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In [ ]: import google.generativeai as genai
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In [ ]:
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In [ ]: from google.colab import userdata  
api_key=userdata.get('gemini_key_prompt')
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In [ ]: genai.configure(api_key=api_key)
```

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In [ ]: prompt_template = """I am building a sentiment analysis model for e-commerce rev  
Act as a data scientist with NLP experience.  
For each sentence I give you, classify its sentiment as Positive, Negative, or N  
Only return the sentiment label – no explanation.  
Here are a few examples for reference:  
  
"I love this product!" → Positive  
  
"It was a complete waste of money." → Negative  
  
"The delivery was fine." → Neutral  
Now classify the following sentence:  
"The packaging was okay but the product quality disappointed me."  
"""
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In [ ]: list(genai.list_models())
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Out[ ]: [Model(name='models/embedding-gecko-001',
               base_model_id='',
               version='001',
               display_name='Embedding Gecko',
               description='Obtain a distributed representation of a text.',
               input_token_limit=1024,
               output_token_limit=1,
               supported_generation_methods=['embedText', 'countTextTokens'],
               temperature=None,
               max_temperature=None,
               top_p=None,
               top_k=None),
 Model(name='models/gemini-1.0-pro-vision-latest',
        base_model_id='',
        version='001',
        display_name='Gemini 1.0 Pro Vision',
        description=('The original Gemini 1.0 Pro Vision model version which was
optimized for '
                    'image understanding. Gemini 1.0 Pro Vision was deprecated
on July 12, 2024. '
                    'Move to a newer Gemini version.'),
        input_token_limit=12288,
        output_token_limit=4096,
        supported_generation_methods=['generateContent', 'countTokens'],
        temperature=0.4,
        max_temperature=None,
        top_p=1.0,
        top_k=32),
 Model(name='models/gemini-pro-vision',
        base_model_id='',
        version='001',
        display_name='Gemini 1.0 Pro Vision',
        description=('The original Gemini 1.0 Pro Vision model version which was
optimized for '
                    'image understanding. Gemini 1.0 Pro Vision was deprecated
on July 12, 2024. '
                    'Move to a newer Gemini version.'),
        input_token_limit=12288,
        output_token_limit=4096,
        supported_generation_methods=['generateContent', 'countTokens'],
        temperature=0.4,
        max_temperature=None,
        top_p=1.0,
        top_k=32),
 Model(name='models/gemini-1.5-pro-latest',
        base_model_id='',
        version='001',
        display_name='Gemini 1.5 Pro Latest',
        description=('Alias that points to the most recent production (non-exper
imental) release '
                    'of Gemini 1.5 Pro, our mid-size multimodal model that supp
orts up to 2 '
                    'million tokens.'),
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        output_token_limit=8192,
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        max_temperature=2.0,
        top_p=0.95,
        top_k=40),

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Model(name='models/gemini-1.5-pro-002',
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      version='002',
      display_name='Gemini 1.5 Pro 002',
      description=('Stable version of Gemini 1.5 Pro, our mid-size multimodal
model that '
                  'supports up to 2 million tokens, released in September of
2024.'),
      input_token_limit=2000000,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens', 'createC
achedContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-pro',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Pro',
      description=('Stable version of Gemini 1.5 Pro, our mid-size multimodal
model that '
                  'supports up to 2 million tokens, released in May of 202
4.'),
      input_token_limit=2000000,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-flash-latest',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Flash Latest',
      description=('Alias that points to the most recent production (non-exper
imental) release '
                  'of Gemini 1.5 Flash, our fast and versatile multimodal mod
el for scaling '
                  'across diverse tasks.'),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-flash',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Flash',
      description=('Alias that points to the most recent stable version of Gem
ini 1.5 Flash, our '
                  'fast and versatile multimodal model for scaling across div
erse tasks.'),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,

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        top_p=0.95,
        top_k=40),
