

DataPulse: 智能市場分析助理

Presented by Team 5 (140.113)

Outline

- 系統介紹
- 系統架構
- 實作方法
- Live Demo



登入頁面

- 預設權限：None

Welcome Back

Enter your credentials to access your account

Username

Password

Sign In

Don't have an account? [Register here](#)

- 新增/ 刪除使用者
- 管理權限
 - Admin role
 - Global role
 - Korea role
 - China role
 - None

DataPulse

adminLogout

Admin Dashboard

Create New User

Username

Email

Password

Role

Korea Data Viewer

Create User

Manage Users

| Username | Email | Current Role | Actions |
|----------|-------------------|--------------|--|
| admin | admin@example.com | admin | <div>Change Role</div> <div>Delete</div> |
| ruby | ruby@gmail.com | korea | <div>Change Role</div> <div>Delete</div> |
| lon | lon@gmail.com | china | <div>Change Role</div> <div>Delete</div> |

© 2025 TSMC CareerHack. All rights reserved.

管理者頁面



Welcome, ruby !

 Your access level: **korea**



AI Assistant

Chat with our AI to analyze financial data and get insights.



Financial Reports

View and compare financial reports from various companies.



Data Visualization

Explore data through interactive charts and graphs.

儀表板

AI Financial Assistant

[Back to Dashboard](#)

AI Hello! I'm your AI financial assistant. I can help you analyze market data and provide insights based on your access level. What would you like to know?

You Tell me the Operating Margin of Samsung company in 2022 Q2

AI Samsung's operating margin in 2022 Q2 was 18.26%. (This answer is derived from the FIN_Data.)

You i want to have a look at the transcript content of Apple company 2022 Q1

AI I apologize, but you don't have permission to access data for Apple. This information is only available to users with appropriate access levels.

You i want to have a look at the transcript content of Samsung company 2022 Q1

AI You are requesting the transcript for Samsung for 2022 Q1. Here is the link to the transcript: [here](#)

AI Chat Assistant

Summary Report

- PDF Download

Financial Report Generator

[← Back to Dashboard](#)

Company

Google




Year

2022



Quarter

Q2

 Generate Report

Report Preview

[Download PDF](#)

Google Q2 2022 Financial Report

1. Executive Summary

Google delivered strong Q2 2022 results, driven by solid performance in Search and continued momentum in Cloud. Total revenue reached \$69.685 billion, a 13% YoY increase (16% in constant currency), exceeding expectations. Search revenue demonstrated resilience amidst a complex macroeconomic backdrop, boosted by strength in the travel and retail sectors. YouTube advertising revenue saw modest growth of 5% YoY, primarily due to tough comps from the prior year. Google Cloud surpassed the \$6 billion quarterly revenue mark for the first time, achieving a 36% YoY increase. Operating income remained flat YoY at \$19.453 billion, impacted by increased operating expenses, primarily in R&D and Sales & Marketing. Management emphasized a long-term focus on investments in AI, Search, and Cloud, while acknowledging the uncertain global economic outlook and implementing measures to slow hiring and sharpen focus.

2. Financial Performance Analysis

Google's Q2 2022 revenue growth of 13% YoY was fueled by sustained demand in Search, particularly within the travel and retail verticals. This performance highlights the enduring relevance of Search in connecting consumers with businesses. However, YouTube advertising revenue growth decelerated compared to previous quarters, facing challenging comparisons to the exceptional performance in Q2 2021. The ongoing shift towards digital video and the increasing adoption of connected TV present significant long-term opportunities for YouTube. Google Cloud's impressive 36% YoY revenue growth showcases its expanding market presence and the growing enterprise adoption of its infrastructure, data analytics, and collaboration tools. Operating income remained flat YoY, primarily due to increased investments in research and development, sales and marketing, and general and administrative expenses. These investments reflect Google's commitment to innovation and long-term growth. The company maintains a robust balance sheet with \$125 billion in cash and marketable securities, enabling continued investments and strategic initiatives.

