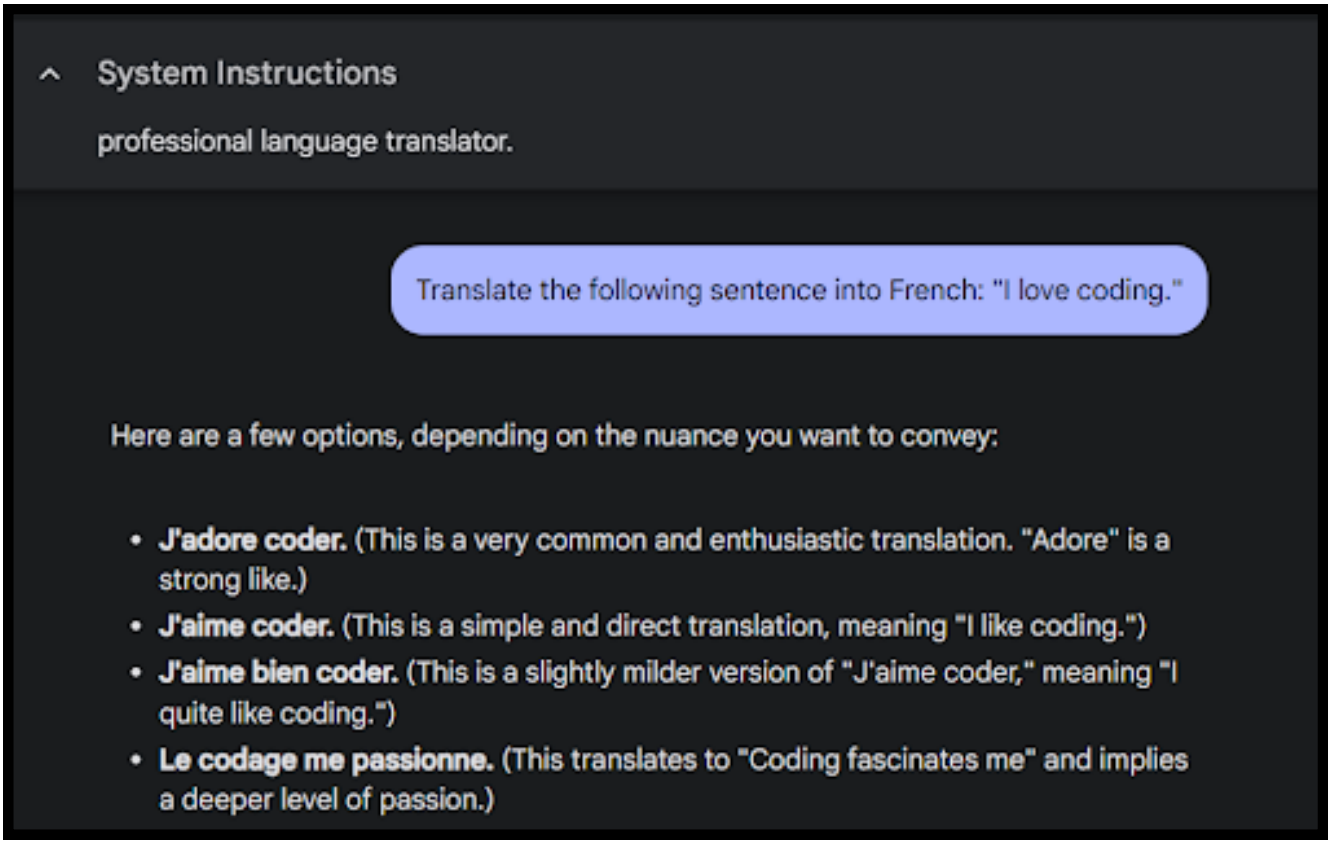


Fig 4.22

Step 3: Simplifying Complex Prompts
Imagine you're baking a cake. If you try to mix all the ingredients and bake everything at once, it might get messy. But if you do it step-by-step, it's much easier to manage. The same idea works when you ask a computer to do something complicated – breaking it down into smaller steps makes it work better!

4.10. Chain Prompts:

Solve one part first, then use the result for the next step.

Example of Chain Prompts:

Imagine you need to create a story, but it's a bit complex. Instead of asking for everything all at once, break it down into smaller parts.

First Prompt: "Create a character named Max.
Describe his appearance and personality."

- AI Response: "Max is a tall, energetic teenager with messy brown hair and a big smile. He loves sports and is always the first to jump into any adventure."

Second Prompt: "Now, give me a setting for Max's first adventure."

- AI Response: "Max finds himself in a dense forest with towering trees, colorful flowers, and a strange, glowing path leading deeper into the woods."

Third Prompt: "Write the beginning of Max's adventure in the forest."

- AI Response: "Max steps onto the glowing path, his heart racing with excitement. He hears the soft rustle of leaves and wonders what mysteries lie ahead."

By building up the story step by step, each piece of information builds on the previous one, making it easier to guide the AI to the final result!

4.11. Aggregate Responses:

Work on smaller parts at the same time, like solving a puzzle!

Example of Aggregate Responses:

Now, imagine you need to generate a full story, but you want to work on different parts at the same time. Instead of asking for the entire story in one go, you break it into sections.

- **Prompt 1:** "Write the introduction of the story."
- **Prompt 2:** "Describe the character and their background."
- **Prompt 3:** "Create the setting where the story takes place."

When the AI generates these separate parts, you can bring them together to form a complete story. This method helps when the task is too large to handle all at once!

Try these strategies in your AI-powered challenges!

4.12. What Can Generative AI Create?

Generative AI is super powerful! It can make:

- Art and Pictures: Ask AI to draw or create beautiful pictures.
- Text: Ask AI to write a story, a poem, or help with homework.
- Audio and Video: Want music or videos? AI can make those too!

4.13. How to Use AI Right: Be a Smart User!

- Don’t just ask for answers—ask for ideas, opinions, and different ways to do things!
- Get multiple answers to make sure you’re thinking about things from all angles.
- Be creative! Use AI to come up with new ideas, not just repeat the same old ones.

4.14. Unlocking the Power of Multimodal AI

Did you know Generative AI can understand not just text, but also images? One of the most exciting and underused features of AI is multimodal prompting—where you combine pictures and text to solve problems, spark creativity, and explore new ideas!

4.14.1. What is Multimodal AI?

Multimodal AI allows you to upload a picture along with a question or instruction, and the AI responds based on what it “sees” in the image. This turns a simple photo into a powerful tool for learning and creating!

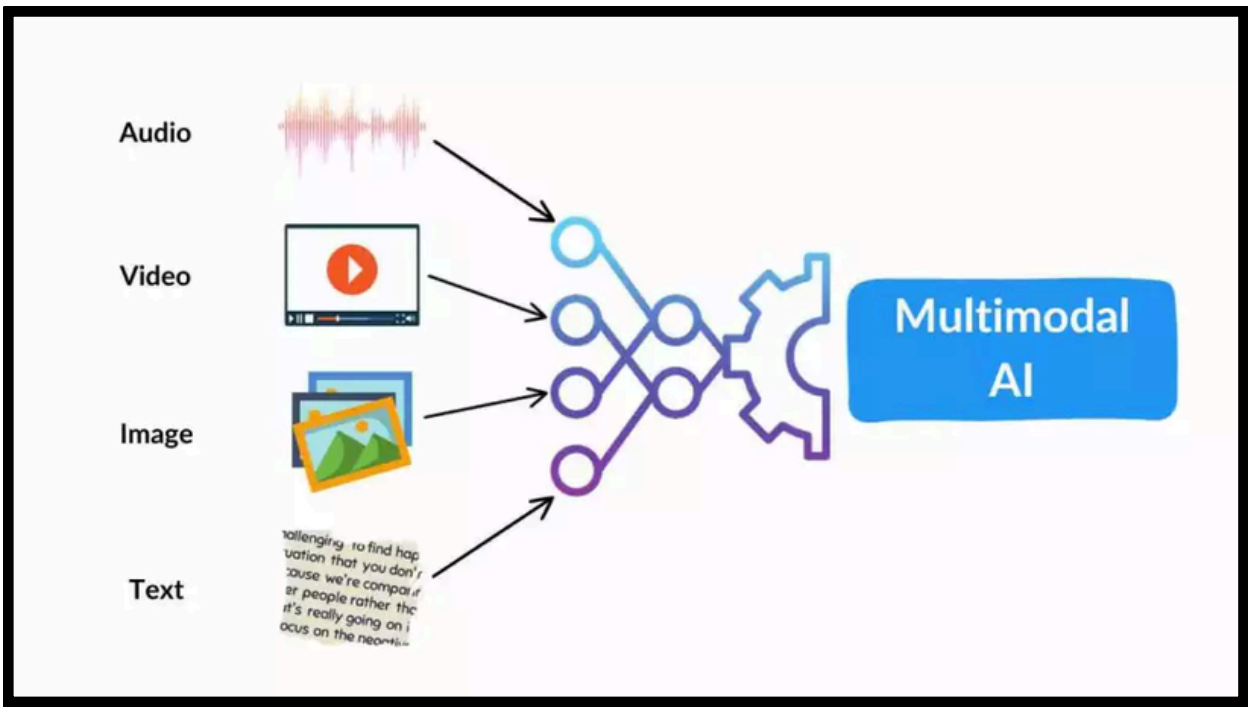


Fig 4.23 Multimodal AI

Example: Just like sending a picture to a friend and asking, “What is this?” or “How do I make it?”, you can ask AI the same things!

4.15. Challenge: AI-Powered Video Detective!

Step 1: Capture a Clip

Find a short video clip that includes speech or text on the screen. It could be a news clip, a sports highlight, or even a classroom lesson.

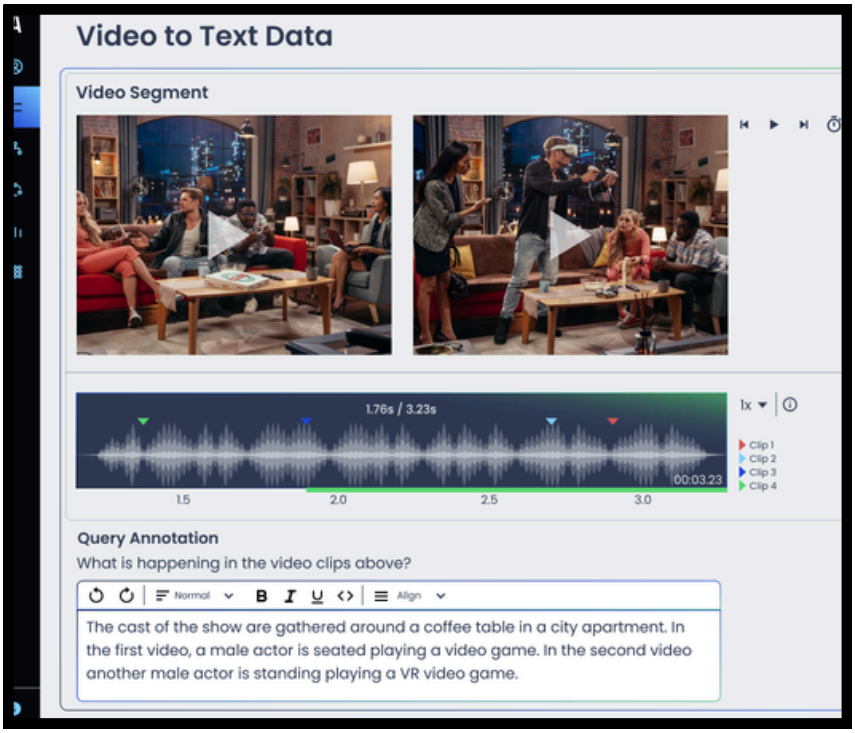


Fig 4.24

Step 2: Transcribe the Content

Listen carefully and try to write down what is being said or shown in the video.

Step 3: Ask AI for Help

Use an AI tool to transcribe the audio or summarize what is happening in the video.

Step 4: Compare and Discuss

Look at your transcription and compare it with the AI's version. Did the AI get it right? What parts would you improve?

4.16. What's Next?

Next up, get ready for hands-on action! In the next module, you'll dive into Thunkable, where you'll learn to build a storytelling app powered by Google Gemini. Users will enter a prompt, and the app will generate a short story based on their input. Time to bring stories to life with AI!

MODULE 5

EXPLORING GENERATIVE AI TOOLS

Module 5 Content

5.1 Getting Started with Thunkable: Your First Steps!

5.2 FUN FACT:

5.3 Designing Your Storytelling App: Step-by-Step!

5.4 Do you know what is API Key?

5.5 API GENERATION

5.6 Step-by-Step Guide to Pay for Gemini API

5.7 Coding Section

05

Congratulations! You've reached the end of the course—but the real fun is just beginning!

Now, it's time to put your skills into action! In Module 5, we're diving into an exciting hands-on project where you'll learn how to connect an AI-powered API in Thunkable to generate short, creative stories.

I’ve got something super exciting to share with you! Look at the image—what do you think it is?

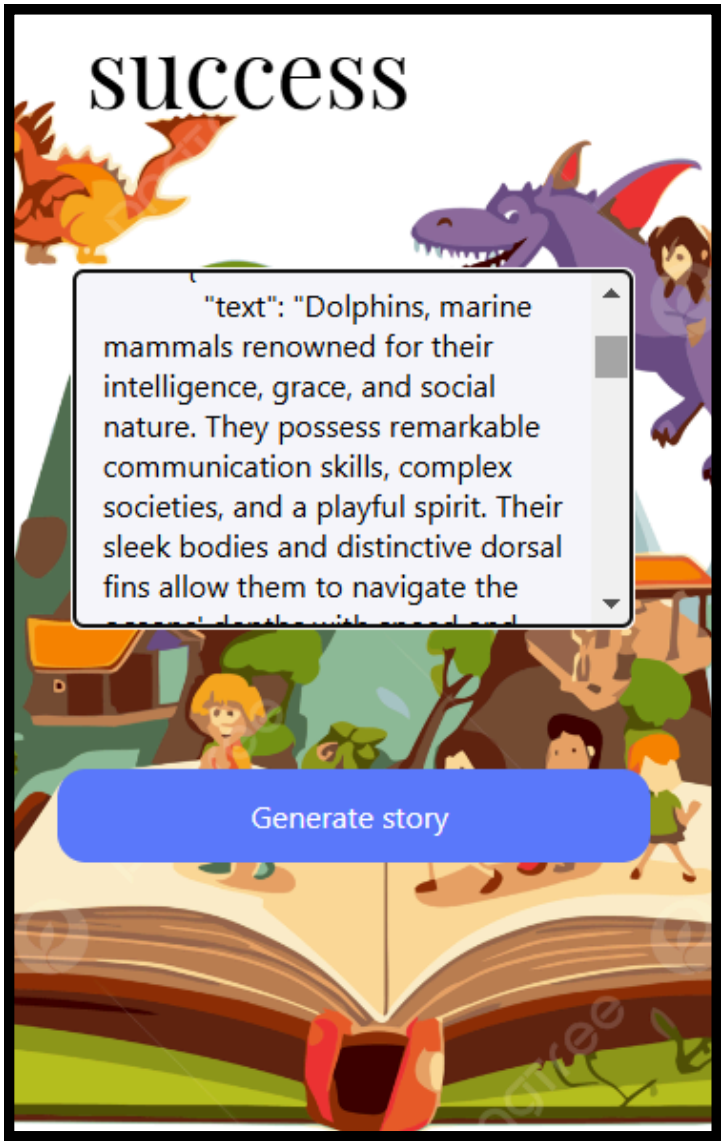


Fig 5.1

We’re going to build a Storytelling App!