Model(name='models/gemini-1.5-flash-002',
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      description=('Stable version of Gemini 1.5 Flash, our fast and versatile
multimodal model '
                  'for scaling across diverse tasks, released in September of
2024.')),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens', 'createC
achedContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-flash-8b',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Flash-8B',
      description=('Stable version of Gemini 1.5 Flash-8B, our smallest and mo
st cost effective '
                  'Flash model, released in October of 2024.')),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['createCachedContent', 'generateContent',
'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-flash-8b-001',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Flash-8B 001',
      description=('Stable version of Gemini 1.5 Flash-8B, our smallest and mo
st cost effective '
                  'Flash model, released in October of 2024.')),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['createCachedContent', 'generateContent',
'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-1.5-flash-8b-latest',
      base_model_id='',
      version='001',
      display_name='Gemini 1.5 Flash-8B Latest',
      description=('Alias that points to the most recent production (non-exper
imental) release '
                  'of Gemini 1.5 Flash-8B, our smallest and most cost effecti
ve Flash model, '
                  'released in October of 2024.')),
      input_token_limit=1000000,
      output_token_limit=8192,
      supported_generation_methods=['createCachedContent', 'generateContent',

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'countTokens'],
    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=40),
Model(name='models/gemini-2.5-pro-preview-03-25',
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    version='2.5-preview-03-25',
    display_name='Gemini 2.5 Pro Preview 03-25',
    description='Gemini 2.5 Pro Preview 03-25',
    input_token_limit=1048576,
    output_token_limit=65536,
    supported_generation_methods=['generateContent',
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                                  'createCachedContent',
                                  'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.5-flash-preview-04-17',
    base_model_id='',
    version='2.5-preview-04-17',
    display_name='Gemini 2.5 Flash Preview 04-17',
    description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
    input_token_limit=1048576,
    output_token_limit=65536,
    supported_generation_methods=['generateContent',
                                  'countTokens',
                                  'createCachedContent',
                                  'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.5-flash-preview-05-20',
    base_model_id='',
    version='2.5-preview-05-20',
    display_name='Gemini 2.5 Flash Preview 05-20',
    description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
    input_token_limit=1048576,
    output_token_limit=65536,
    supported_generation_methods=['generateContent',
                                  'countTokens',
                                  'createCachedContent',
                                  'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.5-flash',
    base_model_id='',
    version='001',
    display_name='Gemini 2.5 Flash',
    description=('Stable version of Gemini 2.5 Flash, our mid-size multimoda
1 model that '
                'supports up to 1 million tokens, released in June of 202
5.'),
    input_token_limit=1048576,
    output_token_limit=65536,

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supported_generation_methods=['generateContent',
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temperature=1.0,
max_temperature=2.0,
top_p=0.95,
top_k=64),
Model(name='models/gemini-2.5-flash-preview-04-17-thinking',
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      version='2.5-preview-04-17',
      display_name='Gemini 2.5 Flash Preview 04-17 for cursor testing',
      description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
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                                    'createCachedContent',
                                    'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.5-flash-lite-preview-06-17',
      base_model_id='',
      version='2.5-preview-06-17',
      display_name='Gemini 2.5 Flash-Lite Preview 06-17',
      description='Preview release (June 11th, 2025) of Gemini 2.5 Flash-Lit
e',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
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                                    'createCachedContent',
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      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.5-pro-preview-05-06',
      base_model_id='',
      version='2.5-preview-05-06',
      display_name='Gemini 2.5 Pro Preview 05-06',
      description='Preview release (May 6th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
