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```
from google.colab import drive
drive.mount('/content/drive')
```

⇄ Mounted at /content/drive

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[Show code](#)

## ✓ Gemini API Python quickstart



[View on Google AI](#)



[Run in Google Colab](#)



[View source on GitHub](#)

This tutorial shows you how to get started with the Gemini API using the Python SDK.

## Prerequisites

You can run this tutorial in Google Colab, which doesn't require additional environment configuration.

Alternatively, to complete this quickstart locally, see the Python guidance in [Get started with the Gemini API](#).

## ✓ Install the SDK

The Python SDK for the Gemini API is contained in the [google-generativeai](#) package. Install the dependency using pip:

```
import os
os.environ['GEMINI_API_KEY'] = 'AIzaSyBJ_qsn3I87NBKoWKoI5Sjq1Rxpzr'

!pip install -q -U google-generativeai

import google.generativeai as genai
```

```
genai.configure(api_key=os.environ[ 'GEMINI_API_KEY' ])
```

## Set up your API key

To use the Gemini API, you'll need an API key. If you don't already have one, create a key in Google AI Studio.

[Get an API key](#)

In Colab, add the key to the secrets manager under the "🔑" in the left panel. Give it the name `GOOGLE_API_KEY`. Then pass the key to the SDK:

### ✓ Initialize the Generative Model

Before you can make any API calls, you need to initialize the Generative Model.

```
#model = genai.GenerativeModel('gemini-1.5-flash')
```

```
#model = genai.GenerativeModel('gemini-1.5-pro')
```

```
model = genai.GenerativeModel('gemini-1.5-flash-8b-exp-0827')
```

### ✓ Generate text

```
response = model.generate_content("what is life span of person.")
print(response.text)
```



The average lifespan of a person varies depending on a number of factors, including:

```
* **Genetics:** Some people have a family history of long lifespans.
* **Lifestyle:** Healthy habits like diet, exercise, and not smoking can significantly
* **Environmental factors:** Access to healthcare, clean water, and safe living conditions
* **Socioeconomic factors:** Poverty and lack of access to resources can negatively
```

```
**Generally, the average lifespan for humans is around 79 years.**
```

```
However, **it's important to remember that this is just an average.** Some people live
```

```
It's also worth noting that **life expectancy is constantly increasing** due to advances
```



### ✓ TEXT PROMPT TO TEXT & IMAGE GENERATION

- <https://ai.google.dev/gemini-api/docs/get-started/python>

```
import pathlib
import textwrap

import google.generativeai as genai

from IPython.display import display
from IPython.display import Markdown

def to_markdown(text):
    text = text.replace('•', ' *')
    return Markdown(textwrap.indent(text, '> ', predicate=lambda _:

for m in genai.list_models():
    if 'generateContent' in m.supported_generation_methods:
        print(m.name)

models/gemini-1.0-pro-latest
models/gemini-1.0-pro
models/gemini-pro
models/gemini-1.0-pro-001
models/gemini-1.0-pro-vision-latest
models/gemini-pro-vision
models/gemini-1.5-pro-latest
models/gemini-1.5-pro-001
models/gemini-1.5-pro
models/gemini-1.5-pro-exp-0801
models/gemini-1.5-pro-exp-0827
models/gemini-1.5-flash-latest
models/gemini-1.5-flash-001
models/gemini-1.5-flash-001-tuning
models/gemini-1.5-flash
models/gemini-1.5-flash-exp-0827
models/gemini-1.5-flash-8b-exp-0827