Summary Report

- Visualization

Financial Report Generator

[← Back to Dashboard](#)

Company


Google

Year

2022

Quarter

Q2

 Generate Report

Report Preview

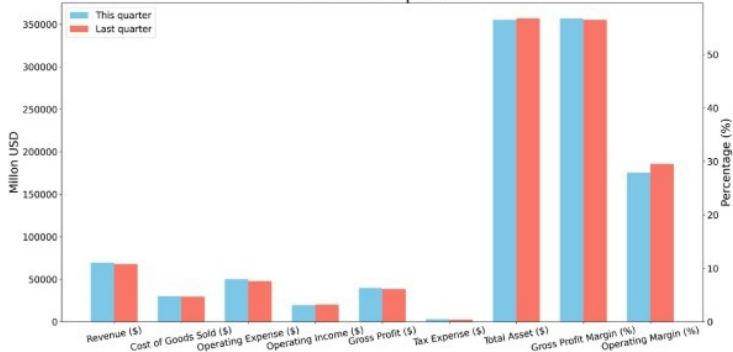
 Download PDF

marketable securities, enabling continued investments and strategic initiatives.

Key Metrics Summary

| Metric | This Quarter | Last Quarter | % Change |
|---------------------------|--------------|--------------|----------|
| Revenue | \$69685 | \$68011 | +2.46% |
| Cost of Goods Sold (COGS) | \$30104 | \$29599 | +1.71% |
| Operating Expense | \$50232 | \$47917 | +4.83% |
| Operating Income | \$19453 | \$20094 | -3.19% |
| Gross Profit | \$39581 | \$38412 | +3.04% |
| Tax Expense | \$3012 | \$2498 | +20.58% |
| Total Asset | \$355185 | \$357096 | -0.54% |
| Gross Profit Margin | \$56 | \$56 | +0.57% |
| Operating Margin | \$27 | \$29 | -5.52% |

metrics comparison



3. Business Segment & Market Analysis

Google Services, which includes Search, YouTube, and Google Network, contributed the majority of revenue in Q2 2022. Search remained the dominant revenue driver, benefiting from the resurgence in travel and retail. YouTube faced tougher comparisons to the previous year, leading to more moderate growth. Google Cloud continued its rapid expansion, gaining traction across various industries and geographies. The company's multi-cloud strategy and focus on data analytics, AI, and cybersecurity position it well in the competitive cloud market.

Data Visualization

Bar Chart Yearly USD Indices... Companies...