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                                    'createCachedContent',
                                    'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.5-pro-preview-06-05',
      base_model_id='',
      version='2.5-preview-06-05',
      display_name='Gemini 2.5 Pro Preview',
      description='Preview release (June 5th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,

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        output_token_limit=65536,
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                                       'batchGenerateContent'],

        temperature=1.0,
        max_temperature=2.0,
        top_p=0.95,
        top_k=64),
Model(name='models/gemini-2.5-pro',
      base_model_id='',
      version='2.5',
      display_name='Gemini 2.5 Pro',
      description='Stable release (June 17th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=[ 'generateContent',
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                                     'createCachedContent',
                                     'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.0-flash-exp',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash Experimental',
      description='Gemini 2.0 Flash Experimental',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=[ 'generateContent', 'countTokens', 'bidiGen
erateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash',
      description='Gemini 2.0 Flash',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=[ 'generateContent',
                                     'countTokens',
                                     'createCachedContent',
                                     'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash-001',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash 001',
      description=('Stable version of Gemini 2.0 Flash, our fast and versatile
multimodal model '
                  'for scaling across diverse tasks, released in January of 2
025.'),

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input_token_limit=1048576,
output_token_limit=8192,
supported_generation_methods=['generateContent',
                              'countTokens',
                              'createCachedContent',
                              'batchGenerateContent'],

temperature=1.0,
max_temperature=2.0,
top_p=0.95,
top_k=40),
Model(name='models/gemini-2.0-flash-exp-image-generation',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash (Image Generation) Experimental',
      description='Gemini 2.0 Flash (Image Generation) Experimental',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens', 'batchGenerateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash-lite-001',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash-Lite 001',
      description='Stable version of Gemini 2.0 Flash-Lite',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=['generateContent',
                                    'countTokens',
                                    'createCachedContent',
                                    'batchGenerateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash-lite',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash-Lite',
      description='Gemini 2.0 Flash-Lite',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=['generateContent',
                                    'countTokens',
                                    'createCachedContent',
                                    'batchGenerateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash-preview-image-generation',
      base_model_id='',
      version='2.0',
      display_name='Gemini 2.0 Flash Preview Image Generation',
      description='Gemini 2.0 Flash Preview Image Generation',
      input_token_limit=32768,
      output_token_limit=8192,

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supported_generation_methods=['generateContent', 'countTokens'],
temperature=1.0,
max_temperature=2.0,
top_p=0.95,
top_k=64),
Model(name='models/gemini-2.0-flash-lite-preview-02-05',
      base_model_id='',
      version='preview-02-05',
      display_name='Gemini 2.0 Flash-Lite Preview 02-05',
      description='Preview release (February 5th, 2025) of Gemini 2.0 Flash-Li
te',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-flash-lite-preview',
      base_model_id='',
      version='preview-02-05',
      display_name='Gemini 2.0 Flash-Lite Preview',
      description='Preview release (February 5th, 2025) of Gemini 2.0 Flash-Li
te',
      input_token_limit=1048576,
      output_token_limit=8192,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=40),
Model(name='models/gemini-2.0-pro-exp',
      base_model_id='',
      version='2.5-exp-03-25',
      display_name='Gemini 2.0 Pro Experimental',
      description='Experimental release (March 25th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.0-pro-exp-02-05',
      base_model_id='',
      version='2.5-exp-03-25',
      display_name='Gemini 2.0 Pro Experimental 02-05',
      description='Experimental release (March 25th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',