Are you ready to make your stories come alive in a whole new way? Get ready to create, explore, and have tons of fun as we build this epic app together!

5.1. Getting Started with Thunkable: Your First Steps!

Step 1: Open a Web Browser

- Thunkable is a web-based platform, so you don't need to install any software. Open Google Chrome, Firefox, Edge, or Safari on your computer.

Step 2: Go to Thunkable's Website

- In the browser's address bar, type https://thunkable.com/ and press Enter.

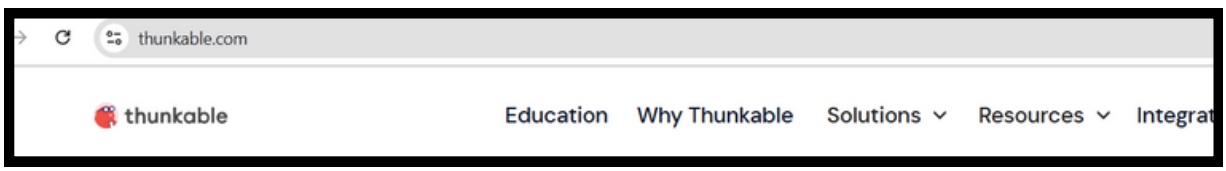


Fig 5.2 Website Address

Step 3: Sign Up / Log In

- If you don’t have an account, click on "Sign Up" and create an account using email.

Fig 5.3

Now add the email address or you can simply click sign in with google

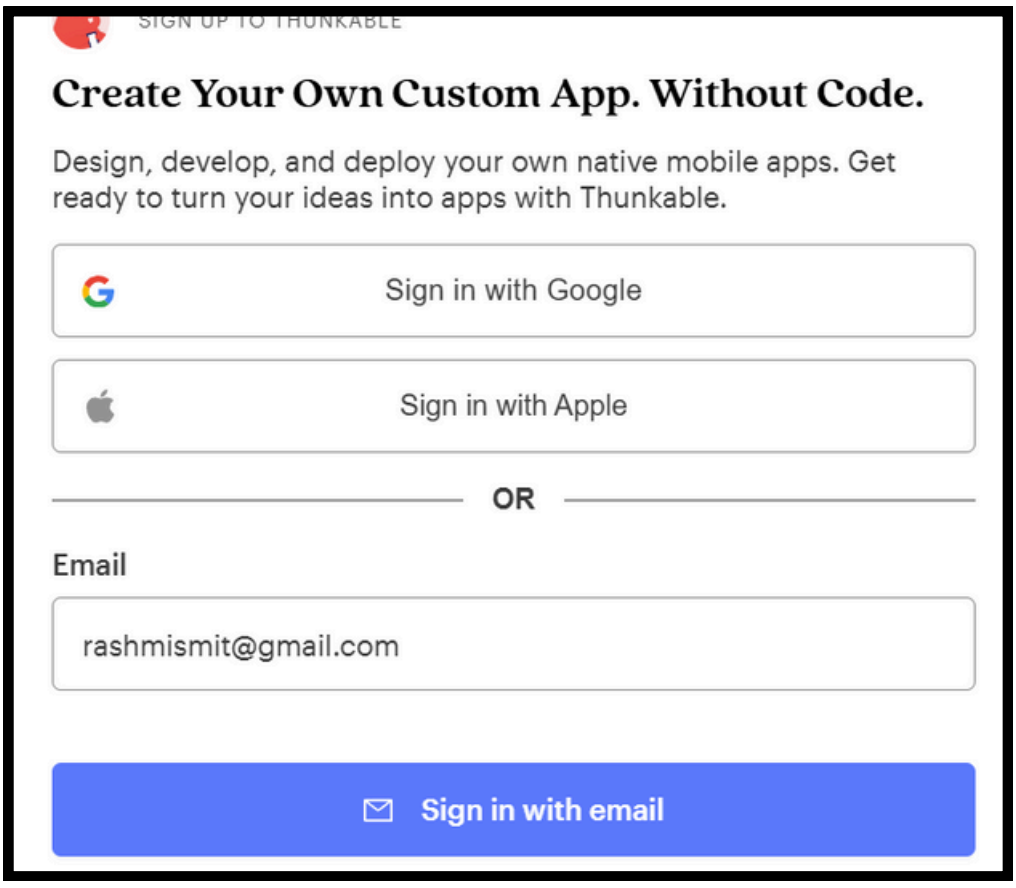


Fig 5.4

Step 4:Confirm in your mail

- Go to your email inbox and find the Thunkable verification email.
- Click on the confirmation link in the email.

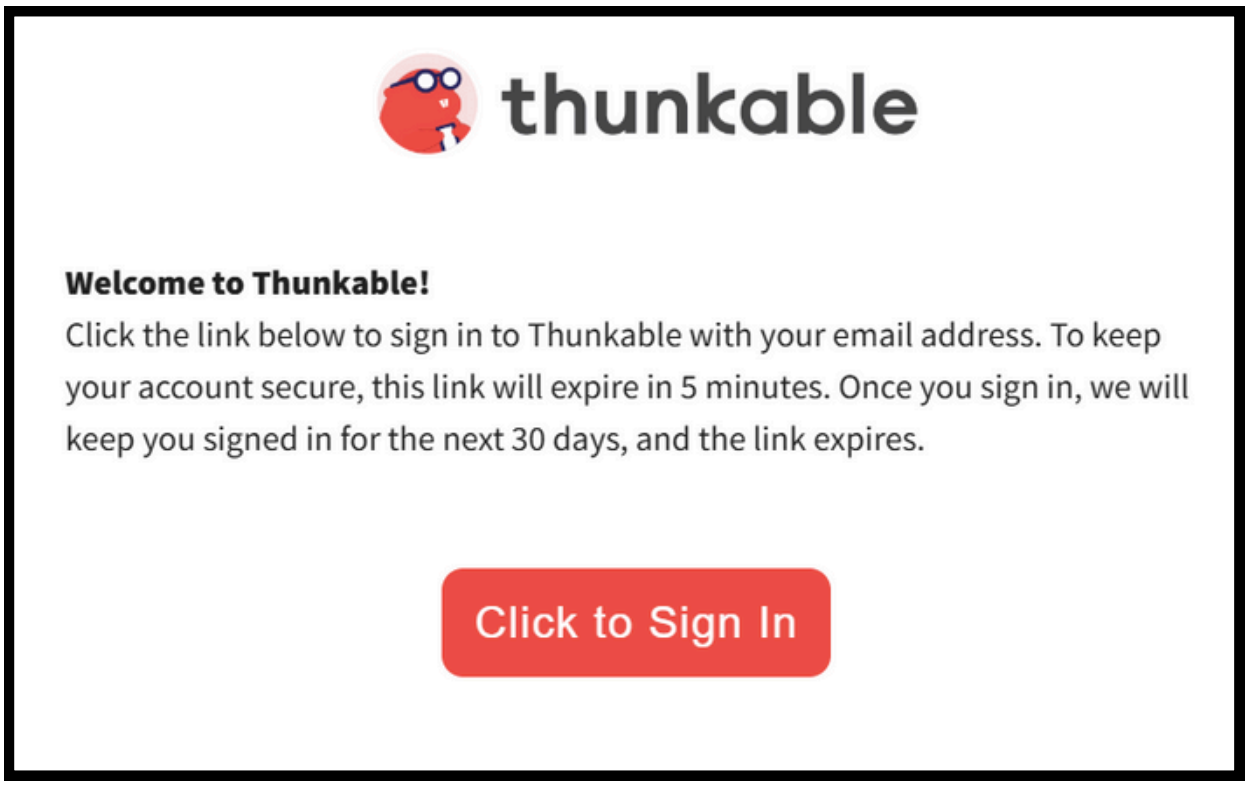


Fig 5.5

Now Answer the Question as shown in the image and click Next to proceed.