%%time
response = model.generate_content("What is the meaning of dream &

CPU times: user 44.8 ms, sys: 5.66 ms, total: 50.4 ms
Wall time: 6.18 s

to_markdown(response.text)
```



## Dream & Goal: A Journey to the Future

**Dream:** A dream is a **vision, an aspiration, a longing for something greater**. It's a picture of what you truly desire, a feeling of what you want to achieve, a spark of inspiration that ignites your soul. It can be something tangible like owning a house or a business, or something more abstract like living a life filled with joy and purpose. Dreams are often **unrealistic, ambitious, and exciting**. They push you beyond your current comfort zone and inspire you to strive for something extraordinary.

**Goal:** A goal is a **specific, measurable, achievable, relevant, and time-bound (SMART)** objective that you set to achieve your dream. It's a **concrete step** you take towards realizing your dream. It's the **actionable plan** that allows you to turn your dream into reality. Goals are **realistic and practical**. They help you focus your energy and guide your actions towards your desired outcome.

**Here's how to reach your dream:**

1. **Define your dream:** Clearly identify what you truly desire. What is it that excites you? What makes your heart sing? Take time to reflect, explore your passions, and identify your values.
2. **Break it down:** Once you have a clear vision of your dream, break it down into smaller, more manageable goals. Each goal should be a specific step towards your overall dream. For example, if your dream is to start your own business, your goals might include:
  - Researching different business ideas
  - Creating a business plan
  - Finding funding
  - Building a website
  - Hiring employees
3. **Set SMART goals:** Make sure your goals are specific, measurable, achievable, relevant, and time-bound. This will help you stay focused and motivated.
4. **Create a plan:** Develop a roadmap for achieving your goals. This might involve creating a timeline, identifying resources, and outlining the steps you need to take.
5. **Take action:** Don't just sit on your dreams! Start taking action towards your goals. Even small steps can make a big difference.
6. **Stay motivated:** Motivation can fluctuate. Find ways to stay inspired and committed to your journey. Surround yourself with positive people, celebrate your successes, and learn from your setbacks.
7. **Embrace challenges:** Obstacles and setbacks are inevitable. Don't let them

response.prompt\_feedback



response.candidates



```
[content {  
  parts {  
    text: "## Dream & Goal: A Journey to the Future\n\n**Dream:** A dream is a  
**vision, an aspiration, a longing for something greater**". It's a picture of  
what you truly desire, a feeling of what you want to achieve, a spark of  
inspiration that ignites your soul. It can be something tangible like owning a  
house or a business, or something more abstract like living a life filled with  
joy and purpose. Dreams are often **unrealistic, ambitious, and exciting**. They  
push you beyond your current comfort zone and inspire you to strive for something  
extraordinary.\n\n**Goal:** A goal is a **specific, measurable, achievable,  
relevant, and time-bound (SMART)** objective that you set to achieve your dream.
```

It\'s a **concrete step** you take towards realizing your dream. It\'s the **actionable plan** that allows you to turn your dream into reality. Goals are **realistic and practical**. They help you focus your energy and guide your actions towards your desired outcome.\n\n**Here\'s how to reach your dream:**\n\n1. **Define your dream:** Clearly identify what you truly desire. What is it that excites you? What makes your heart sing? Take time to reflect, explore your passions, and identify your values.\n2. **Break it down:** Once you have a clear vision of your dream, break it down into smaller, more manageable goals. Each goal should be a specific step towards your overall dream. For example, if your dream is to start your own business, your goals might include:\n\n \* Researching different business ideas\n \* Creating a business plan\n \* Finding funding\n \* Building a website\n \* Hiring employees\n3. **Set SMART goals:** Make sure your goals are specific, measurable, achievable, relevant, and time-bound. This will help you stay focused and motivated. \n4. **Create a plan:** Develop a roadmap for achieving your goals. This might involve creating a timeline, identifying resources, and outlining the steps you need to take.\n5. **Take action:** Don\'t just sit on your dreams! Start taking action towards your goals. Even small steps can make a big difference.\n6. **Stay motivated:** Motivation can fluctuate. Find ways to stay inspired and committed to your journey. Surround yourself with positive people, celebrate your successes, and learn from your setbacks.\n7. **Embrace challenges:** Obstacles and setbacks are inevitable. Don\'t let them discourage you. View them as opportunities for growth and learning.\n8. **Be patient:** Reaching your dream takes time and effort. Don\'t get discouraged if you don\'t see results immediately. Keep going and stay committed to your vision.\n9. **Enjoy the journey:** The journey towards your dream is just as important as the destination. Embrace the challenges, celebrate the milestones, and enjoy the process of growth and transformation.\n\n**Remember:** Dreams and goals are personal. What motivates one person might not motivate another. The key is to find what resonates with you and create a plan that is aligned with your values and aspirations. The journey is yours, so make it your own!\n"

```

    }
    role: "model"
  }
  finish_reason: STOP
  index: 0
  safety_ratings {
    category: HARM_CATEGORY_SEXUALLY_EXPLICIT
    probability: NEGLIGIBLE
  }
  safety_ratings {
    category: HARM_CATEGORY_HATE_SPEECH
    probability: NEGLIGIBLE
  }
  safety_ratings {
    category: HARM_CATEGORY_HARASSMENT
    probability: NEGLIGIBLE
  }

```

%%time

