

AI Tools Integration Guide

Google Vertex AI, Gemini, Imagen, Veo & Canva APIs

MarketingAI Platform | December 2025

1. Google Cloud AI Services Overview

Google AI Integration Strategy

MarketingAI leverages Google's complete AI ecosystem through Vertex AI, providing unified access to best-in-class models for text, image, and video generation. This section details every available tool and its integration potential.

1.1 Gemini Models (Text & Multimodal)



Gemini 2.5 Pro

LATEST

Purpose: Most advanced reasoning model for complex content generation, analysis, and multi-step planning.

Capability	Details	Marketing Use Case
Context Window	1M tokens	Analyze entire brand history for content consistency
Multimodal Input	Text, images, video, audio	Generate captions from product images
Thinking Mode	Extended reasoning	Complex campaign strategy planning
Code Generation	Advanced	Generate analytics dashboards
Function Calling	Native support	Trigger automated workflows

```
# Gemini 2.5 Pro API Integration from google.cloud import aiplatform from vertexai.generative_models import GenerativeModel
model = GenerativeModel("gemini-2.5-pro-preview-05-06")
response = model.generate_content(contents="Create a week's worth of Instagram posts for a fitness brand", generation_config={ "temperature": 0.8, "max_output_tokens": 8192, "top_p": 0.95 } )
```

Pricing: \$1.25/1M input tokens, \$10/1M output tokens (under 200K context)



Gemini 2.0 Flash

SPEED

Purpose: Fast, cost-effective model for high-volume content generation.

Capability	Details	Marketing Use Case
Speed	2x faster than Pro	Real-time caption suggestions
Context	1M tokens	Process large content libraries
Streaming	Native support	Live content preview

Cost	10x cheaper than Pro	High-volume batch processing
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Pricing: \$0.10/1M input tokens, \$0.40/1M output tokens

G**Gemini 2.0 Flash-Lite****BUDGET**

Purpose: Ultra-low-cost model for simple tasks and high-volume operations.

- Hashtag generation
- Simple caption rewrites
- Content categorization
- Sentiment quick-check

Pricing: \$0.075/1M input tokens, \$0.30/1M output tokens

1.2 Imagen 3 (Image Generation)

I**Imagen 3****VERTEX AI**

Purpose: Photorealistic and artistic image generation for marketing visuals.

Feature	Capability	Marketing Application
Resolution	Up to 2048x2048	High-quality social media graphics
Aspect Ratios	1:1, 16:9, 9:16, 4:3, 3:4	All social platform formats
Styles	Photo, art, 3D, sketch	Brand-consistent visuals
Batch	Up to 4 images per request	A/B testing visuals
Edit Mode	Inpainting, outpainting	Product image enhancement
Upscale	2x, 4x enhancement	Print-ready marketing materials

```
# Imagen 3 API Integration
from vertexai.preview.vision_models import ImageGenerationModel
model = ImageGenerationModel.from_pretrained("imagen-3.0-generate-002")
images = model.generate_images(prompt="Modern minimalist product photo of wireless earbuds on marble surface", number_of_images=4, aspect_ratio="1:1", safety_filter_level="block_something", person_generation="allow_adult") # Save generated images for i, image in enumerate(images): image.save(f"product_image_{i}.png")
```

Pricing: ~\$0.04 per image (standard), ~\$0.08 per image (high quality)

I**Imagen 3 Fast****SPEED**

Purpose: Rapid image generation for real-time preview and iteration.

- 3x faster generation
- Lower cost per image
- Ideal for draft visuals
- Quick concept testing

Pricing: ~\$0.02 per image

1.3 Veo 2 (Video Generation)



Purpose: AI video generation for social media content, ads, and product showcases.