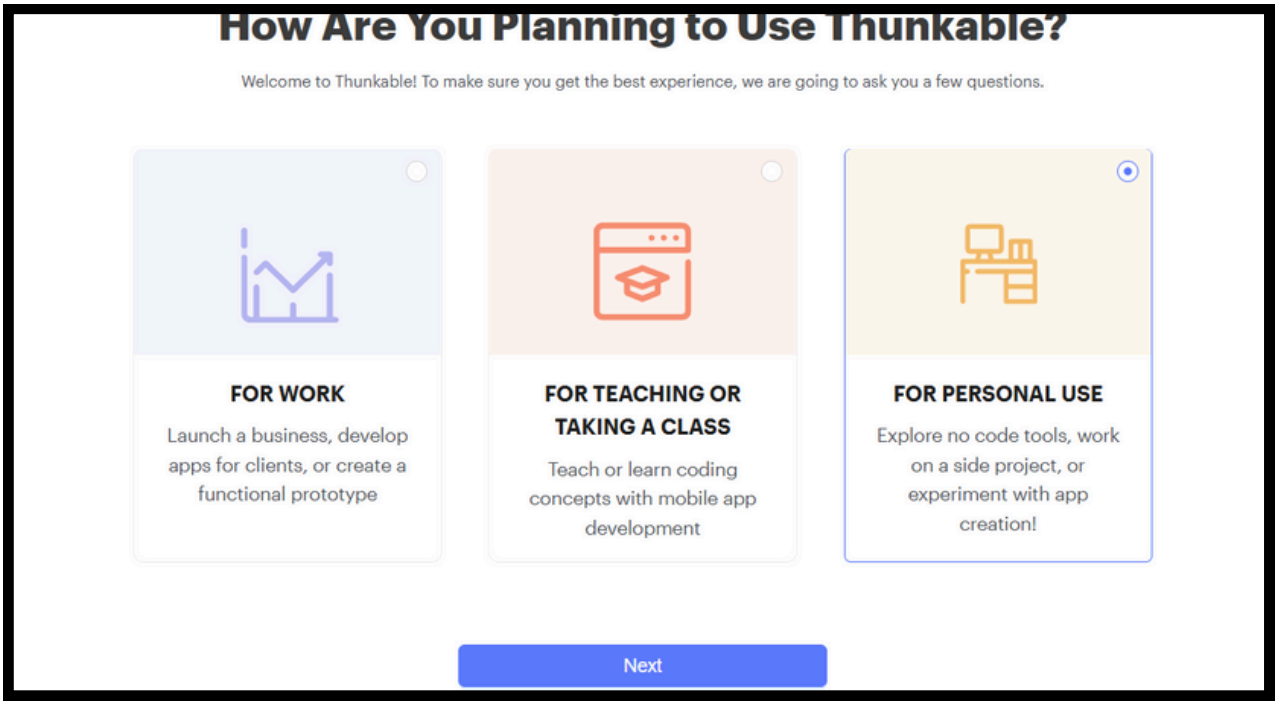


Fig 5.6

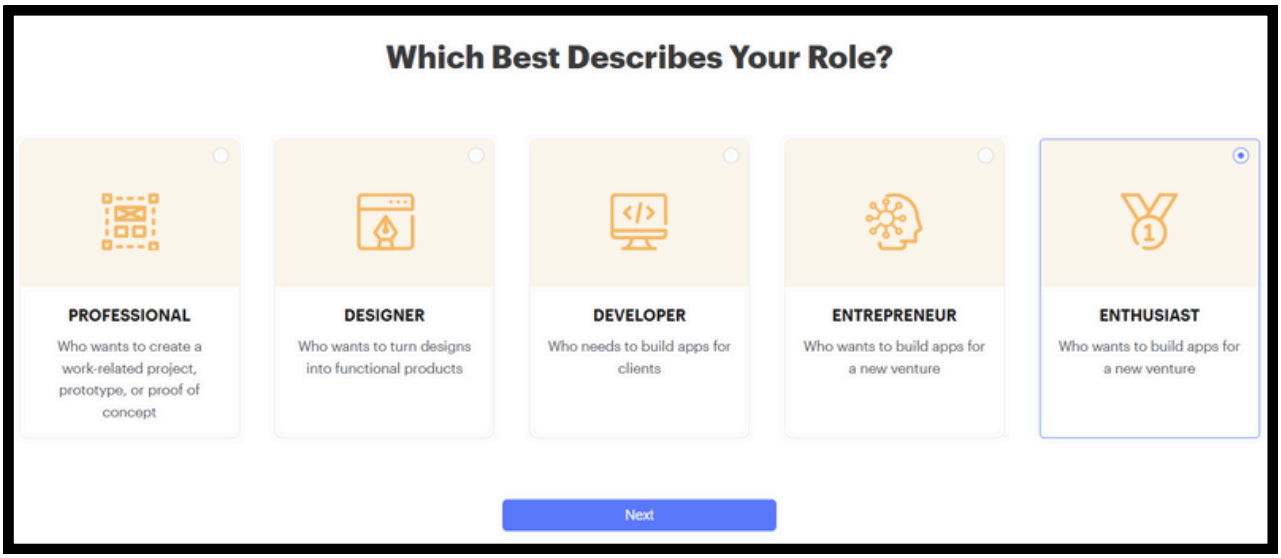


Fig 5.7

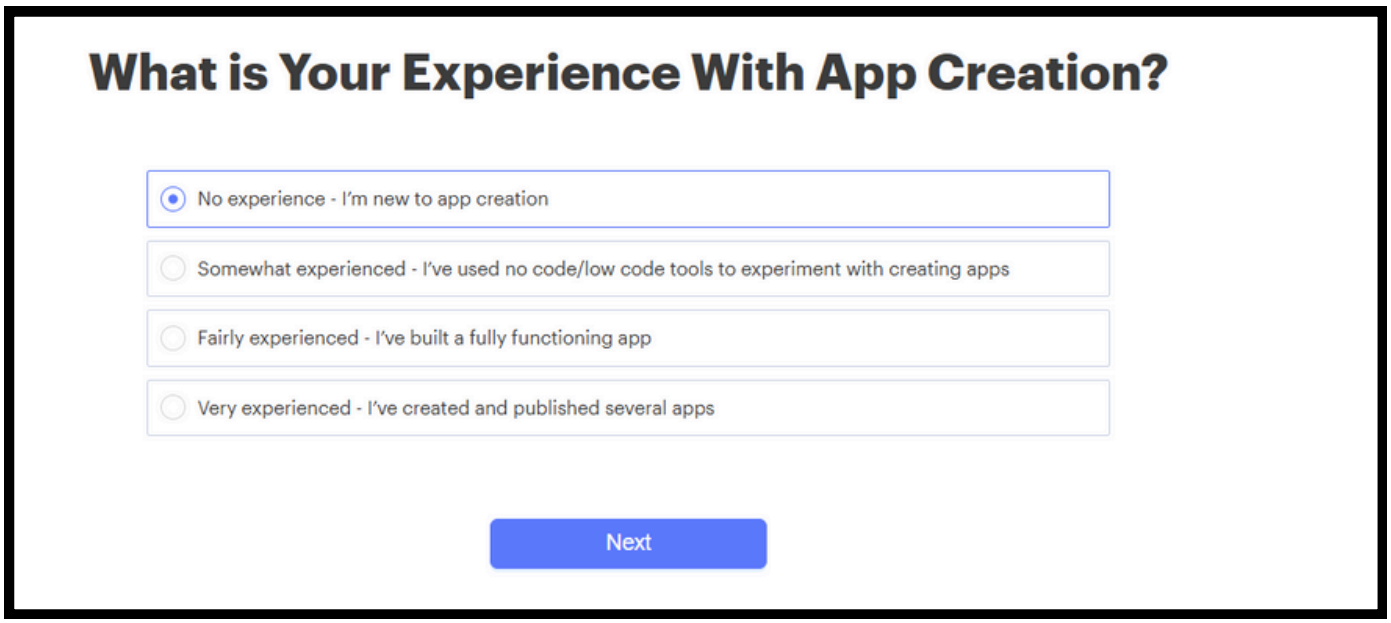


Fig 5.8

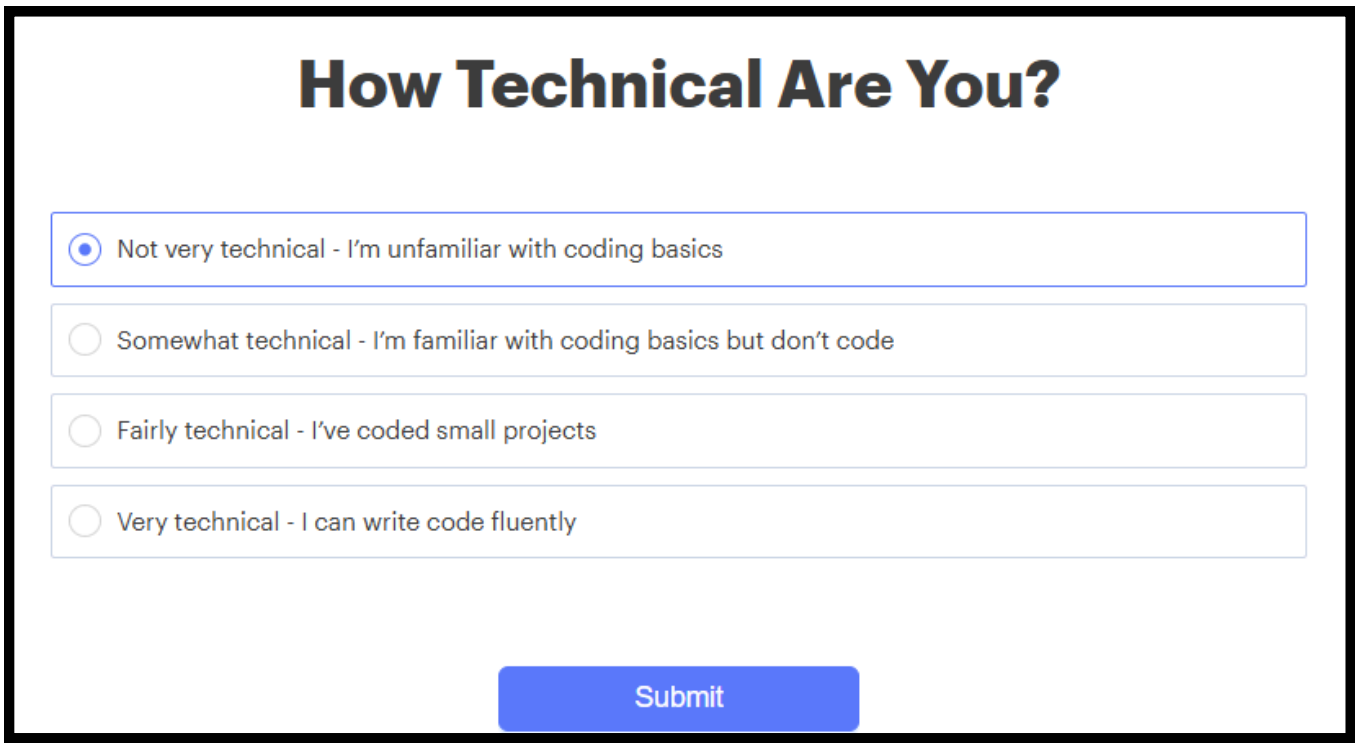


Fig 5.9

Finally, click on "Start for Free" to log in to Thunkable and begin your creative journey!

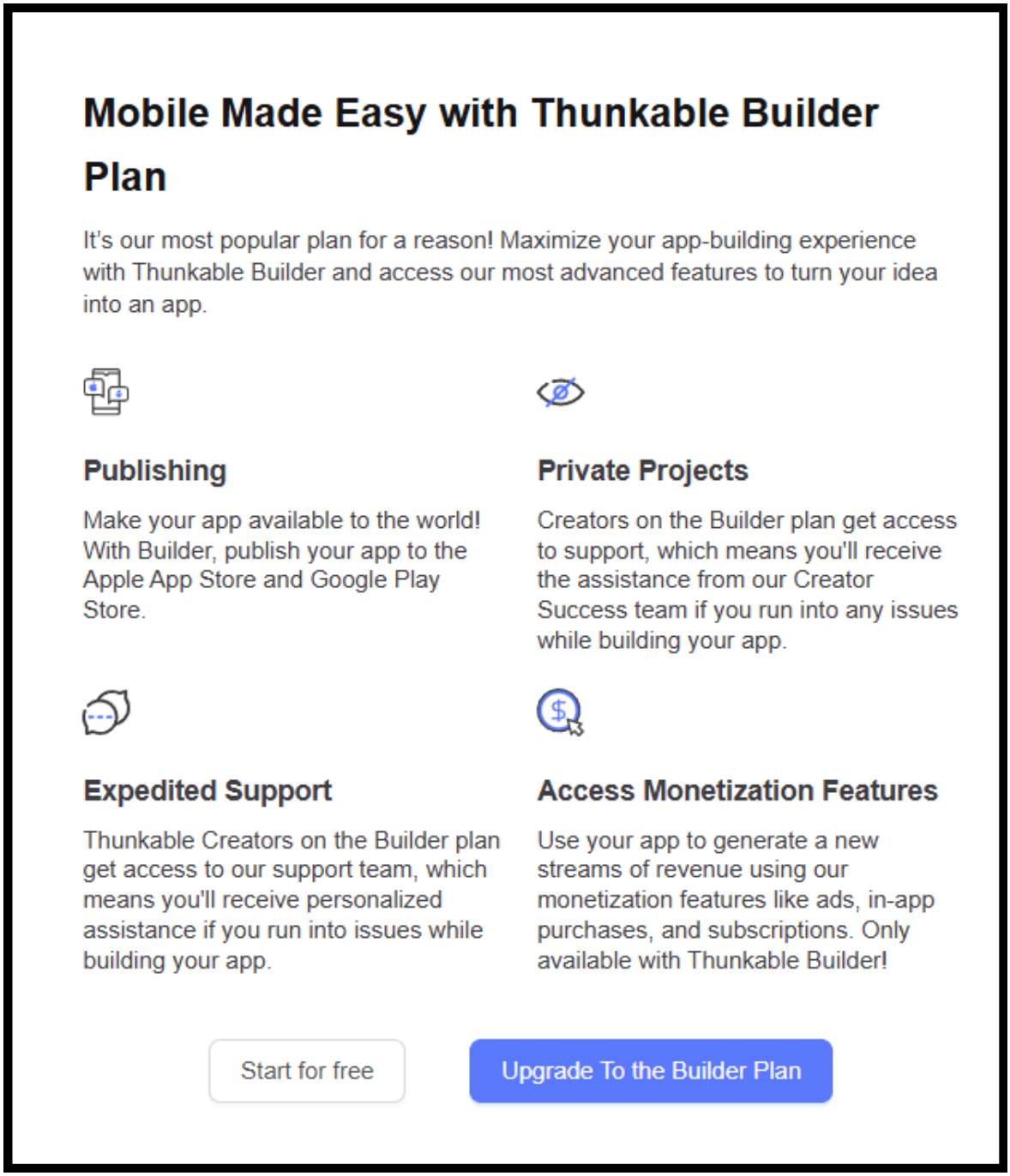


Fig 5.10

Note: If you already have an account, click on "Log In" and enter your credentials.

Step 5: Access the Thunkable Project Dashboard

After logging in, you'll be taken to the Thunkable project dashboard, where you can create new projects or edit existing ones.

We've already covered how to log in to Thunkable, and now it's time for the exciting part—creating your first project!

In this next step, we'll guide you through setting up a new project in Thunkable, designing the interface, and preparing it for AI integration.

5.2. FUN FACT:

Thunkable was one of the first no-code platforms to support building native mobile apps for both Android and iOS without needing to write a single line of code

Fig 5.11

5.3. Designing Your Storytelling App: Step-by-Step!

5.3.1. DESIGN PART

Step 1: Start a New Project

1. Click the “Create New” button.
2. Choose "Blank Project" or "Sample Project" to start with a template.
3. Name your project and click "Create"

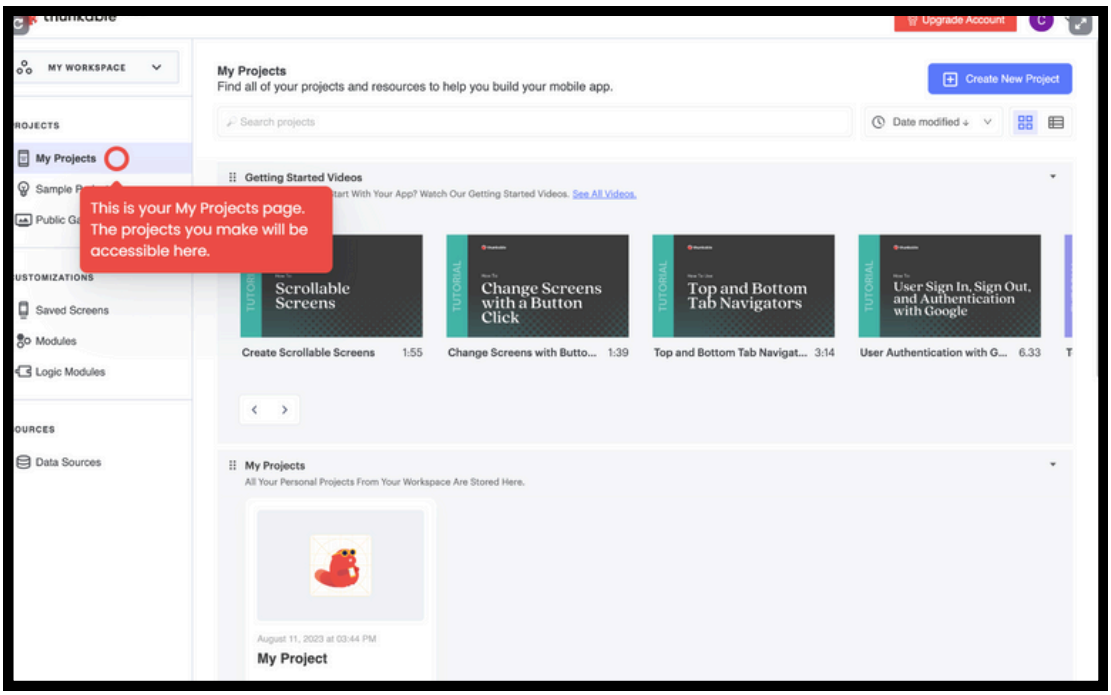


Fig 5.12

Step 2:Adding Label

- Drag a Label component from the "User Interface" category to the top of the screen.

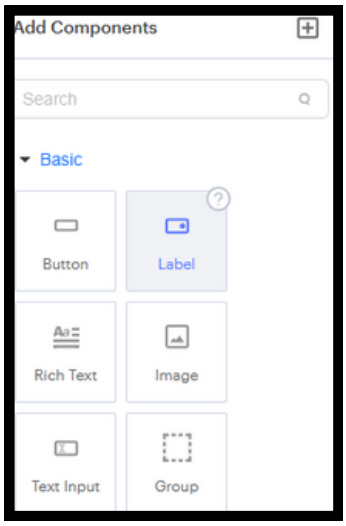


Fig 5.13

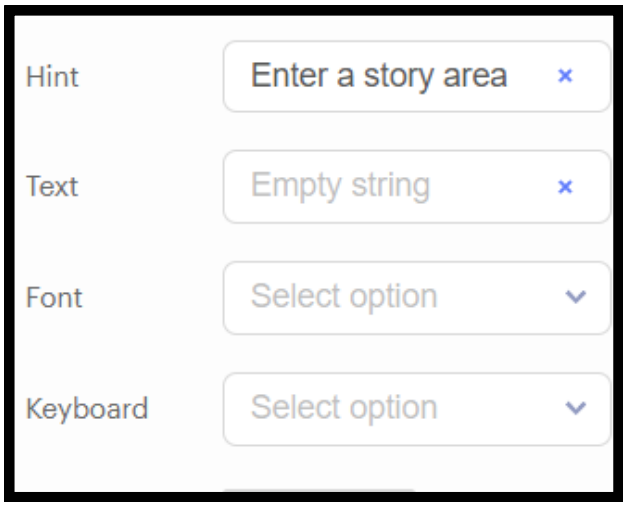


Fig 5.14

Set the Text property to "AI Storyteller". You can adjust the FontSize, FontWeight, and TextAlign for styling.

Step 3: Adding Text Input

- Drag a TextInput component below the label.

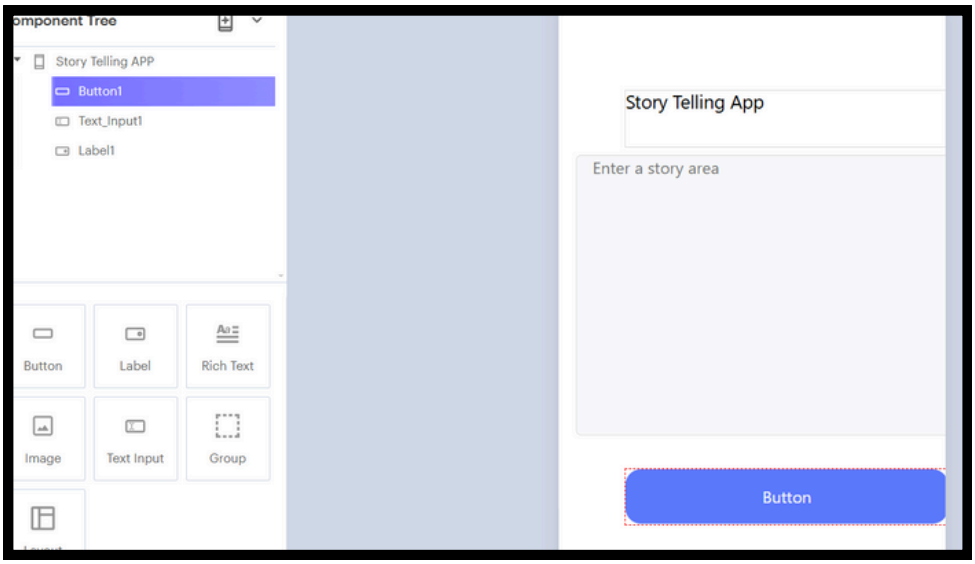


Fig 5.15

Set Hint property to "Enter a story idea...".

Fig 5.16

Set MultiLine property to true to allow longer prompts. Also, consider setting Height to a reasonable number (e.g., 100 pixels) to give the user a better view of what they're typing. Set Width to "Fill container".

Fig 5.17

Step 9: Adding Button

- Drag a Button component below the TextInput.