```
response = model.generate_content("What is the meaning of goal?",
```



CPU times: user 30.8 ms, sys: 5.01 ms, total: 35.8 ms  
Wall time: 3.99 s

```

for chunk in response:
    print(chunk.text)
    print("_"*10)

```

→ A

goal is a **desired outcome or aim** that someone strives to achieve. It's a **specific, measurable, achievable, relevant, and time-bound (SMART)** objective that motivates and guides action.

Here's a breakdown of the key aspects:

**Desired Outcome:** It's something

you want to accomplish, a result you aim for.

**Aim:** It's a direction or purpose towards which you are working.

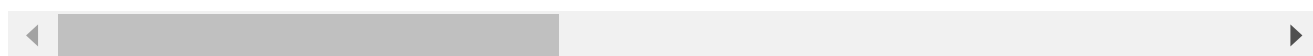
**Strive to Achieve:** It's something you work towards, putting effort and energy into

**Motivates and Guides Action:** Goals provide a sense of purpose and direction, drive them.

In simpler terms, a goal is like a **destination** you're trying to reach. It gives you

Goals can be

personal, professional, or related to any area of life. They can be big or small, short-term or long-term.



## ✓ TEXT PROMPT TO IMAGE GENERATION

```
#!/usr/bin/curl -o image.jpg https://t0.gstatic.com/licensed-image?q=tbn:AI
```

```
→ % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
   100    405k    100    405k    0      0  6016k      0  --:--:--  --:--:--  --:--:--  6045k
```

```
import PIL.Image
```

```
img = PIL.Image.open('/content/drive/MyDrive/myimage.jpg')
img
```



```
model = genai.GenerativeModel('gemini-1.5-flash-8b-exp-0827')  
  
response = model.generate_content(img)  
  
to_markdown(response.text)
```



This appears to be a photo or screenshot of a man giving a presentation or video.  
Here's what we can see:

- **A man with a bald head and a beard:** He appears to be of South Asian descent.
- **Wearing a checkered shirt:** The shirt is black and white plaid, suggesting a casual or business casual attire.
- **Possible lapel mic:** There's a small device on his shirt, which could be a lapel mic or a similar device used for audio recording.
- **Background is plain:** The background appears to be a plain, possibly gray or light-colored wall, suggesting a professional setting.

```
import PIL.Image
```

```
img1 = PIL.Image.open('/content/drive/MyDrive/horse.jpg')  
img1
```





```
response1 = model.generate_content(img1)
```

```
to_markdown(response1.text)
```



This is a stunning digital art piece showcasing a majestic white horse in motion. Here's a breakdown of the key elements:

- **The Horse:** A beautifully rendered white horse with a flowing mane and tail, captured in a dynamic running pose. The realistic muscle definition and the way the hair is depicted adds to its ethereal quality.
  - **The Background:** A soft, muted blue background creates a serene and mystical atmosphere, enhancing the horse's presence. The mist and water further contribute to the dreamlike quality.
  - **The Lighting:** The lighting is strategically placed to highlight the horse's form and create a sense of movement. The soft, diffused light adds to the overall ethereal feel of the image.
  - **The Composition:** The horse is positioned centrally, drawing the viewer's eye. The flowing water and mist create a sense of depth and movement, further emphasizing
- 

```
response = model.generate_content(["Write a short, engaging blog p  
response.resolve()
```

```
to_markdown(response.text)
```



## Meal Prep Made Easy (and Delicious!)

This week, I'm all about making healthy eating a breeze! This picture shows my latest meal prep success - a colorful and satisfying salad with grilled chicken, quinoa, and a delicious homemade dressing. It's the perfect lunch or dinner that's packed with protein and nutrients, and it's super easy to throw together.

Speaking of easy, let's talk about meal prepping! I've been on a journey to streamline my life, and that includes my eating habits. I used to dread cooking, and I'd often find myself reaching for unhealthy takeout or grabbing something quick and not-so-great. But then I discovered the magic of meal prepping!

It's transformed my life, allowing me to:

- **Save time:** I spend a few hours one day prepping meals for the week, and then I have delicious, healthy options ready to go whenever I need them.
- **Eat healthier:** It's way easier to stick to a healthy diet when you have prepped meals waiting for you.
- **Save money:** Meal prepping is actually cheaper than constantly ordering takeout or grabbing unhealthy snacks.
- **Reduce stress:** Knowing I have healthy meals ready to go takes a lot of the stress out of my day.