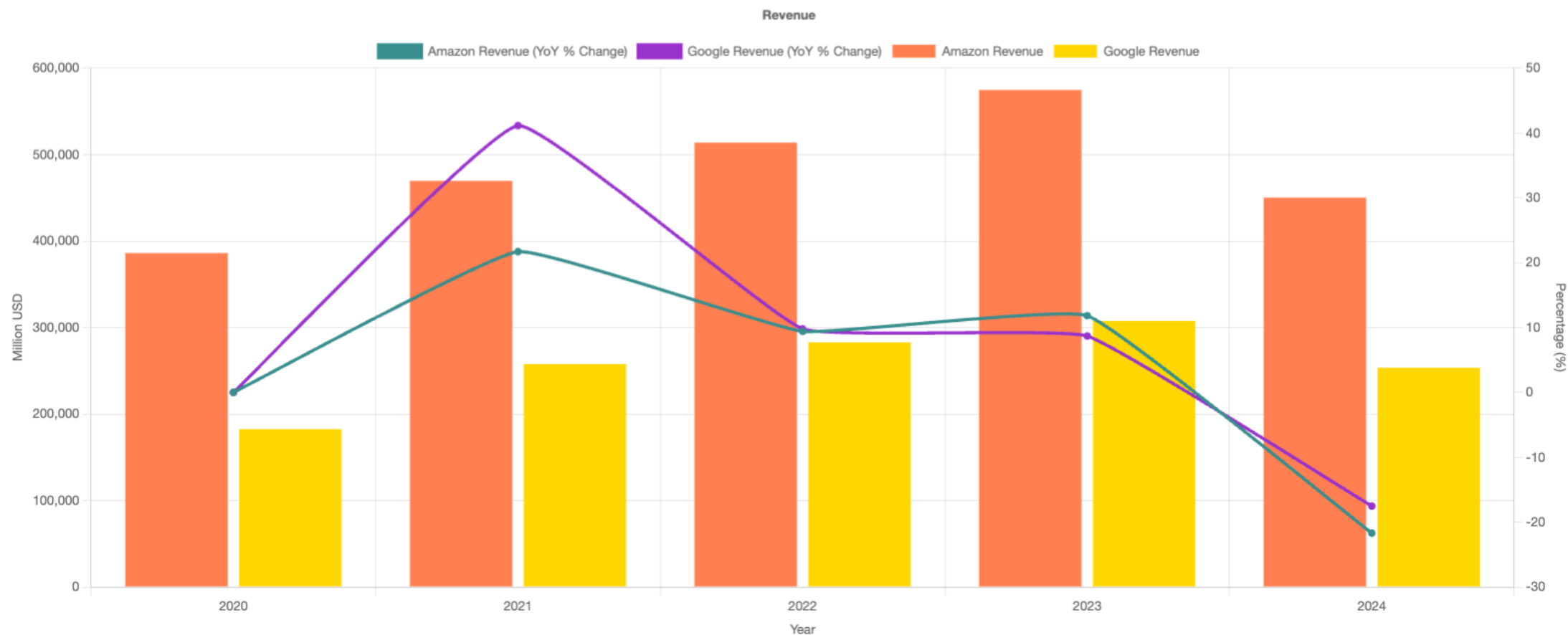
Selected Indices: Revenue

Selected companies: Amazon Google

Filter by Year:



Years: 2020 - 2024



Bar Chart ▾

Quarterly ▾

TWD ▾

Indices... ▾

Companies... ▾

Selected Indices: Operating Income ✕

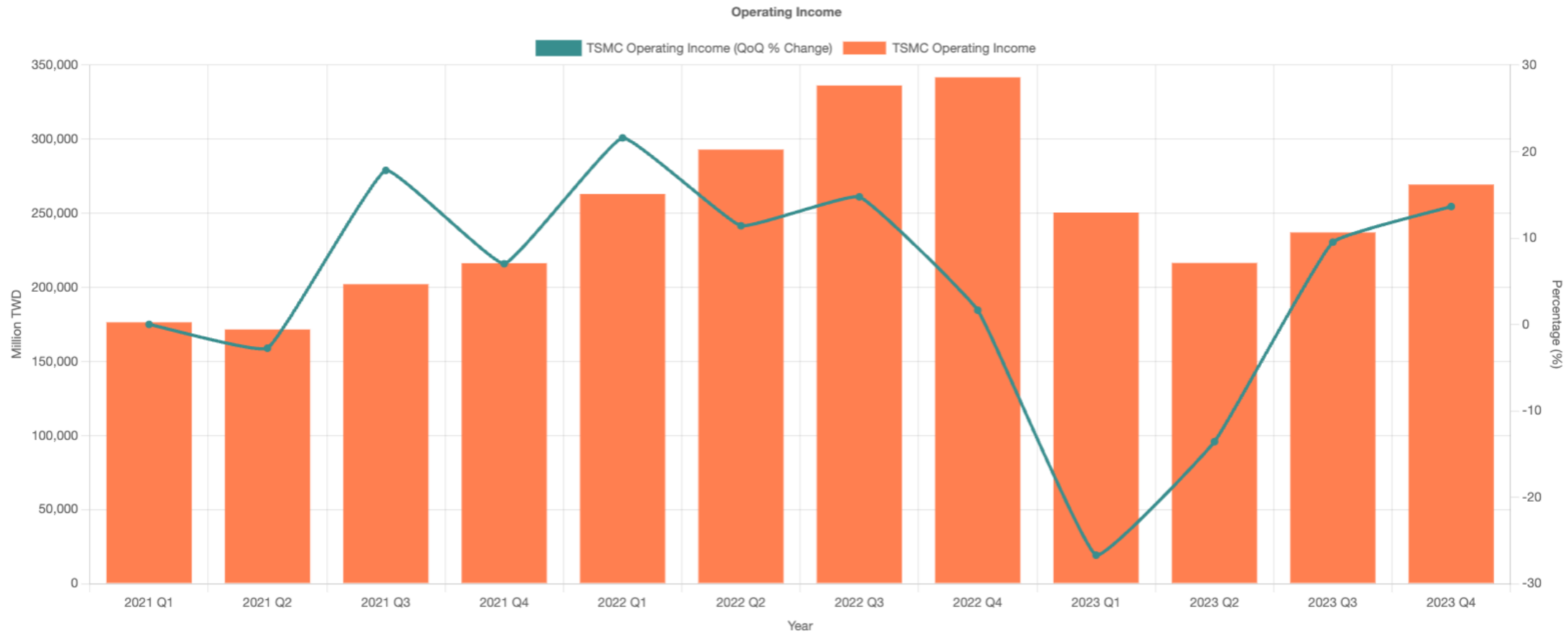
Selected companies: TSMC ✕

Filter by Year:

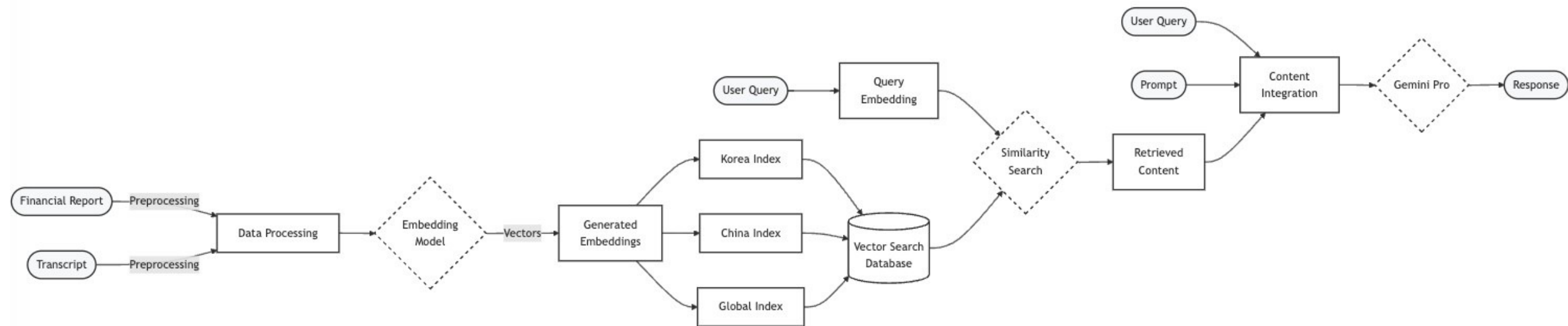


Years: 2021 - 2023

Data Visualization

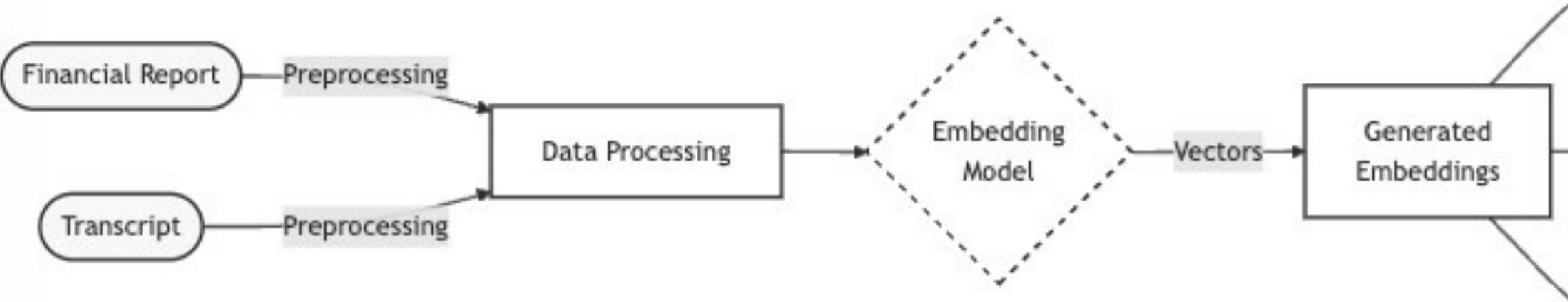


系統架構