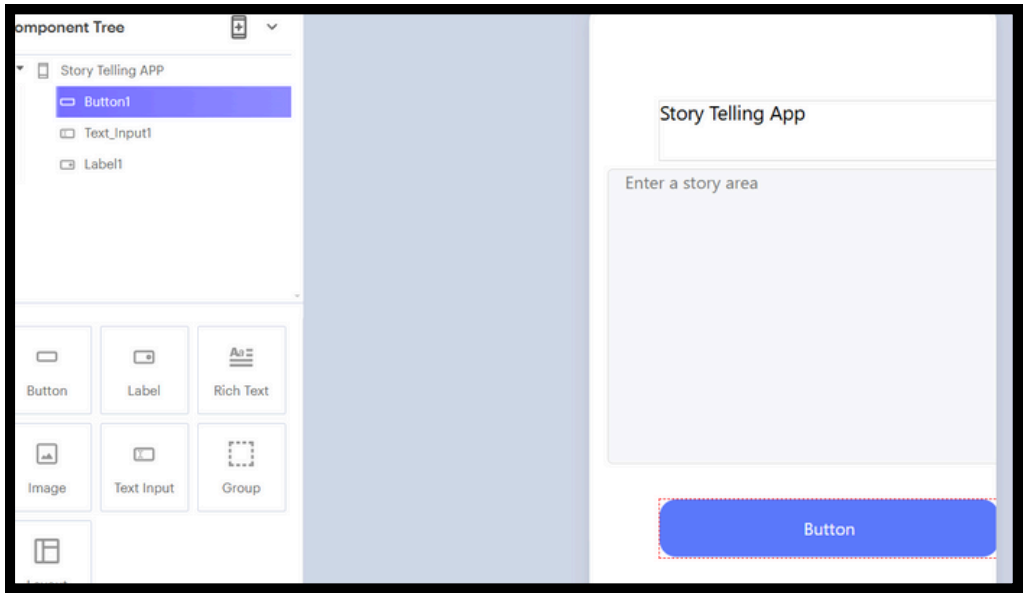


Fig 5.18

Set Text property to "Generate Story". Adjust appearance properties as desired.

Fig 5.19

With the design now complete, it's time to bring our app to life with coding! In this next step, we'll add the logic that powers the app, making it interactive and functional. Let's dive in and start building!

- **Before we dive into coding, let's first create the API we need for this course.**

- **In this step, we'll set up the necessary API key and understand how to connect it to our Thunkable project.**

5.4. Do you know what is API Key?

Imagine you're trying to borrow a book from a library. But before you can get the book, the librarian asks for a library card to make sure you're allowed to borrow it. The API key is like that library card, but for the internet! It tells the website or service that you're allowed to use its information or tools.

When we use a Google API key, it allows our app to connect to Google's services (like Google Maps, Google Search, or other cool things) and get the data we need for our app. Without the key, our app wouldn't be able to get that info. So, just like how you need a library card to get books, you need an API key to get information from the internet!

how

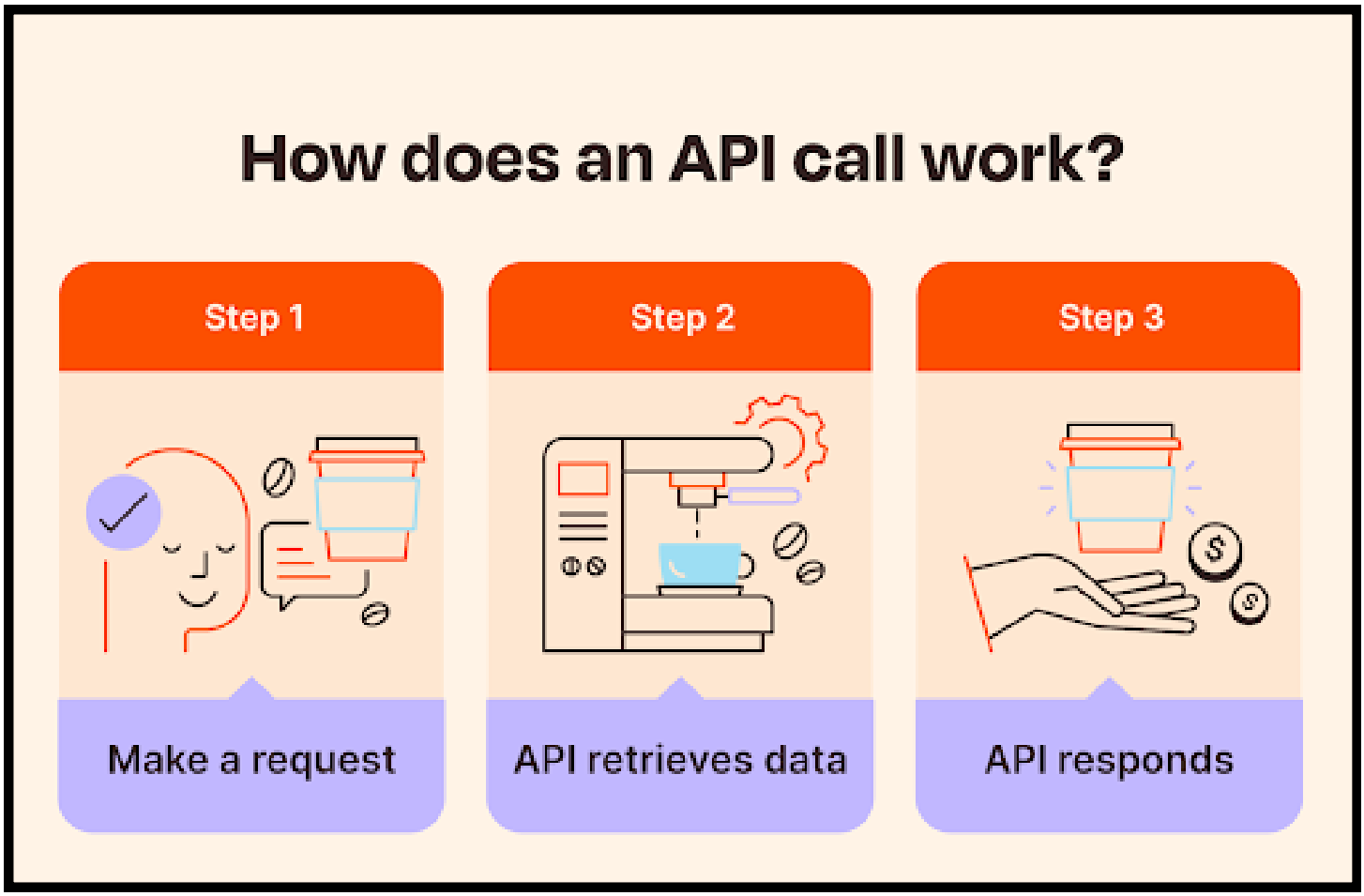

How does an API call work?
Step 1
Step 2
Step 3
Make a request
API retrieves data
API responds

Fig 5.20

5.5. API GENERATION

STEP 1: Click on this link to go to the Gemini API setup page:
Gemini API Setup

STEP 2: Choose your API key:
Once you're on the page, you'll be prompted to select the appropriate API key for your project.

STEP 3:Accept the Terms & Conditions:

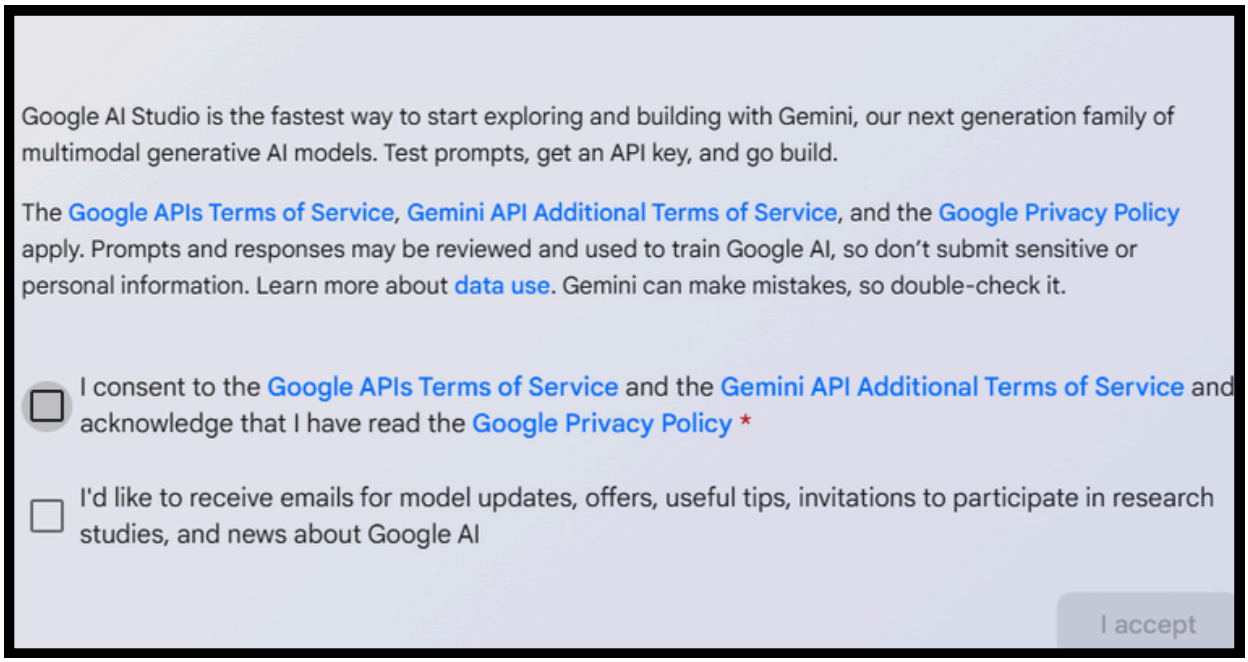


Fig 5.21

STEP 4:Select the API Key:

Once you've accepted the terms, you'll see an option to choose the API key. Click on "API Key" to generate your key.

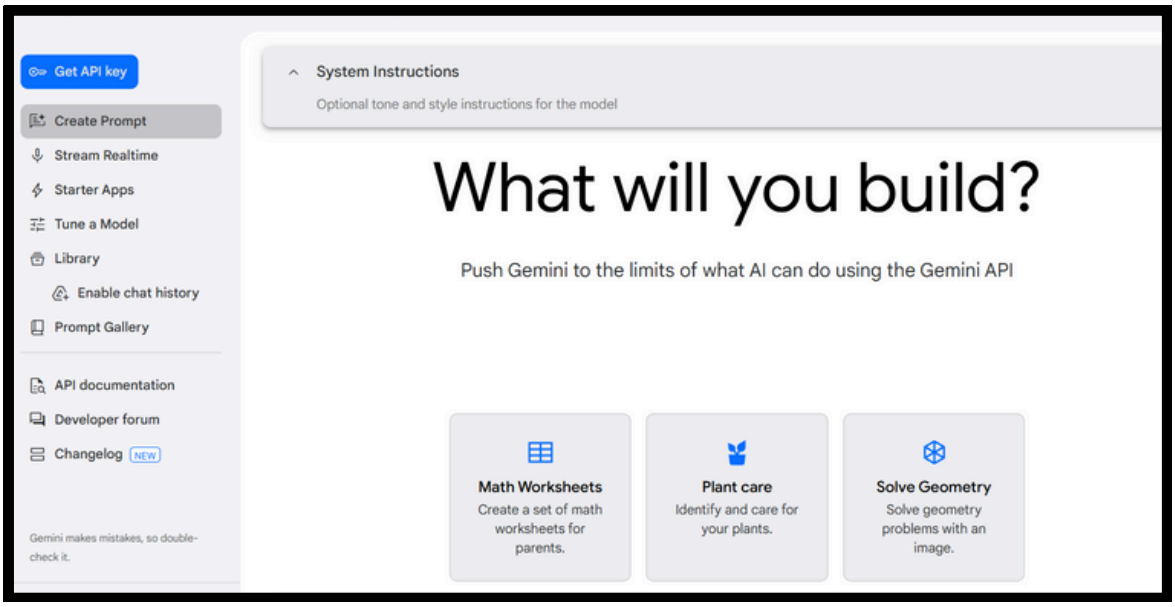


Fig 5.22

Fig 5.23

Step 5: Copy the API Key:
After the key is generated, copy it by clicking the copy icon next to the key. This is the key you'll use for your Thunkable project.

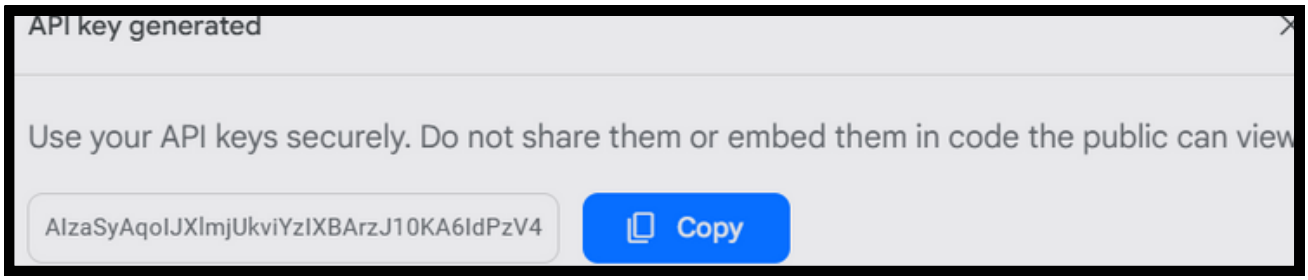


Fig 5.24

Note: To use the Gemini app, you'll need to add your card details to access the trial version.

5.6. Step-by-Step Guide to Pay for Gemini API

STEP 1. Select the "Set Up Billing" option to proceed.

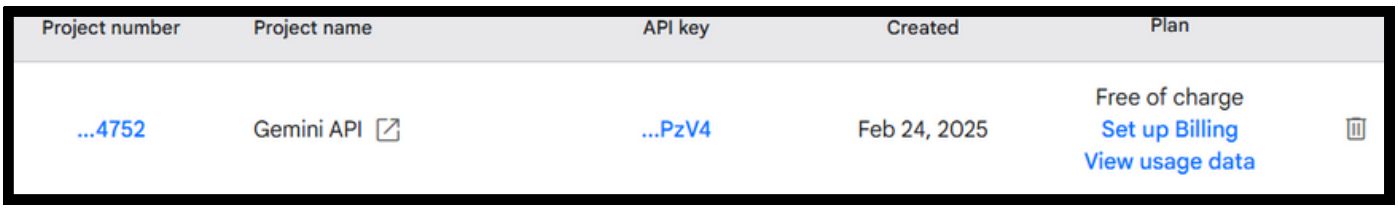


Fig 5.25

STEP 2. Please agree to the terms and conditions to proceed.

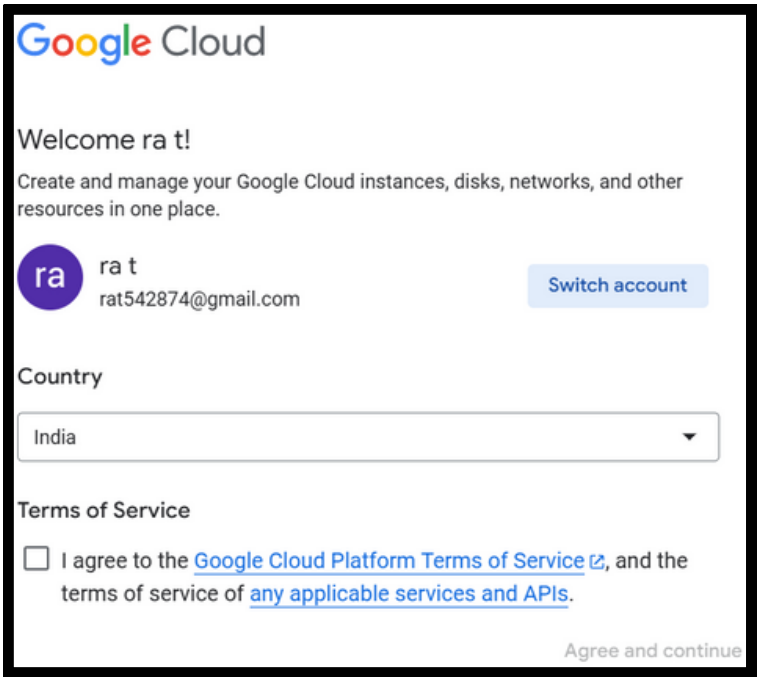


Fig 5.26

STEP 3. Click on "Create Billing Account" to get started.