Feature	Capability	Marketing Application
Resolution	1080p, 4K	Professional video ads
Duration	6-60 seconds	Reels, TikToks, Stories
FPS	24, 30, 60	Cinematic or smooth motion
Styles	Realistic, animated, cinematic	Brand-appropriate content
Text-to-Video	Full prompt support	Generate from descriptions
Image-to-Video	Animate still images	Product showcases

```
# Veo 2 API Integration from vertexai.preview.vision_models import VideoGenerationModel
model = VideoGenerationModel.from_pretrained("veo-2.0-generate-001")
video = model.generate_video(prompt="Smooth camera pan across a modern coffee shop, morning light streaming through windows", duration_seconds=15, aspect_ratio="9:16", # For Instagram Reels
resolution="1080p", fps=30)
video.save("coffee_shop_reel.mp4")
```

Pricing: ~\$0.35 per second of video generated

1.4 Additional Google AI Services

Cloud Natural Language API

- Sentiment analysis for comments
- Entity extraction from posts
- Content classification
- Syntax analysis

Cost: \$1/1K records

Cloud Vision API

- Image labeling & tagging
- OCR for screenshots
- Logo detection
- Safe search detection

Cost: \$1.50/1K images

Cloud Speech-to-Text

- Video transcription
- Podcast to blog conversion
- Auto-captioning
- 125+ languages

Cost: \$0.006/15 sec**Cloud Text-to-Speech**

- Voiceovers for videos
- 400+ voices
- Neural2 quality
- SSML support

Cost: \$4/1M chars (Neural2)**Cloud Translation API**

- Multi-language campaigns
- 133 languages
- Glossary support
- Document translation

Cost: \$20/1M chars**Video Intelligence API**

- Video content analysis
- Object tracking
- Scene detection
- Auto-tagging

Cost: \$0.10/min

2. Canva API & Magic Studio Integration

Canva Connect API

Canva's Connect API enables deep integration with MarketingAI, allowing users to leverage Canva's design ecosystem while benefiting from our AI automation. Available through Canva's developer platform.

2.1 Canva Connect API Capabilities

**Canva Design API****CONNECT**

Endpoint	Function	MarketingAI Integration
POST /designs	Create new design	Auto-generate from AI content
GET /designs/{id}	Retrieve design	Sync designs to calendar
PUT /designs/{id}	Update design	Apply brand changes
POST /designs/{id}/export	Export design	Download for posting
GET /templates	List templates	Template library integration
POST /autofill	Auto-populate template	Batch content creation

```
# Canva Connect API Integration import requests
CANVA_API_KEY = "your_canva_api_key"
BASE_URL = "https://api.canva.com/v1" # Create design from template with AI-generated content
def create_social_post(template_id, ai_content):
    response = requests.post(f"{BASE_URL}/designs", headers={"Authorization": f"Bearer {CANVA_API_KEY}"}, json={ "template_id": template_id, "title": ai_content["title"], "data": { "headline": ai_content["headline"], "body": ai_content["body_text"], "cta": ai_content["call_to_action"] } })
    return response.json() # Export design for social media
def export_design(design_id, format="png", quality="high"):
    response = requests.post( f"{BASE_URL}/designs/{design_id}/export", headers={"Authorization": f"Bearer {CANVA_API_KEY}"}, json={ "format": format, "quality": quality, "pages": [1] })
    return response.json()["download_url"]
```

2.2 Canva Magic Studio AI Tools

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Magic Studio Features

AI

Tool	Capability	API Access	Use Case
Magic Write	AI text generation	Via Autofill API	Auto-populate copy
Magic Design	Auto-generate designs	Design API	One-click social posts
Magic Edit	AI image editing	Asset API	Product photo enhancement
Magic Eraser	Remove objects	Asset API	Clean product shots
Magic Expand	Extend images	Asset API	Fit different aspect ratios
Magic Grab	Extract subjects	Asset API	Create cutouts
Magic Morph	Style transfer	Asset API	Brand consistency
Magic Animate	Add motion	Export API	Animated posts
Magic Media	Text-to-image	Asset API	Generate custom graphics
Text to Video	AI video creation	Video API	Quick video ads