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        'countTokens',
        'createCachedContent',
        'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-exp-1206',
      base_model_id='',
      version='2.5-exp-03-25',
      display_name='Gemini Experimental 1206',
      description='Experimental release (March 25th, 2025) of Gemini 2.5 Pro',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.0-flash-thinking-exp-01-21',
      base_model_id='',
      version='2.5-preview-04-17',
      display_name='Gemini 2.5 Flash Preview 04-17',
      description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.0-flash-thinking-exp',
      base_model_id='',
      version='2.5-preview-04-17',
      display_name='Gemini 2.5 Flash Preview 04-17',
      description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',
                                   'countTokens',
                                   'createCachedContent',
                                   'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.0-flash-thinking-exp-1219',
      base_model_id='',
      version='2.5-preview-04-17',
      display_name='Gemini 2.5 Flash Preview 04-17',
      description='Preview release (April 17th, 2025) of Gemini 2.5 Flash',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['generateContent',

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        'countTokens',
        'createCachedContent',
        'batchGenerateContent'],

    temperature=1.0,
    max_temperature=2.0,
    top_p=0.95,
    top_k=64),
Model(name='models/gemini-2.5-flash-preview-tts',
      base_model_id='',
      version='gemini-2.5-flash-exp-tts-2025-05-19',
      display_name='Gemini 2.5 Flash Preview TTS',
      description='Gemini 2.5 Flash Preview TTS',
      input_token_limit=8192,
      output_token_limit=16384,
      supported_generation_methods=['countTokens', 'generateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.5-pro-preview-tts',
      base_model_id='',
      version='gemini-2.5-pro-preview-tts-2025-05-19',
      display_name='Gemini 2.5 Pro Preview TTS',
      description='Gemini 2.5 Pro Preview TTS',
      input_token_limit=8192,
      output_token_limit=16384,
      supported_generation_methods=['countTokens', 'generateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/learnlm-2.0-flash-experimental',
      base_model_id='',
      version='2.0',
      display_name='LearnLM 2.0 Flash Experimental',
      description='LearnLM 2.0 Flash Experimental',
      input_token_limit=1048576,
      output_token_limit=32768,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemma-3-1b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3 1B',
      description='',
      input_token_limit=32768,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=None,
      top_p=0.95,
      top_k=64),
Model(name='models/gemma-3-4b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3 4B',
      description='',

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        input_token_limit=32768,
        output_token_limit=8192,
        supported_generation_methods=['generateContent', 'countTokens'],
        temperature=1.0,
        max_temperature=None,
        top_p=0.95,
        top_k=64),
Model(name='models/gemma-3-12b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3 12B',
      description='',
      input_token_limit=32768,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=None,
      top_p=0.95,
      top_k=64),
Model(name='models/gemma-3-27b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3 27B',
      description='',
      input_token_limit=131072,
      output_token_limit=8192,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=None,
      top_p=0.95,
      top_k=64),
Model(name='models/gemma-3n-e4b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3n E4B',
      description='',
      input_token_limit=8192,
      output_token_limit=2048,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=None,
      top_p=0.95,
      top_k=64),
Model(name='models/gemma-3n-e2b-it',
      base_model_id='',
      version='001',
      display_name='Gemma 3n E2B',
      description='',
      input_token_limit=8192,
      output_token_limit=2048,
      supported_generation_methods=['generateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=None,
      top_p=0.95,
      top_k=64),
Model(name='models/embedding-001',
      base_model_id='',
      version='001',
      display_name='Embedding 001',
      description='Obtain a distributed representation of a text.',

```

```

        input_token_limit=2048,
        output_token_limit=1,
        supported_generation_methods=['embedContent'],
        temperature=None,
        max_temperature=None,
        top_p=None,
        top_k=None),
Model(name='models/text-embedding-004',
      base_model_id='',
      version='004',
      display_name='Text Embedding 004',
      description='Obtain a distributed representation of a text.',
      input_token_limit=2048,
      output_token_limit=1,
      supported_generation_methods=['embedContent'],
      temperature=None,
      max_temperature=None,
      top_p=None,
      top_k=None),
Model(name='models/gemini-embedding-exp-03-07',