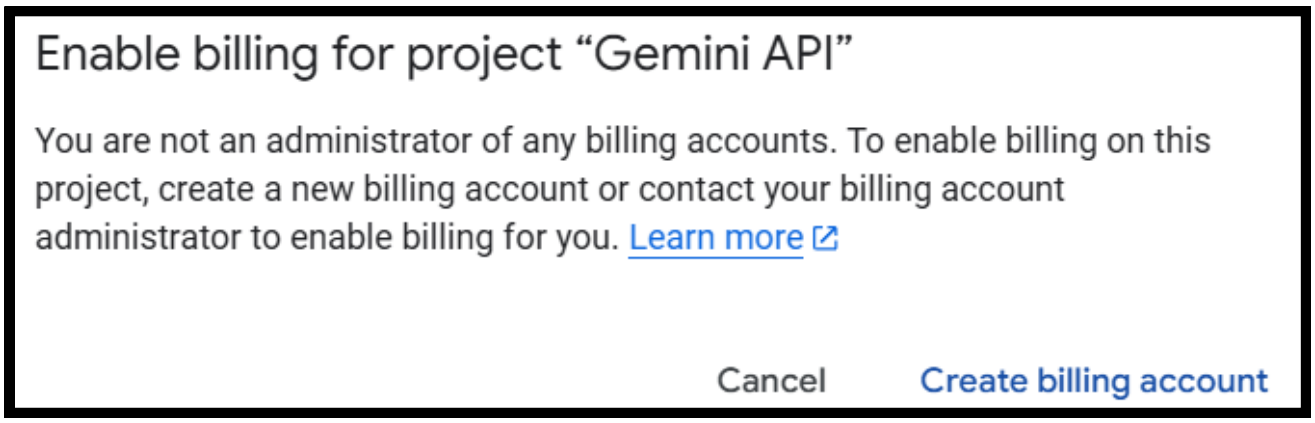


Fig 5.27

Step 4. Confirm your account information

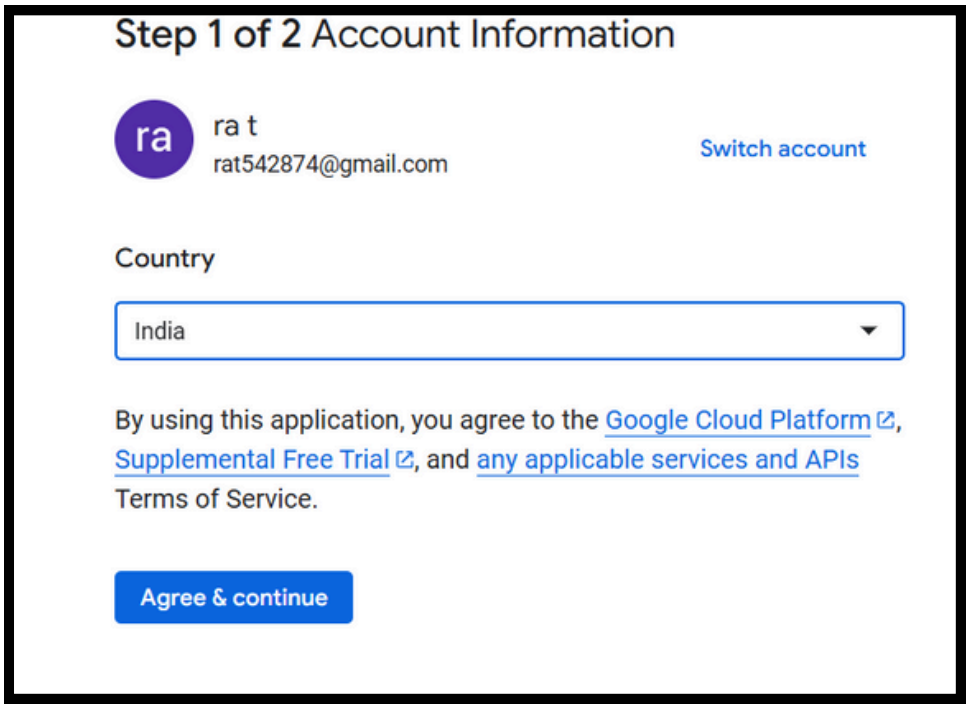


Fig 5.28

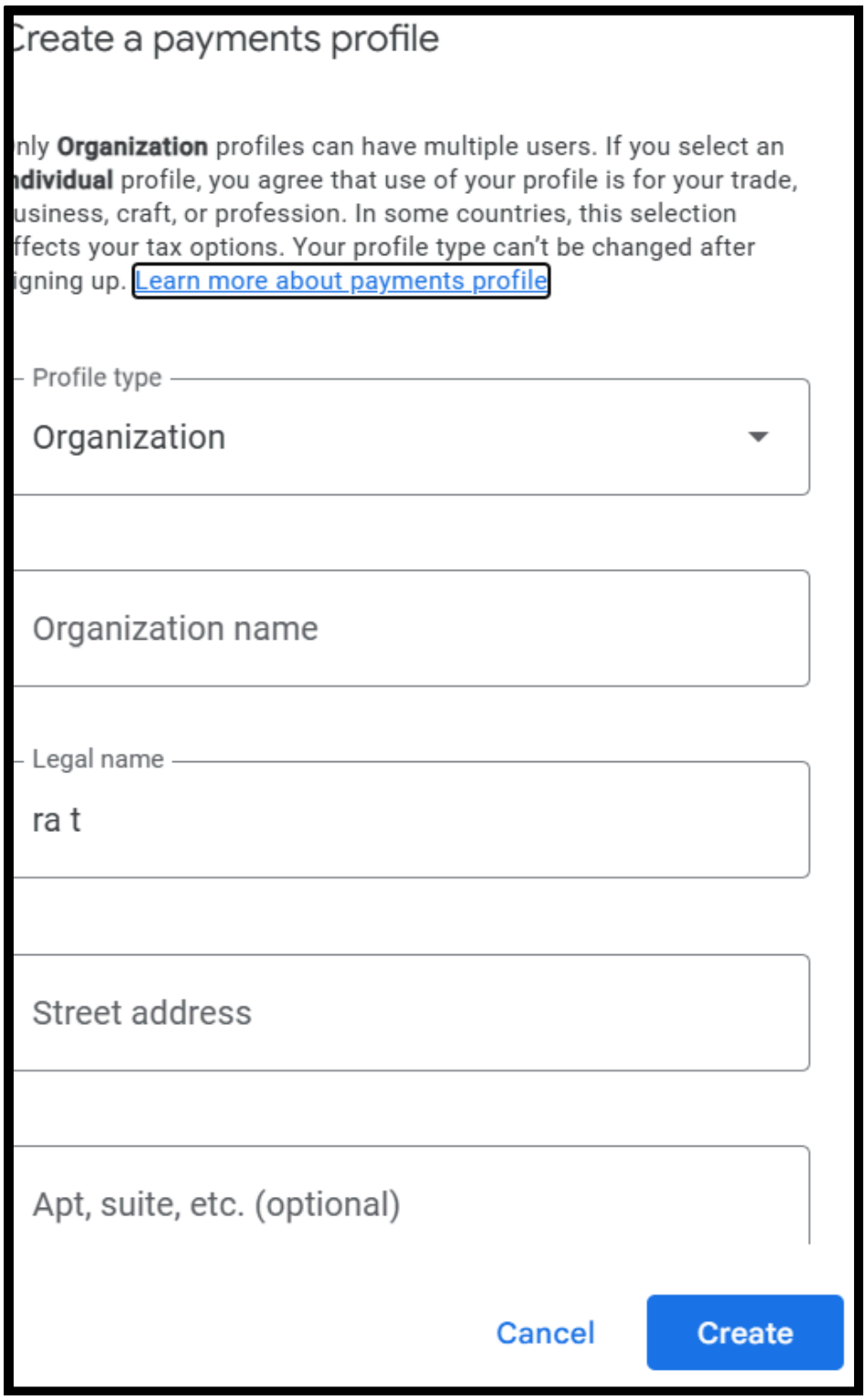

Create a payments profile
nly Organization profiles can have multiple users. If you select an
ndividual profile, you agree that use of your profile is for your trade,
usiness, craft, or profession. In some countries, this selection
ffects your tax options. Your profile type can't be changed after
igning up. Learn more about payments profile
Profile type
Organization
Organization name
Legal name
ra t
Street address
Apt, suite, etc. (optional)
Cancel
Create

Fig 5.29

Step 5. Add the payment method

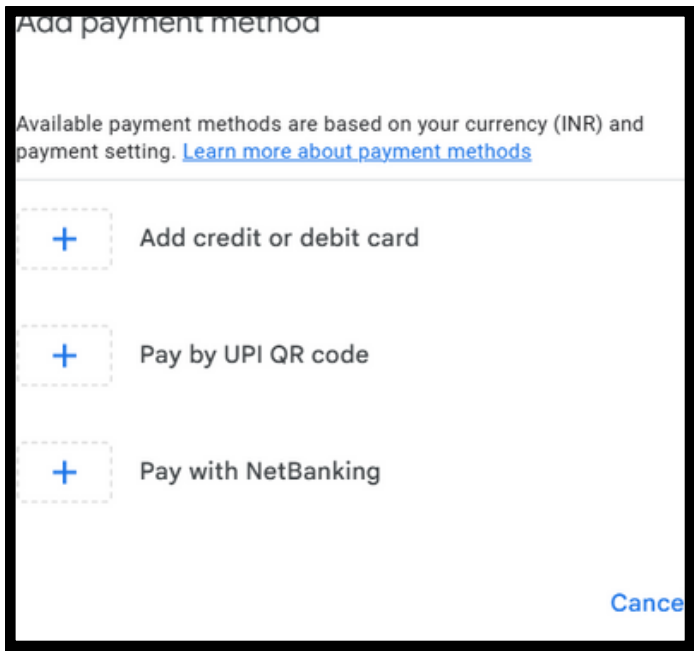


Fig 5.30

Step 6.Choose "Start as Free" to begin using the service.

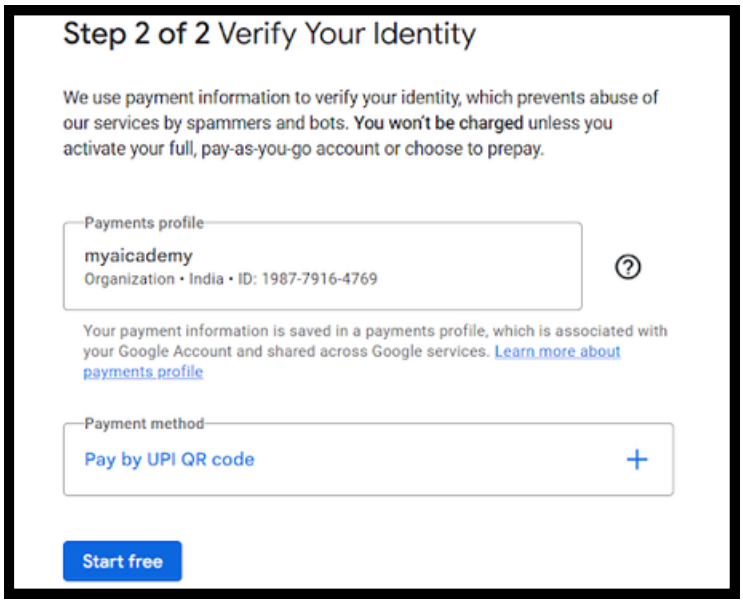


Fig 5.31

Step 7. Now, you should see the status change to "Paid".

Fig 5.32

You've successfully completed the payment for the Gemini API! Now that you have access, remember, you can cancel anytime before the trial period ends to avoid any further charges.

Now, let's jump into the exciting part—coding!

5.7. CODING SECTION

Click the Blocks tab to start coding and bring your app to life!

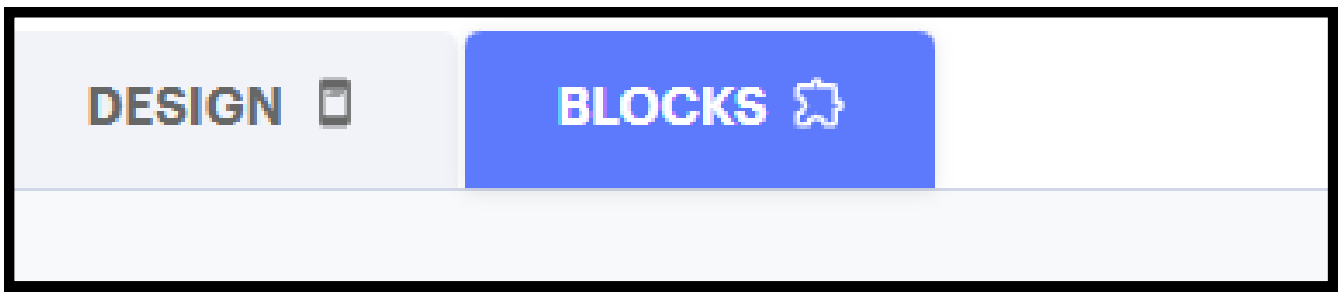


Fig 5.33

Step 1:Initialize app variable name

- This initializes a variable named name, which is likely used later in the app.