```
to_markdown(response.text)
```



## Meal Prep Made Easy (and Delicious!)

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- **Reduce stress:** Knowing I have healthy meals ready to go takes a lot of the stress out of my day.

## ✓ CHAT COVERSATION

```
model = genai.GenerativeModel('gemini-1.5-flash-8b-exp-0827')
chat = model.start_chat(history=[])
chat
```



```
ChatSession(
  model=genai.GenerativeModel(
    model_name='models/gemini-1.5-flash-8b-exp-0827',
    generation_config={},
    safety_settings={},
    tools=None,
    system_instruction=None,
    cached_content=None
  ),
  history=[]
)
```

```
response = chat.send_message("In one sentence, explain how to get to_markdown(response.text)
```



To get a job in generative AI, develop a strong technical skill set encompassing machine learning, deep learning, natural language processing, computer vision, and data science, coupled with a strong understanding of the underlying algorithms and their applications.

```
response = chat.send_message("explain how to get job in generative to_markdown(response.text)
```



To secure a job in generative AI, demonstrate proficiency in **machine learning, deep learning, natural language processing, and computer vision**, while showcasing a strong understanding of **data science, algorithm development, and model deployment**. This includes skills like Python programming, TensorFlow/PyTorch, and experience with relevant libraries (e.g., NLTK, spaCy).

#### Here's a breakdown of the key technical skills:

- **Machine Learning:** Understanding algorithms like supervised/unsupervised learning, reinforcement learning, and model evaluation metrics.
- **Deep Learning:** Expertise in neural networks (CNNs, RNNs, Transformers), training and optimizing deep learning models.
- **Natural Language Processing (NLP):** Ability to work with text data, perform tasks like sentiment analysis, text generation, and machine translation.
- **Computer Vision:** Knowledge of image processing, object detection, image recognition, and image generation.
- **Data Science:** Data manipulation, cleaning, and visualization, with an understanding of statistical modeling and data analysis.

### chat.history



```
[parts {
  text: "In one sentence, explain how to get job in generative ai & what is
technical skill set required"
}
role: "user",
parts {
  text: "To get a job in generative AI, develop a strong technical skill set
encompassing machine learning, deep learning, natural language processing, computer
vision, and data science, coupled with a strong understanding of the underlying
algorithms and their applications.\n"
}
role: "model",
parts {
  text: "explain how to get job in generative ai & what is technical skill set
required"
}
role: "user",
parts {
  text: "To secure a job in generative AI, demonstrate proficiency in **machine
learning, deep learning, natural language processing, and computer vision**, while
showcasing a strong understanding of **data science**, **algorithm development**,
and **model deployment**. This includes skills like Python programming,
TensorFlow/PyTorch, and experience with relevant libraries (e.g., NLTK, spaCy).
\n\n\n**Here's a breakdown of the key technical skills:**\n\n* **Machine
Learning:** Understanding algorithms like supervised/unsupervised learning,
reinforcement learning, and model evaluation metrics.\n* **Deep Learning:**
Expertise in neural networks (CNNs, RNNs, Transformers), training and optimizing
deep learning models.\n* **Natural Language Processing (NLP):** Ability to work
with text data, perform tasks like sentiment analysis, text generation, and machine
translation.\n* **Computer Vision:** Knowledge of image processing, object
detection, image recognition, and image generation.\n* **Data Science:** Data
manipulation, cleaning, and visualization, with an understanding of statistical
modeling and data analysis.\n* **Algorithm Development:** The ability to design,
implement, and evaluate new algorithms for generative AI tasks.\n* **Model
Deployment:** Experience with deploying AI models to production environments,
potentially using cloud platforms (AWS, Azure, GCP).\n\nBy building a strong
foundation in these technical areas and demonstrating your abilities through
projects, online courses, or certifications, you can increase your chances of
landing a job in generative AI.\n"
```