      base_model_id='',
      version='exp-03-07',
      display_name='Gemini Embedding Experimental 03-07',
      description='Obtain a distributed representation of a text.',
      input_token_limit=8192,
      output_token_limit=1,
      supported_generation_methods=['embedContent', 'countTextTokens', 'countT
okens'],
      temperature=None,
      max_temperature=None,
      top_p=None,
      top_k=None),
Model(name='models/gemini-embedding-exp',
      base_model_id='',
      version='exp-03-07',
      display_name='Gemini Embedding Experimental',
      description='Obtain a distributed representation of a text.',
      input_token_limit=8192,
      output_token_limit=1,
      supported_generation_methods=['embedContent', 'countTextTokens', 'countT
okens'],
      temperature=None,
      max_temperature=None,
      top_p=None,
      top_k=None),
Model(name='models/aqa',
      base_model_id='',
      version='001',
      display_name='Model that performs Attributed Question Answering.',
      description=('Model trained to return answers to questions that are grou
nded in provided '
                  'sources, along with estimating answerable probability.'),
      input_token_limit=7168,
      output_token_limit=1024,
      supported_generation_methods=['generateAnswer'],
      temperature=0.2,
      max_temperature=None,
      top_p=1.0,
      top_k=40),
Model(name='models/imagen-3.0-generate-002',

```

```

    base_model_id='',
    version='002',
    display_name='Imagen 3.0 002 model',
    description='Vertex served Imagen 3.0 002 model',
    input_token_limit=480,
    output_token_limit=8192,
    supported_generation_methods=['predict'],
    temperature=None,
    max_temperature=None,
    top_p=None,
    top_k=None),
Model(name='models/imagen-4.0-generate-preview-06-06',
    base_model_id='',
    version='01',
    display_name='Imagen 4 (Preview)',
    description='Vertex served Imagen 4.0 model',
    input_token_limit=480,
    output_token_limit=8192,
    supported_generation_methods=['predict'],
    temperature=None,
    max_temperature=None,
    top_p=None,
    top_k=None),
Model(name='models/imagen-4.0-ultra-generate-preview-06-06',
    base_model_id='',
    version='01',
    display_name='Imagen 4 Ultra (Preview)',
    description='Vertex served Imagen 4.0 ultra model',
    input_token_limit=480,
    output_token_limit=8192,
    supported_generation_methods=['predict'],
    temperature=None,
    max_temperature=None,
    top_p=None,
    top_k=None),
Model(name='models/veo-2.0-generate-001',
    base_model_id='',
    version='2.0',
    display_name='Veo 2',
    description=('Vertex served Veo 2 model. Access to this model requires b
illing to be '
                'enabled on the associated Google Cloud Platform account. P
lease visit '
                'https://console.cloud.google.com/billing to enable it.'),
    input_token_limit=480,
    output_token_limit=8192,
    supported_generation_methods=['predictLongRunning'],
    temperature=None,
    max_temperature=None,
    top_p=None,
    top_k=None),
Model(name='models/gemini-2.5-flash-preview-native-audio-dialog',
    base_model_id='',
    version='gemini-2.5-flash-preview-native-audio-dialog-2025-05-19',
    display_name='Gemini 2.5 Flash Preview Native Audio Dialog',
    description='Gemini 2.5 Flash Preview Native Audio Dialog',
    input_token_limit=131072,
    output_token_limit=8192,
    supported_generation_methods=['countTokens', 'bidiGenerateContent'],
    temperature=1.0,

```

```

        max_temperature=2.0,
        top_p=0.95,
        top_k=64),
Model(name='models/gemini-2.5-flash-exp-native-audio-thinking-dialog',
      base_model_id='',
      version='gemini-2.5-flash-exp-native-audio-thinking-dialog-2025-05-19',
      display_name='Gemini 2.5 Flash Exp Native Audio Thinking Dialog',
      description='Gemini 2.5 Flash Exp Native Audio Thinking Dialog',
      input_token_limit=131072,
      output_token_limit=8192,
      supported_generation_methods=['countTokens', 'bidiGenerateContent'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-2.0-flash-live-001',
      base_model_id='',
      version='001',
      display_name='Gemini 2.0 Flash 001',
      description='Gemini 2.0 Flash 001',
      input_token_limit=131072,
      output_token_limit=8192,
      supported_generation_methods=['bidiGenerateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64),
Model(name='models/gemini-live-2.5-flash-preview',
      base_model_id='',
      version='001',
      display_name='Gemini Live 2.5 Flash Preview',
      description='Gemini Live 2.5 Flash Preview',
      input_token_limit=1048576,
      output_token_limit=65536,
      supported_generation_methods=['bidiGenerateContent', 'countTokens'],
      temperature=1.0,
      max_temperature=2.0,
      top_p=0.95,
      top_k=64)]

```

```
In [ ]: model = genai.GenerativeModel('gemini-2.0-flash') # model ready
```

```
In [ ]: # model ready with the variable of model
        # prompt ready with variable prompt_template

        response = model.generate_content(prompt_template)
        response.text.strip()
```

```
Out[ ]: 'Negative'
```