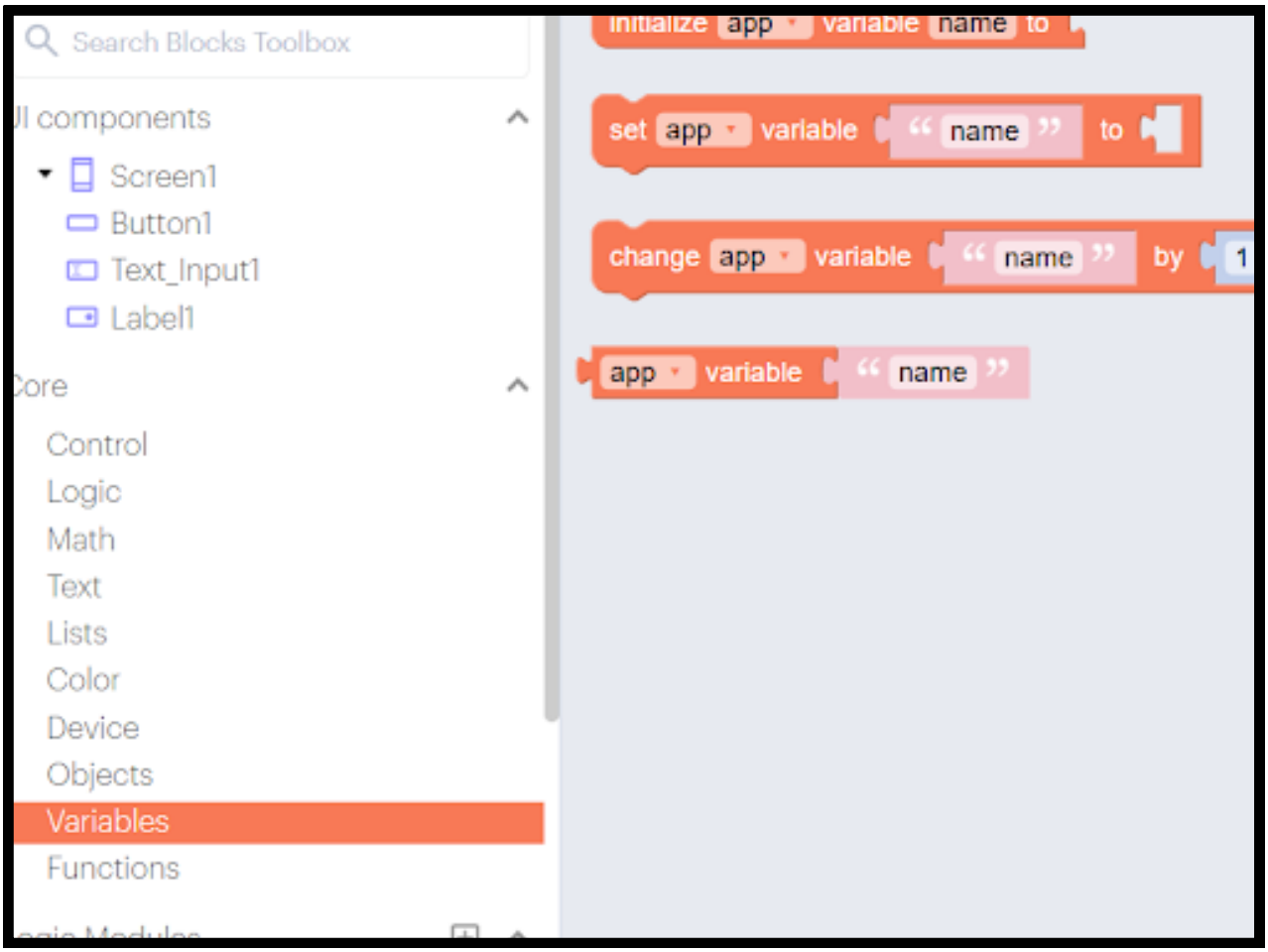


Fig 5.34

From the text box drag and drop the text

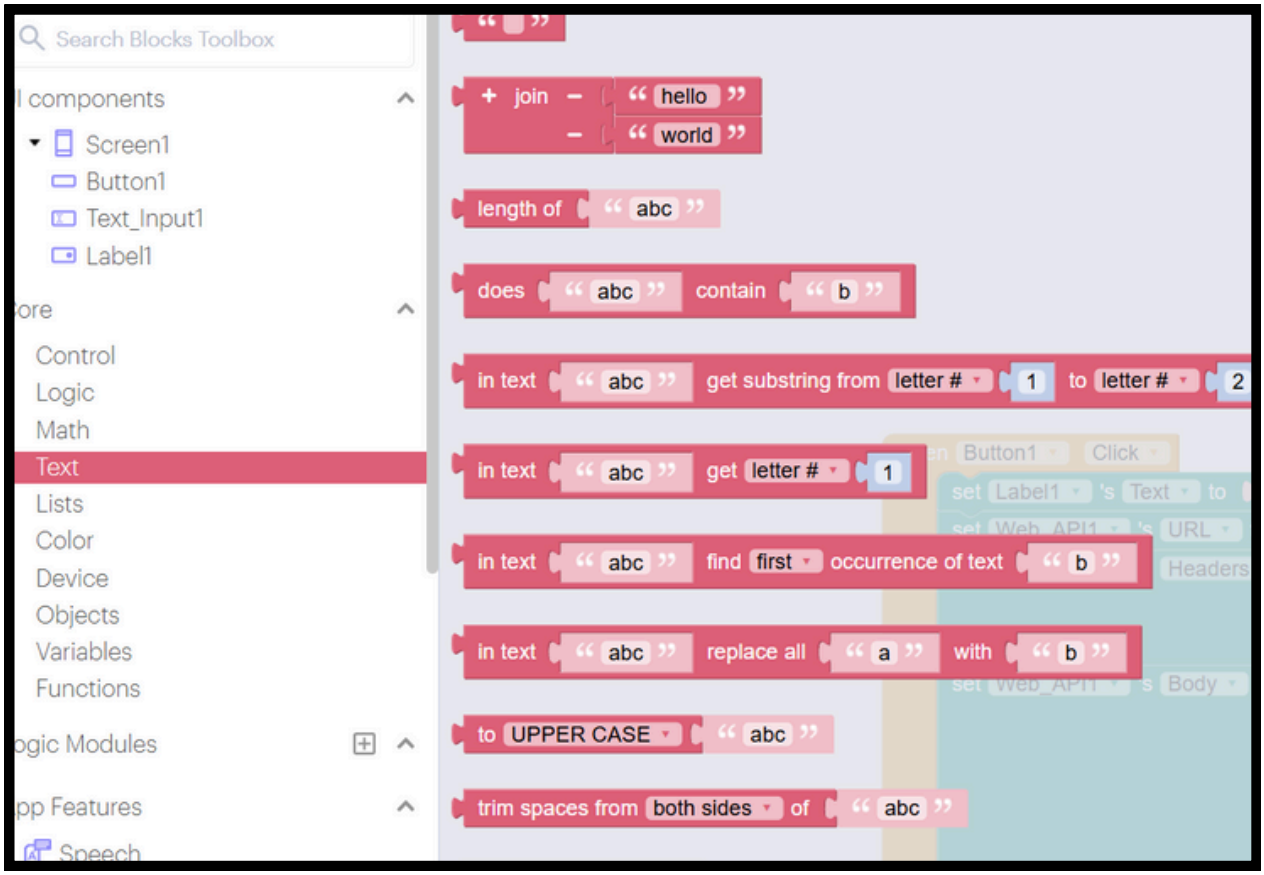


Fig 5.35

Enter the API key that you copied from Google AI Studio and add it to the code block, as shown below.

Fig 5.36

STEP2: Button Click Event

When Button1 is clicked: This event triggers the following actions when the button is clicked.

To do this, drag and drop the Button Click event from the Button

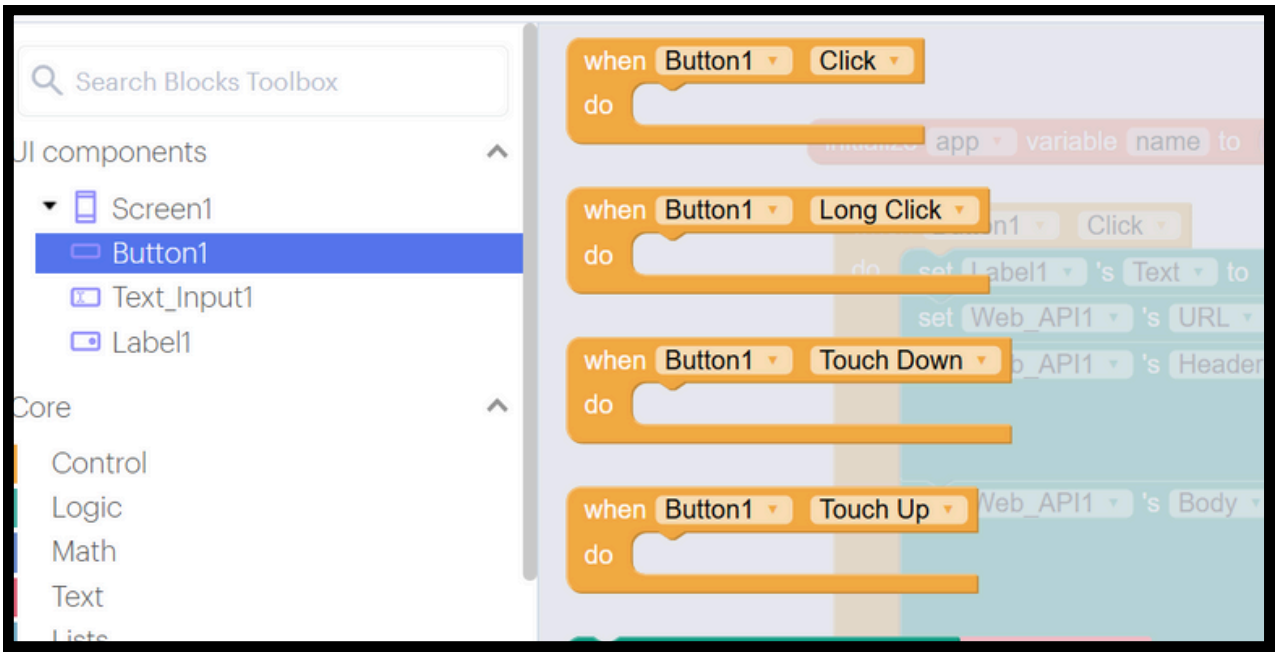


Fig 5.37

Drop the Label UI component below the Button

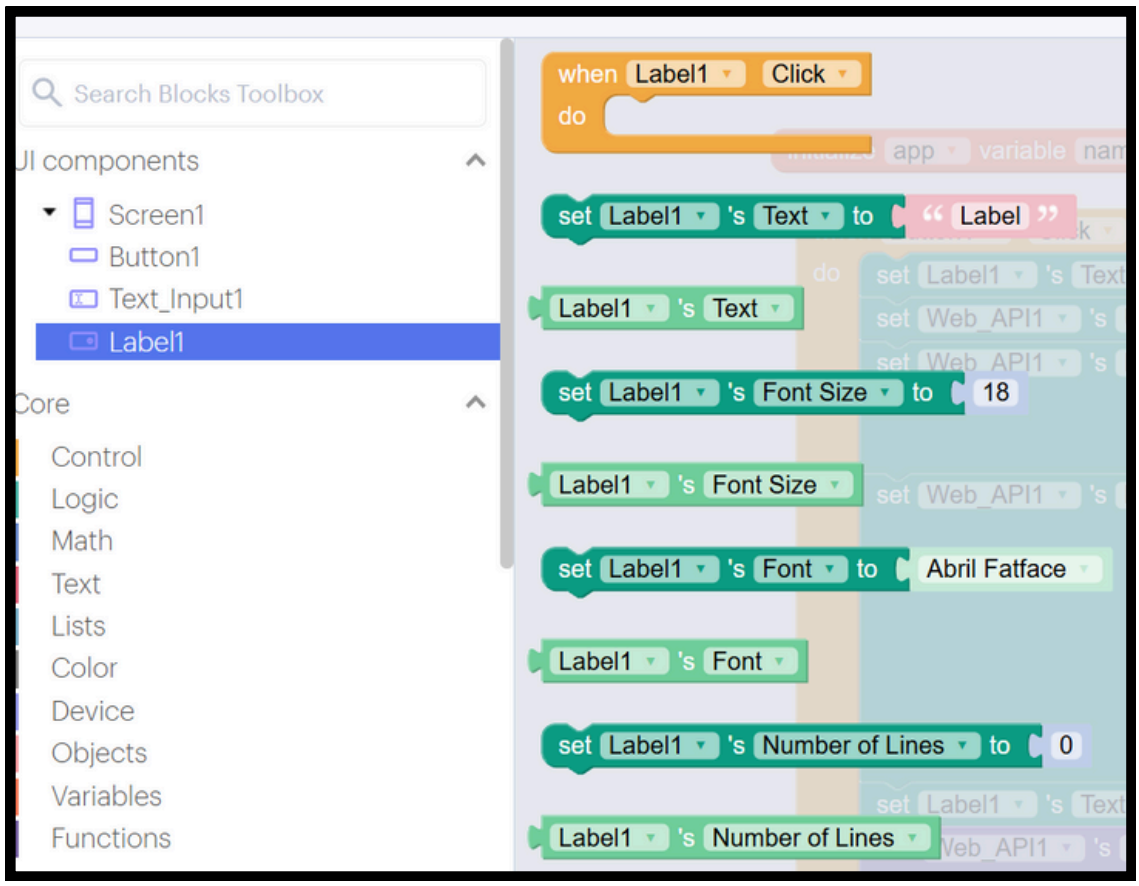


Fig 5.38

Step 3: Displaying API Call Start Message

Set Label1's text to "API CALL STARTED"

Updates Label1 to inform the user that the API call has started.

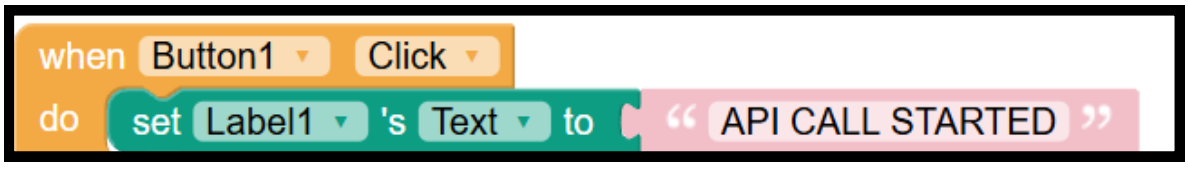


Fig 5.39

Note : We need to drop text as did before to wite the message API call started.

Step 4: Add the Web Component

- In the Designer tab, go the Advanced
- Drag the Web component onto the screen (it will appear as "Web1" in the Components section)

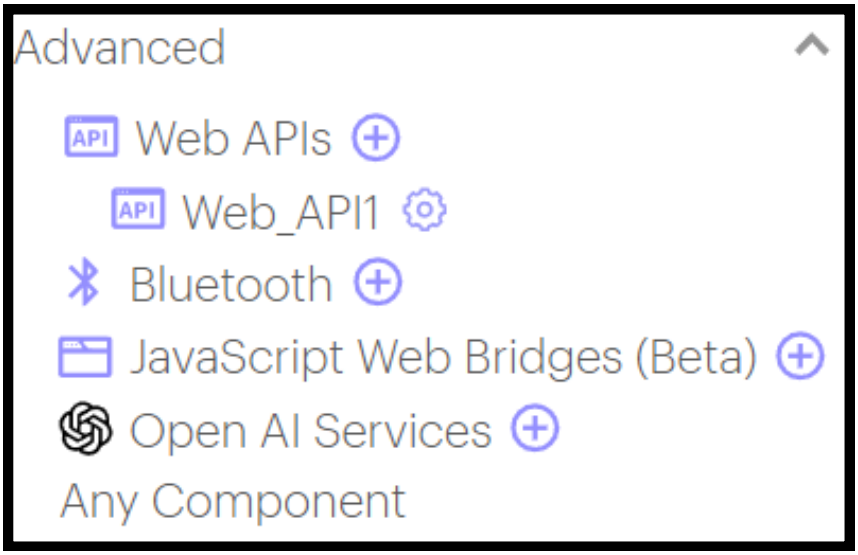


Fig 5.40

Drag and drop set webservice from Web API and add join from text

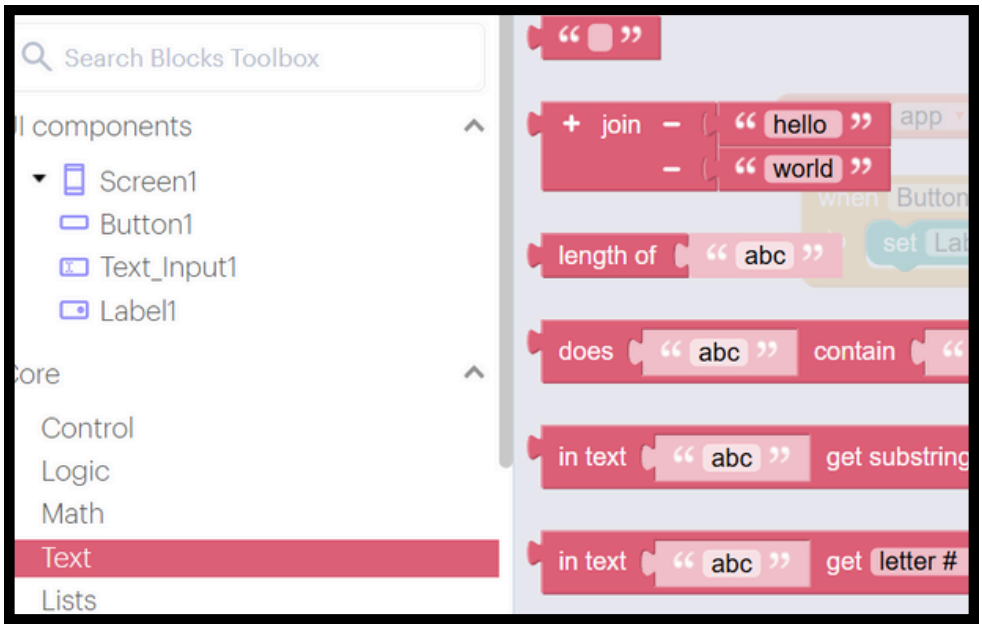


Fig 5.41

Step 5: Use Web1.