```
}
role: "model"]
```

```
response = chat.send_message("Okay, how about a more detailed expl
```

```
for chunk in response:
```

```
    print(chunk.text)
```

```
    print("_"*80)
```

➞ To

---

command a higher salary in the AI field, focus on these key areas:

---

**\*\*1. Deepen Your Expertise:\*\***

\* **\*\*Specialize in**

---

a niche:\*\* Instead of being a generalist, focus on a specific area like Natural

---

you're an expert in a valuable domain.

\* **\*\*Master cutting-edge techniques:\*\*** Stay updated on the latest advancements in

---

in your projects. This demonstrates your ability to contribute to the field's pro

\* **\*\*Become a thought leader:\*\*** Publish research papers, contribute to open-source

---

your expertise.

**\*\*2. Develop Highly Demanded Skills:\*\***

\* **\*\*Advanced Machine Learning:\*\*** Mastering techniques like transfer learning, fed

---

\* **\*\*Cloud Computing Expertise:\*\*** Proficiency in cloud platforms like AWS, Azure,

\* **\*\*Data Engineering:\*\*** Understanding data pipelines, data storage, and data proc

\* **\*\*MLOps:\*\*** Gaining knowledge in

---

MLOps (Machine Learning Operations) will enable you to build and maintain robust

**\*\*3. Build a Strong Portfolio:\*\***

\* **\*\*Create impressive projects:\*\*** Develop and showcase your skills through person

---

real-world problems with AI.

\* **\*\*Document your work:\*\*** Clearly explain the challenges you faced, the solutions

\* **\*\*Highlight your accomplishments:\*\*** Quantify your achievements with metrics lik

**\*\*4. Network and Build Connections**

---

:\*\*

\* **\*\*Attend industry events:\*\*** Connect with other AI professionals at conferences,

\* **\*\*Join online communities:\*\*** Engage with AI experts on platforms like LinkedIn

\* **\*\*Seek mentorship:\*\*** Connect with experienced AI professionals who can provide

**\*\*5**

---

. Negotiate Effectively:\*\*

\* \*\*Research salary ranges:\*\* Understand the average salary for your experience ]  
\* \*\*Highlight your value:\*\* Clearly articulate your skills, experience, and accom  
\* \*\*Be confident and assertive:\*\* Negotiate your salary with a clear

---

understanding of your worth and without hesitation.

for message in chat.history:

display(to\_markdown(f'\*\*{message.role}\*\*: {message.parts[0].text



**user:** In one sentence, explain how to get job in generative ai & what is technical skill set required

**model:** To get a job in generative AI, develop a strong technical skill set encompassing machine learning, deep learning, natural language processing, computer vision, and data science, coupled with a strong understanding of the underlying algorithms and their applications.

**user:** explain how to get job in generative ai & what is technical skill set required

**model:** To secure a job in generative AI, demonstrate proficiency in **machine learning, deep learning, natural language processing, and computer vision**, while showcasing a strong understanding of **data science, algorithm development**, and **model deployment**. This includes skills like Python programming, TensorFlow/PyTorch, and experience with relevant libraries (e.g., NLTK, spaCy).

**Here's a breakdown of the key technical skills:**

- **Machine Learning:** Understanding algorithms like supervised/unsupervised learning, reinforcement learning, and model evaluation metrics.
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- **Computer Vision:** Knowledge of image processing, object detection, image recognition, and image generation.
- **Data Science:** Data manipulation, cleaning, and visualization, with an understanding of statistical modeling and data analysis.
- **Algorithm Development:** The ability to design, implement, and evaluate new algorithms for generative AI tasks.
- **Model Deployment:** Experience with deploying AI models to production environments, potentially using cloud platforms (AWS, Azure, GCP).

By building a strong foundation in these technical areas and demonstrating your abilities through projects, online courses, or certifications, you can increase your chances of landing a job in generative AI.

**user:** Okay, how about a more detailed explanation about how to get more salary in ai field

**model:** To command a higher salary in the AI field, focus on these key areas:

### 1. Deepen Your Expertise:

- **Specialize in a niche:** Instead of being a generalist, focus on a specific area like Natural Language Processing, Computer Vision, or Reinforcement Learning. This shows employers you're an expert in a valuable domain.
- **Master cutting-edge techniques:** Stay updated on the latest advancements in AI research and implement them in your projects. This demonstrates your ability to contribute to the field's progress.
- **Become a thought leader:** Publish research papers, contribute to open-source projects, or give presentations at conferences to establish your reputation and demonstrate your expertise.

### 2. Develop Highly Demanded Skills:

- **Advanced Machine Learning:** Mastering techniques like transfer learning, federated learning, and generative adversarial networks (GANs) will significantly increase your value.
- **Cloud Computing Expertise:** Proficiency in cloud platforms like AWS, Azure, or GCP is essential for deploying and scaling AI models.
- **Data Engineering:** Understanding data pipelines, data storage, and data

## ✓ TOKEN COUNTING

personal projects, hackathons, or contributions to open-source projects. These