2.3 Canva Brand Kit API

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Brand Kit Integration

Sync brand assets between MarketingAI and Canva for consistent design output.

```
# Sync MarketingAI brand to Canva Brand Kit
def sync_brand_to_canva(brand_data): # Upload logo
    logo_response = requests.post( f"{BASE_URL}/assets/upload", headers={"Authorization": f"Bearer {CANVA_API_KEY}"}, files={"file": brand_data["logo_file"]} ) # Create/update brand kit
    brand_kit = requests.put( f"{BASE_URL}/brand-kits/{brand_data['canva_brand_id']}", headers={"Authorization": f"Bearer {CANVA_API_KEY}"}, json={ "name": brand_data["brand_name"], "colors": { "primary": brand_data["primary_color"], "secondary": brand_data["secondary_color"], "accent": brand_data["accent_color"] }, "fonts": {
```

```
"heading": brand_data["heading_font"], "body": brand_data["body_font"] }, "logos": [logo_response.json()["asset_id"]]} ) return  
brand_kit.json()
```

3. Cost Analysis & Optimization

3.1 Google AI Services Pricing Summary

Service	Unit	Price	Est. Monthly (1000 users)
Gemini 2.5 Pro	1M tokens	\$1.25 in / \$10 out	\$150-500
Gemini 2.0 Flash	1M tokens	\$0.10 in / \$0.40 out	\$50-150
Imagen 3	Per image	\$0.02-0.08	\$100-400
Veo 2	Per second	\$0.35	\$200-800
Natural Language	1K records	\$1.00	\$20-50
Speech-to-Text	15 seconds	\$0.006	\$30-100
Translation	1M chars	\$20	\$40-100
Total Google AI			\$590-2,100

3.2 Canva API Pricing

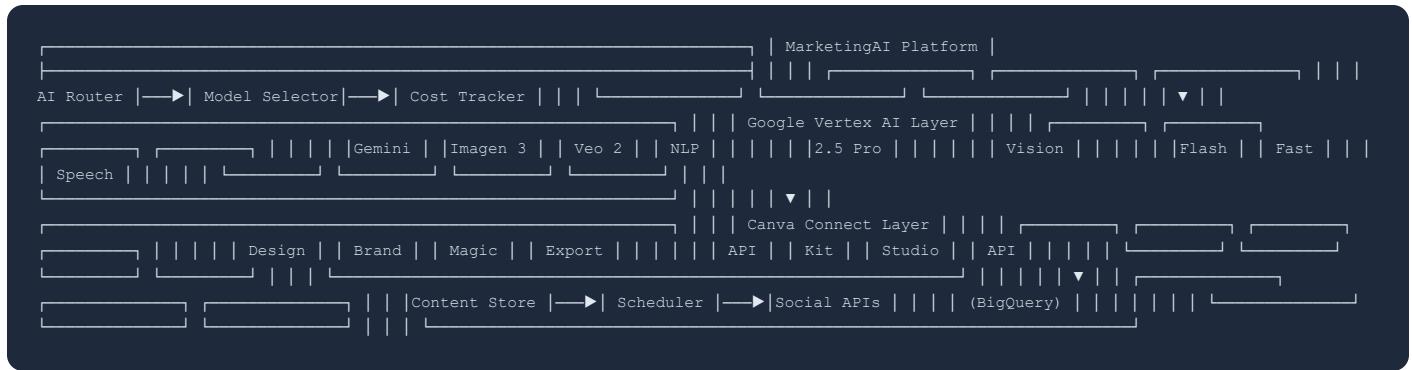
Tier	API Calls/Month	Price	Features
Free	100	\$0	Basic design creation
Starter	1,000	\$50/mo	+ Export, templates
Pro	10,000	\$200/mo	+ Brand kit, autofill
Enterprise	Unlimited	Custom	+ White-label, SLA

3.3 Cost Optimization Strategies

Smart Model Routing

- Simple tasks → **Flash-Lite**: Hashtags, short captions (\$0.075/1M tokens)
- Standard content → **Flash**: Regular posts, emails (\$0.10/1M tokens)
- Complex strategy → **Pro**: Campaign planning, analysis (\$1.25/1M tokens)
- Draft images → **Imagen Fast**: Previews, iterations (\$0.02/image)
- Final images → **Imagen 3**: Published content (\$0.04/image)

4. Integration Architecture



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