Set Url to dynamically set the API URL. Check out the image below to see how to add
Add the content along with your API key like this: https://generativelanguage.googleapis.com/v1beta/models/gemini-pro:generateContext?key=.

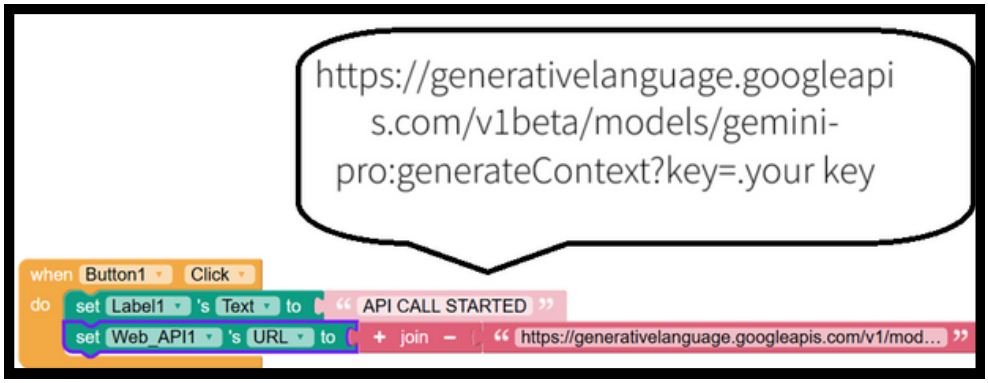


Fig 5.42

Step 6: Set Web_API1's Headers

- The header specifies that the request uses "Content-Type": "application/json", meaning the data sent will be in JSON format.

Fig 5.43

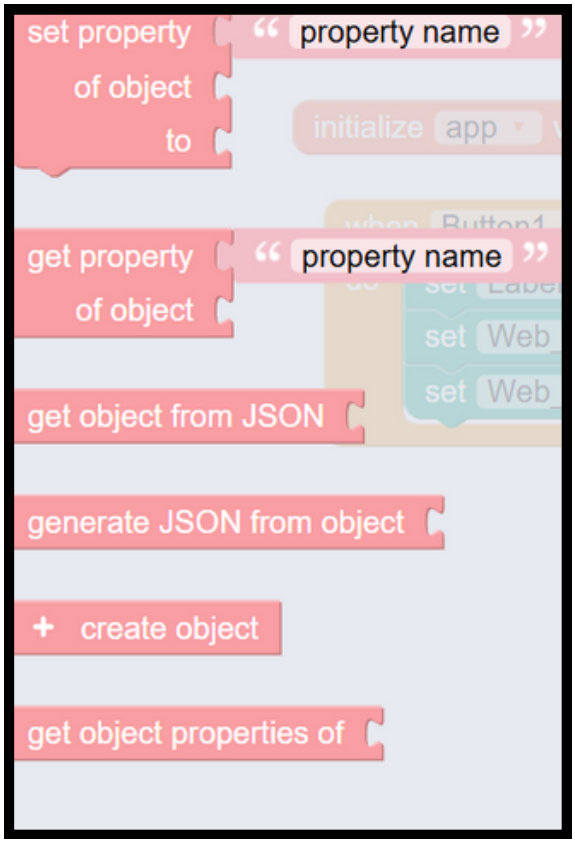


Fig 5.44

Step 7: Set Web_API1's Headers

The header specifies that the request uses "Content-Type": "application/json", meaning the data sent will be in JSON format.

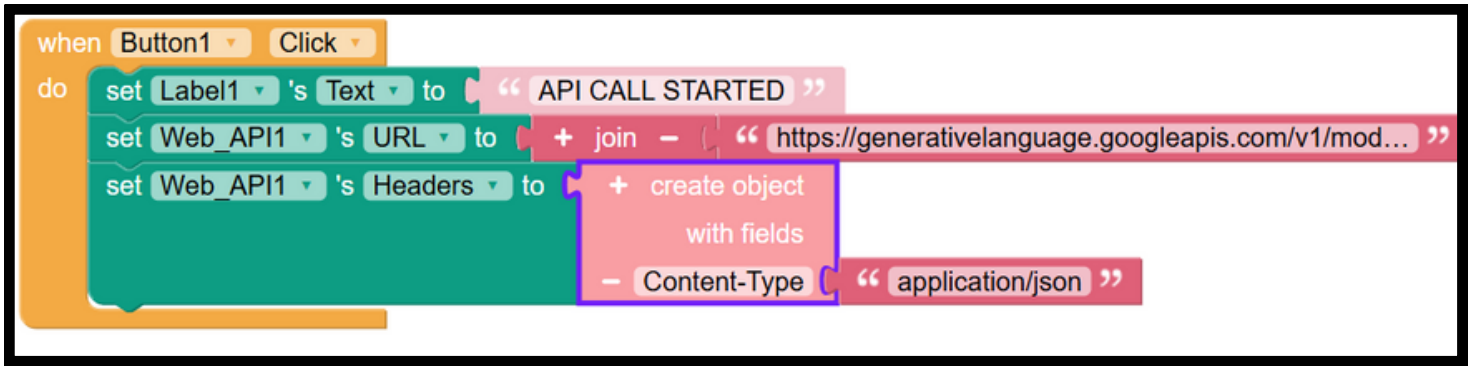


Fig 5.45

Step 8: Set Web_API1's Body

- The body of the request is created in JSON format.
- The JSON object has a key "contents", which contains a list.
- The list includes another object "parts", which itself contains a list.
- Inside "parts", there is another object with a "text" field that contains "write 30 words about dolphin".
- This means the API request asks the AI to generate a response containing 30 words about dolphins.

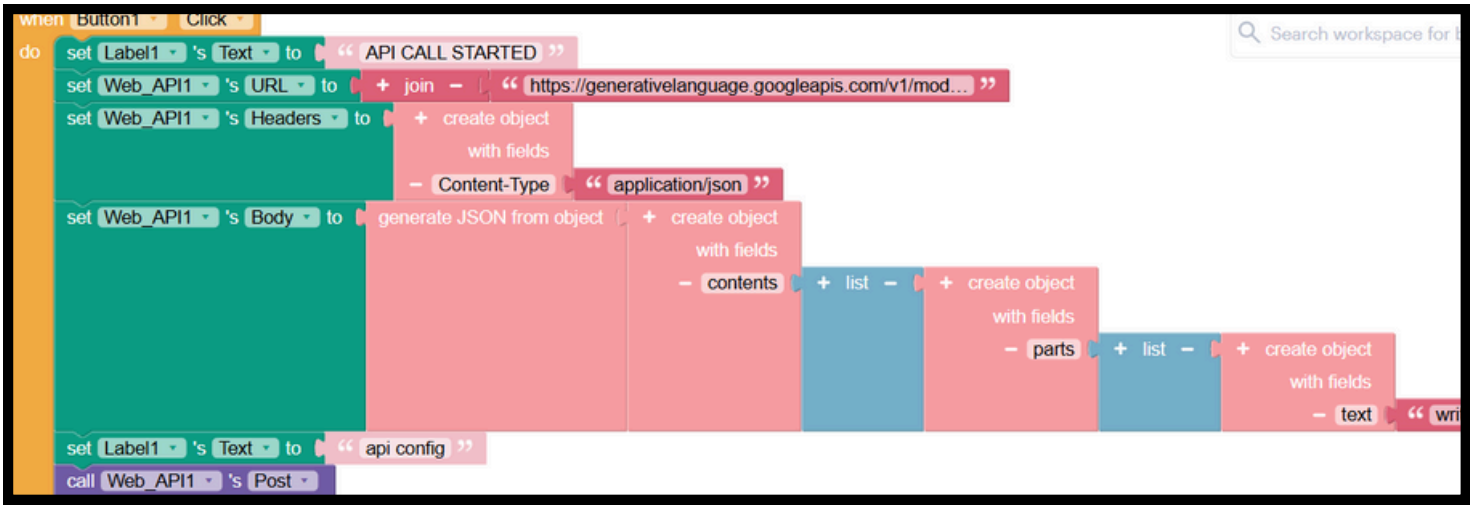


Fig 5.46

Step 9:Updating Label to Show API Config Message

Set Label1's text to "api config"

- Updates Label1 to indicate that the API request configuration is complete.

Fig 5.47

Step 10: Call Web_API1's Post with outputs (response, status, error)

- This sends a POST request to the API and retrieves three outputs:
  - response: The response from the API.
  - status: The HTTP status code of the response.
  - error: Any error message received.

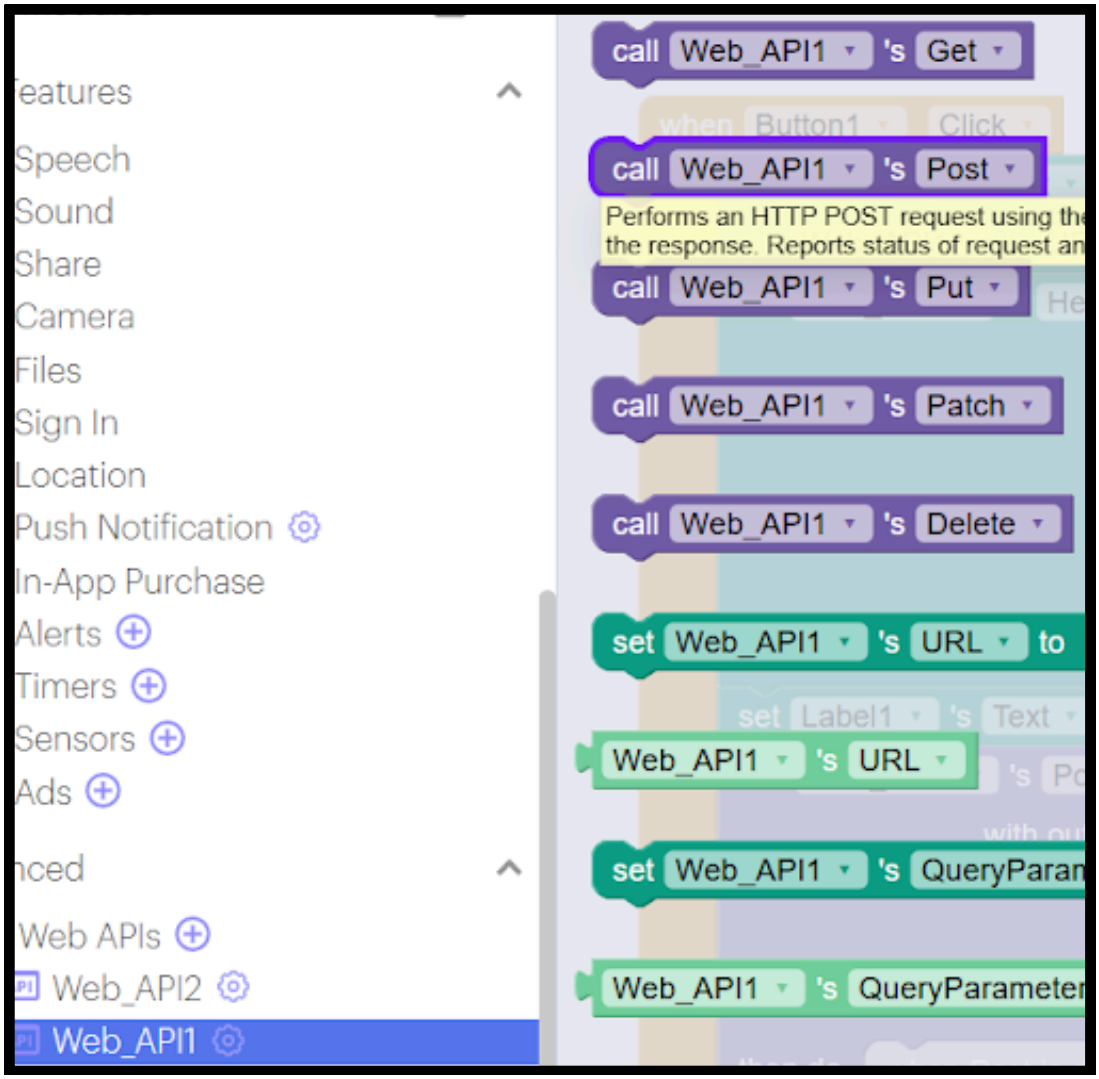


Fig 5.48

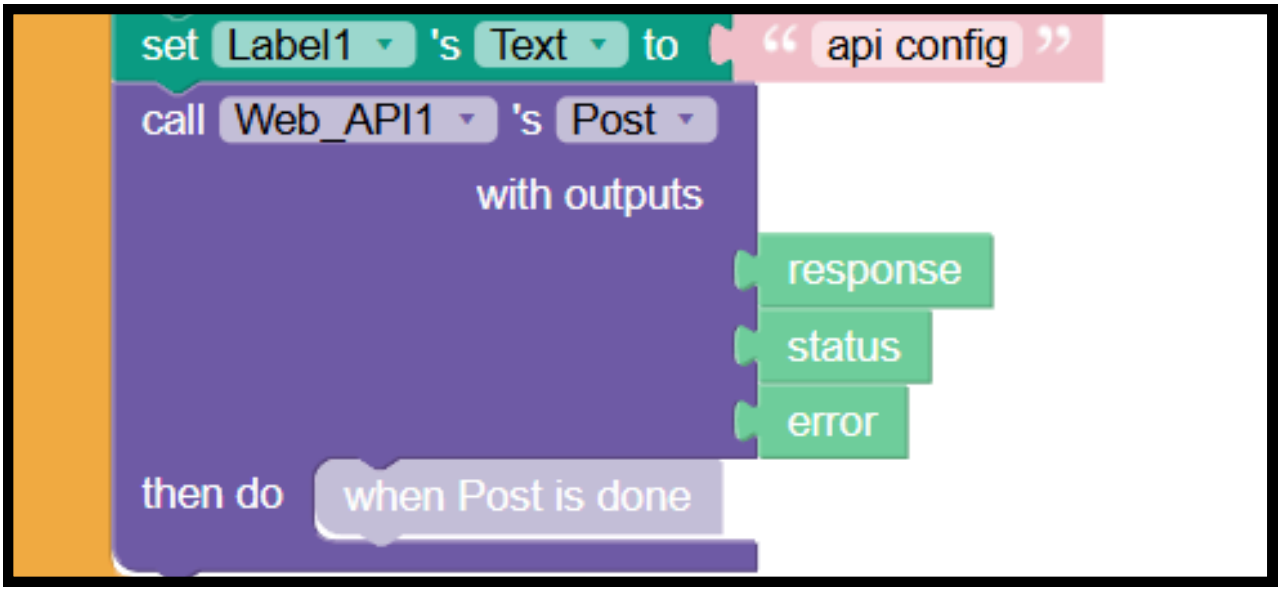


Fig 5.49

Step 11: Handling API Response

Check if there is an error

- If error is present:
  - Set Text_Input1's text to error (to display the error message).
  - Set Label1's text to "error" (indicating that an error occurred).
- Else (if no error):
  - Set Text_Input1's text to response (display the response from the API).
  - Set Label1's text to "success" (indicating that the API call was successful).