```
model.count_tokens("What is the meaning of dream and ?goal")
```

```
⇒ total_tokens: 9
```

```
model.count_tokens(chat.history)
```

```
⇒ total_tokens: 1034
```

## ✓ USE EMBEDDINGS

```
result = genai.embed_content(
    model="models/embedding-001",
    content="What is the meaning of dream?",
    task_type="retrieval_document",
    title="Embedding of single string")
```

```
# 1 input > 1 vector output
print(str(result['embedding'])[:50], '... TRIMMED']')
```

```
⇒ [-0.012753247, 0.007850709, -0.054399665, -0.00708 ... TRIMMED]
```

Double-click (or enter) to edit

```
result = genai.embed_content(
    model="models/embedding-001",
    content=[
        'What is the meaning of life?',
        'How much wood would a woodchuck chuck?',
        'How does the brain work?'],
    task_type="retrieval_document",
    title="Embedding of list of strings")
```

```
# A list of inputs > A list of vectors output
for v in result['embedding']:
    print(str(v)[:50], '... TRIMMED ...')
```

```
⇒ [0.0040260437, 0.004124458, -0.014209415, -0.00183 ... TRIMMED ...
    [-0.004049845, -0.0075574904, -0.0073463684, -0.03 ... TRIMMED ...
    [0.025310587, -0.0080734305, -0.029902633, 0.01160 ... TRIMMED ...
```



response.candidates[0].content

```

➡ parts {
  text: "To command a higher salary in the AI field, focus on these key
areas:\n\n**1. Deepen Your Expertise:** \n\n* **Specialize in a niche:** Instead
of being a generalist, focus on a specific area like Natural Language Processing,
Computer Vision, or Reinforcement Learning. This shows employers you're an expert
in a valuable domain.\n* **Master cutting-edge techniques:** Stay updated on the
latest advancements in AI research and implement them in your projects. This
demonstrates your ability to contribute to the field's progress.\n* **Become a
thought leader:** Publish research papers, contribute to open-source projects, or
give presentations at conferences to establish your reputation and demonstrate your
expertise.\n\n**2. Develop Highly Demanded Skills:**\n\n* **Advanced Machine
Learning:** Mastering techniques like transfer learning, federated learning, and
generative adversarial networks (GANs) will significantly increase your value.\n*
**Cloud Computing Expertise:** Proficiency in cloud platforms like AWS, Azure, or
GCP is essential for deploying and scaling AI models.\n* **Data Engineering:**
Understanding data pipelines, data storage, and data processing is crucial for
handling massive datasets.\n* **MLOps:** Gaining knowledge in MLOps (Machine
Learning Operations) will enable you to build and maintain robust AI
systems.\n\n**3. Build a Strong Portfolio:**\n\n* **Create impressive projects:**
Develop and showcase your skills through personal projects, hackathons, or
contributions to open-source projects. These should demonstrate your ability to
solve real-world problems with AI.\n* **Document your work:** Clearly explain the
challenges you faced, the solutions you implemented, and the results you
achieved.\n* **Highlight your accomplishments:** Quantify your achievements with
metrics like accuracy, efficiency, and impact.\n\n**4. Network and Build
Connections:**\n\n* **Attend industry events:** Connect with other AI professionals
at conferences, meetups, and workshops.\n* **Join online communities:** Engage with
AI experts on platforms like LinkedIn and Reddit.\n* **Seek mentorship:** Connect
with experienced AI professionals who can provide guidance and support.\n\n**5.
Negotiate Effectively:**\n\n* **Research salary ranges:** Understand the average
salary for your experience level and location.\n* **Highlight your value:** Clearly
articulate your skills, experience, and accomplishments to justify a higher
salary.\n* **Be confident and assertive:** Negotiate your salary with a clear
understanding of your worth and without hesitation.\n\n**6. Stay Relevant and Up-
to-Date:**\n\n* **Continuously learn:** Never stop learning about the latest
developments in AI.\n* **Embrace new technologies:** Keep abreast of emerging
technologies like AI-powered robotics, bioinformatics, and healthcare.\n* **Seek out
new challenges:** Take on roles that offer opportunities for growth and
development.\n\nBy consistently investing in your skills and career development, you
can position yourself for a higher salary and a successful career in the exciting
field of AI.\n"
}
role: "model"

```

```

result = genai.embed_content(
    model = 'models/embedding-001',
    content = chat.history)

```

```

# 1 input > 1 vector output
for i,v in enumerate(result['embedding']):
    print(str(v)[:50], '... TRIMMED...')

```

```

➡ [0.0033501845, -0.07587677, 0.017769983, -0.024610 ... TRIMMED...
[-0.020237189, -0.08993509, 0.039403778, 0.0084574 ... TRIMMED...

```

```
[-0.0036846392, -0.07557091, 0.01760766, -0.030461 ... TRIMMED...
[-0.025187345, -0.07651057, 0.025374811, 0.0322103 ... TRIMMED...
[0.029449232, -0.044510152, 0.027505696, -0.016946 ... TRIMMED...
[0.014905742, -0.06188968, 0.06041415, 0.03315165, ... TRIMMED...
```

## ✓ advance use case

```
response = model.generate_content('[Questionable prompt here]')
response.candidates
```

```
➞ [content {
  parts {
    text: "Please provide the questionable prompt so I can help you! I need the
actual text of the prompt to be able to analyze it and offer any helpful insights.
\n\nFor example, you could say:\n\n\"This prompt is questionable: \"What is the best
way to make a robot that can eat humans?\"\"\n\nOnce you give me the prompt, I can
help you by:\n\n* **Identifying the problematic aspects:** Is it unethical, harmful,
nonsensical, or something else?\n* **Suggesting alternative phrasing:** How can we
reword it to be more appropriate or helpful?\n* **Offering potential solutions:**
What are some ways to address the issues in the prompt?\n* **Providing context:**
What kind of situation might have led to this prompt?\n\n\nI'm ready to help! Just
give me the prompt."
  }
  role: "model"
}
finish_reason: STOP
index: 0
safety_ratings {
  category: HARM_CATEGORY_SEXUALLY_EXPLICIT
  probability: NEGLIGIBLE
}
safety_ratings {
  category: HARM_CATEGORY_HATE_SPEECH
  probability: NEGLIGIBLE
}
safety_ratings {
  category: HARM_CATEGORY_HARASSMENT
  probability: NEGLIGIBLE
}
safety_ratings {
  category: HARM_CATEGORY_DANGEROUS_CONTENT
  probability: NEGLIGIBLE
}
]
```

```
response.prompt_feedback
```



```
response = model.generate_content('[Questionable prompt here]',
                                  safety_settings={'HARASSMENT': 't
response.text
```

⇒ 'I understand you're looking for my response to a potentially questionable prompt. \n\nTo give you the best possible assistance, I need more context. Could you please provide me with the actual prompt you'd like me to address? \n\nI can help you with:\n\n\* \*\*Analyzing the prompt:\*\* Identifying potentially problematic aspects, such as harmful stereotypes, biases, or offensive language. \n\* \*\*Reframing the prompt:\*\* Suggesting alternative ways to phrase the question or request that are more ethical or appropriate. \n\* \*\*Providing a response that is safe and ethical:\*\* Even if the p

## ✓ ENCODE MESSAGE

```
import google.ai.generativelanguage as glm

model = genai.GenerativeModel('models/gemini-1.5-flash-exp-0827')
response = model.generate_content(
    glm.Content(
        parts = [
            glm.Part(text="Write a short, engaging blog post based on the image below"),
            glm.Part(
                inline_data=glm.Blob(
                    mime_type='image/jpeg',
                    data=pathlib.Path('/content/drive/MyDrive/election_results_2020.jpg').read_bytes()
                ),
            ),
        ],
    ),
    stream=True)

response.resolve()

to_markdown(response.text[:100] + "... [TRIMMED] ...")
```



### A Gentle Stroll Through the Green

Imagine this: the air is thick with the scent of damp earth and... [TRIMMED] ...