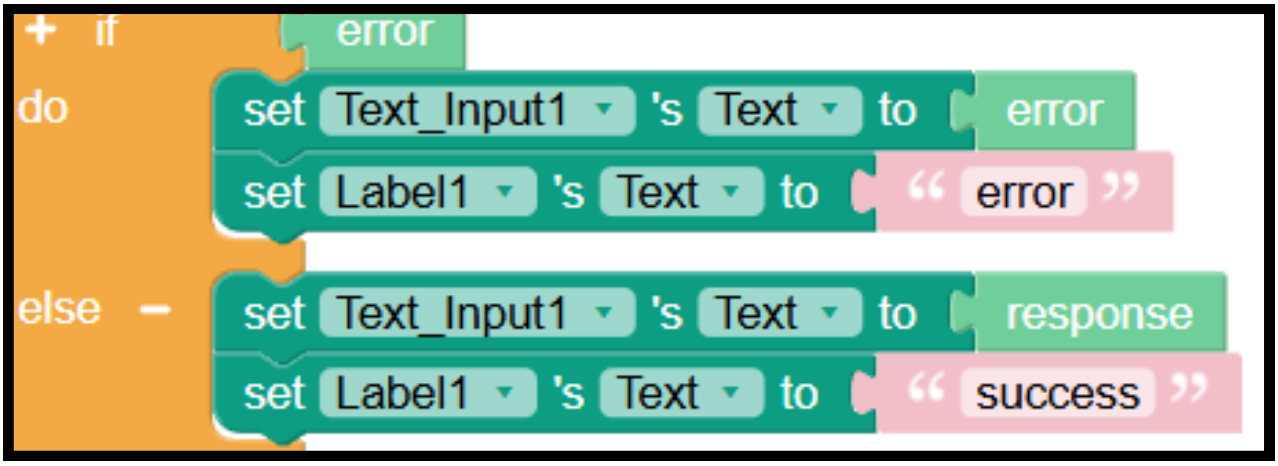


Fig 5.50

Note to add error and response you can duplicate as below and add to the code

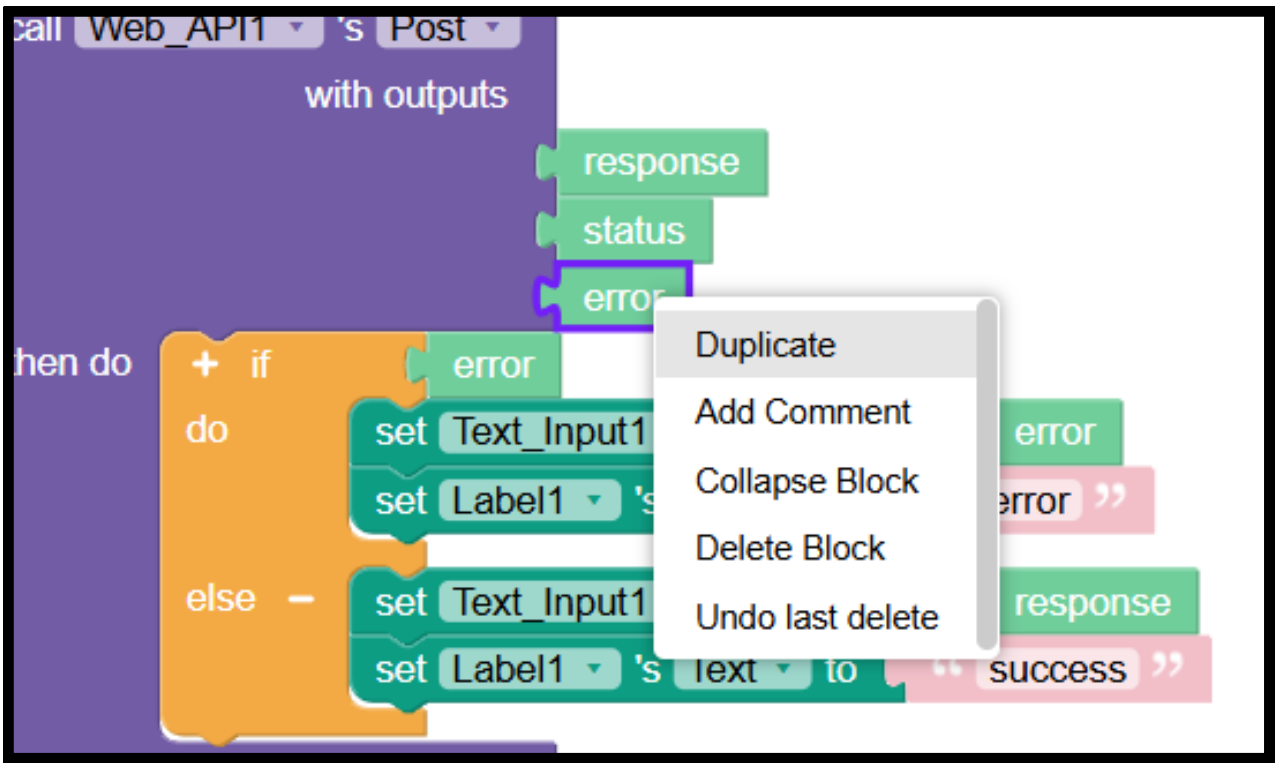


Fig 5.51

Final code

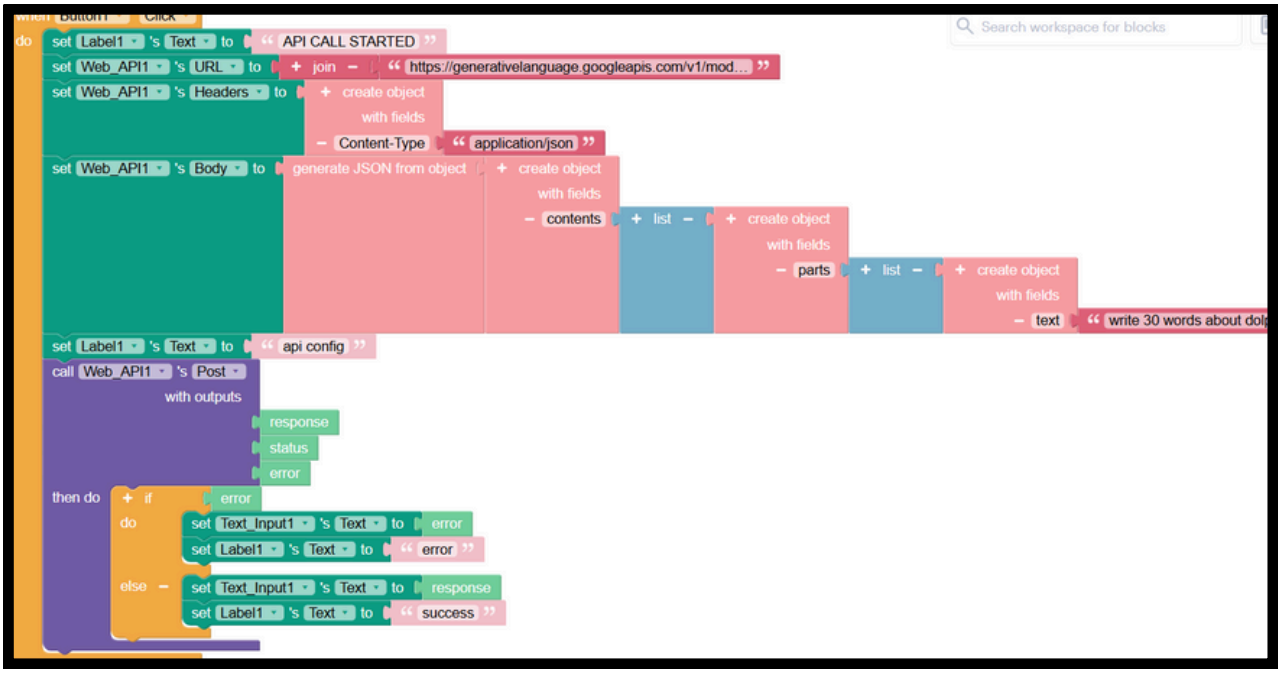


Fig 5.52

Fig 5.53

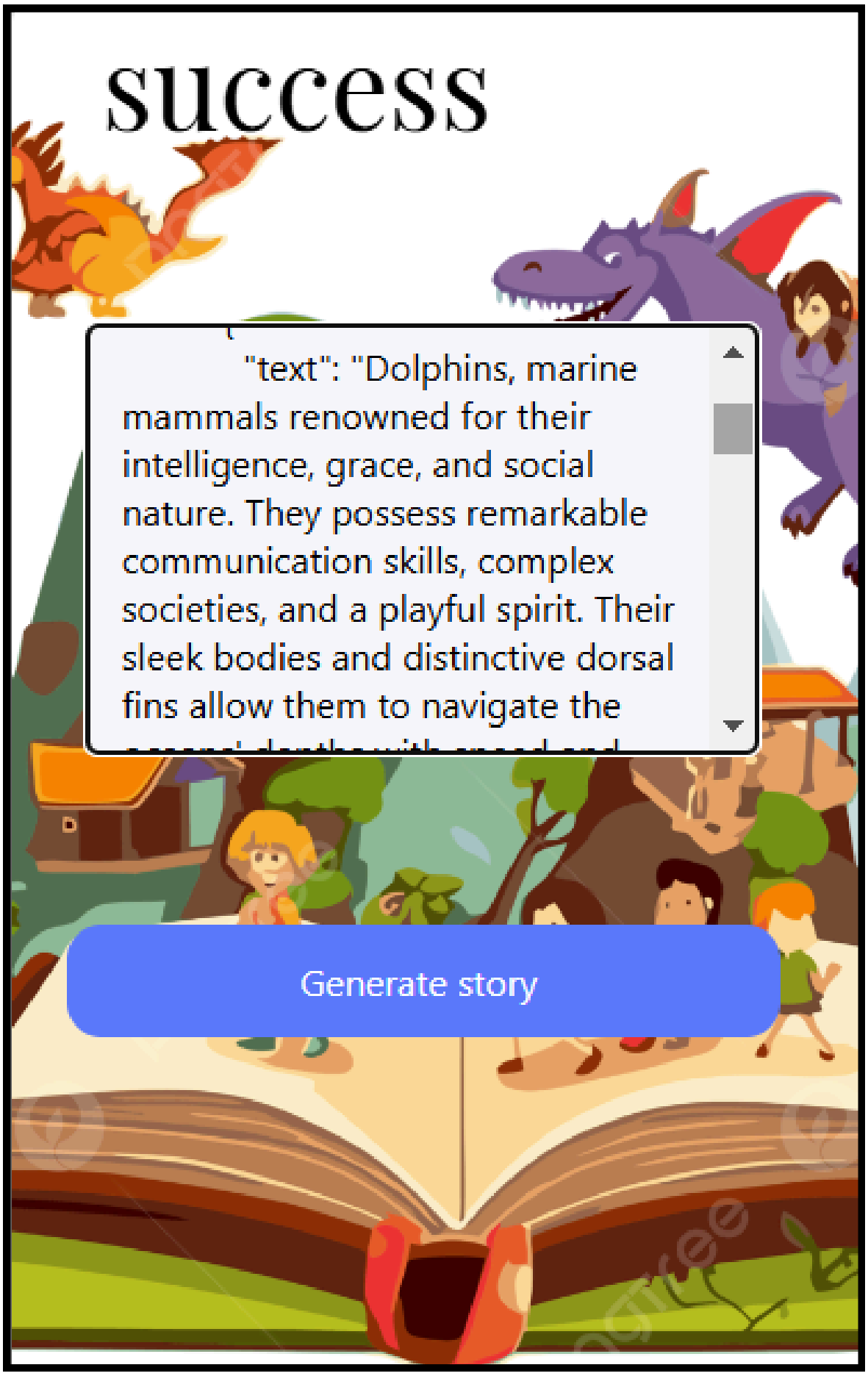

success
"text": "Dolphins, marine mammals renowned for their intelligence, grace, and social nature. They possess remarkable communication skills, complex societies, and a playful spirit. Their sleek bodies and distinctive dorsal fins allow them to navigate the
Generate story

Fig 5.54

6

KEY TAKE AWAY

6.1. MODULE 1: What is AI?

- **What is AI? AI is like giving computers a brain! It helps them think, learn, and solve problems.**
- **How AI Learns: AI learns by looking at lots of examples, like when you learn to tell an apple from a banana. It finds patterns in the data.**
- **Labeled Data ("Guided Tour"): Like having a teacher tell you the name of each fruit ("This is an apple!"). AI learns with labeled data.**
- **Unlabeled Data ("Exploring on Your Own"): Like sorting a pile of fruits without anyone telling you what they are. AI learns to group things by itself.**
- **Testing AI: Ask the AI, "Is this an apple or a banana?" to see if it learned correctly.**
- **More Training Data: The more examples you give AI, the better it gets! If it's never seen a green apple, show it some**

6.2. MODULE 2: AI Everywhere

AI is your invisible tech buddy, making everyday tasks easier:

- **Morning:**
  - Sleep Tracking Alarm: AI wakes you up at the optimal time.
  - Voice Assistants: Ask, and AI answers, like "What's the weather?"
- **Getting to School:**
  - Google Maps: AI finds the fastest route with traffic updates.
  - Ride-Sharing Apps: AI tracks your ride's arrival time.
- **At School:**
  - Face Recognition & Google Lens: AI helps with security and homework.
- **At Night:**
  - Smart Homes: AI adjusts lights and temperature for comfort.

6.3. MODULE 3: Diving Deeper – The Many Flavors of AI!

- **Machine Learning (ML):** Teaching computers to learn on their own. It learns from data instead of rules.You show it lots of examples and labels Examples: Recognizing a dog, Identifying Spam
- **Generative AI (GEN AI):** AI that creates new things, like artwork, music, or stories.
- **Supervised Learning:** AI learns with a teacher, like labeling fruit.
- **Unsupervised Learning:** AI explores on its own, like grouping fruits without names.
- **How Generative AI Works:** Collects data, learns patterns, trains itself, creates something new, and gets better with feedback.
- **Prompts:** Prompts are the instructions that you give to AI to tell it what to do

Good for tasks that need a bit of extra guidance.

6.4. MODULE 4: PROMPT ENGINEERING

- **Prompt Engineering:** Learning how to create the best questions and instructions to get the best results from AI.
- **Prompts Are Instructions:** The clearer your instructions, the better the AI's answer.
- **Types of Prompts:**

1. **Zero-Shot:** Ask the AI a question without any examples (basic).
2. **One-Shot:** Give the AI one example before asking the question.
3. **Few-Shot:** Give the AI several examples to help it understand the pattern.

- **Multimodal AI** Combine pictures and text to solve problems, spark creativity, and explore new ideas.

Tips for Clear Prompts:

- Be clear and specific.
- Use system instructions to guide the model's behavior.
- Simplify complex prompts.

***Chain Prompts :** Solve one part first, then use the result for the next step.

***Aggregate Responses:** Work on smaller parts at the same time, like solving a puzzle.

6.5. MODULE 5:

Creating a Story Telling APP Utilizing GEN API.

6.6. We've reached the end of our book!

I hope you enjoyed the journey. Remember, AI is everywhere, and no matter what path you choose—whether you're an artist, engineer, or anything else—you'll need AI! The more you practice, the more hands-on experience you gain with AI.

Practice is the key to mastering it.

AI is evolving rapidly, and everything around us is turning into AI-powered tech. Reading is the key to staying updated!

We'd love to hear from you!

Scan the QR code to share your feedback and let us know your thoughts!

SCAN ME