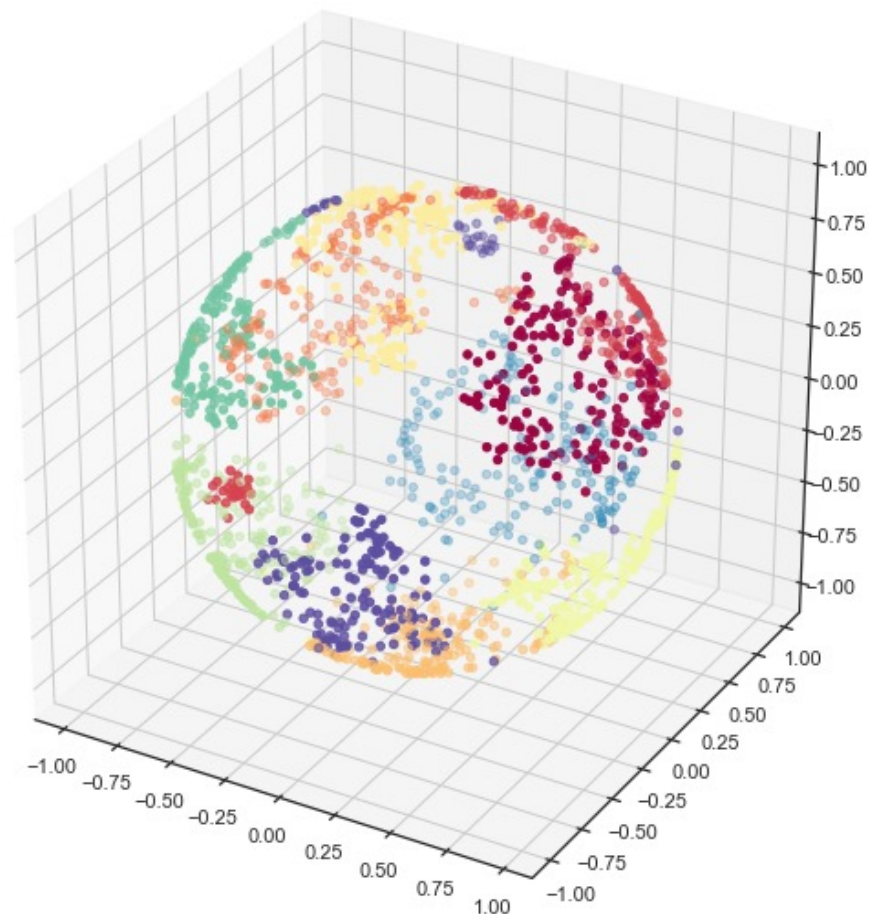
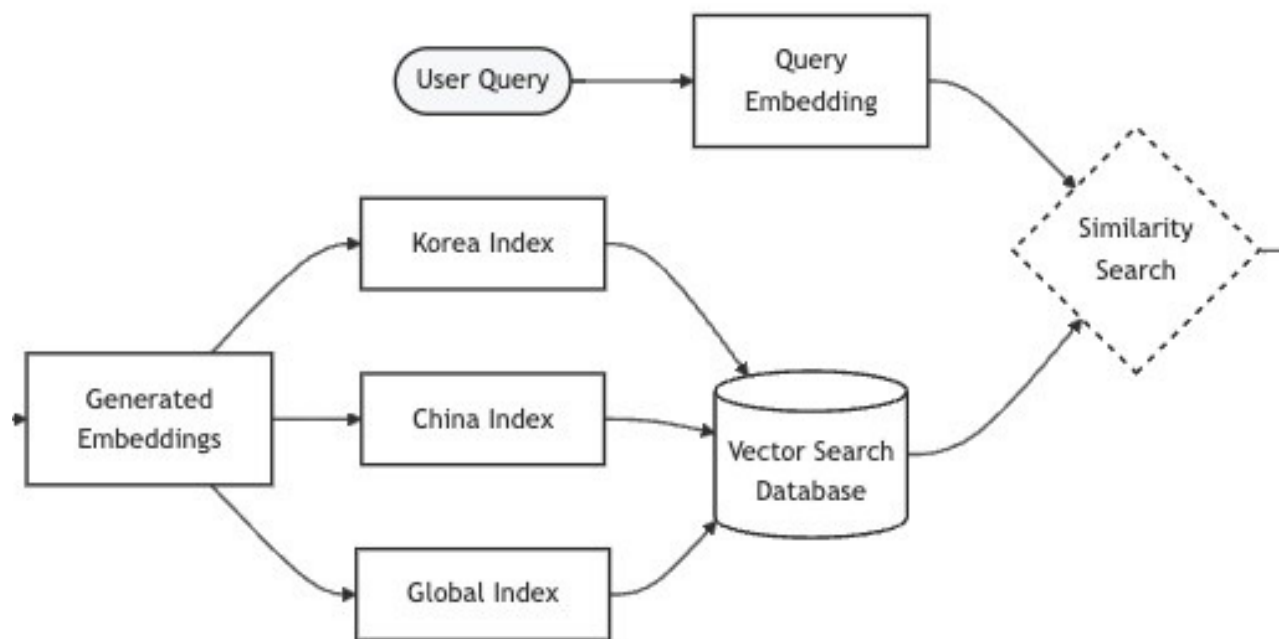
Data Processing

- EMBEDDING_MODEL="text-multilingual-embedding-002"

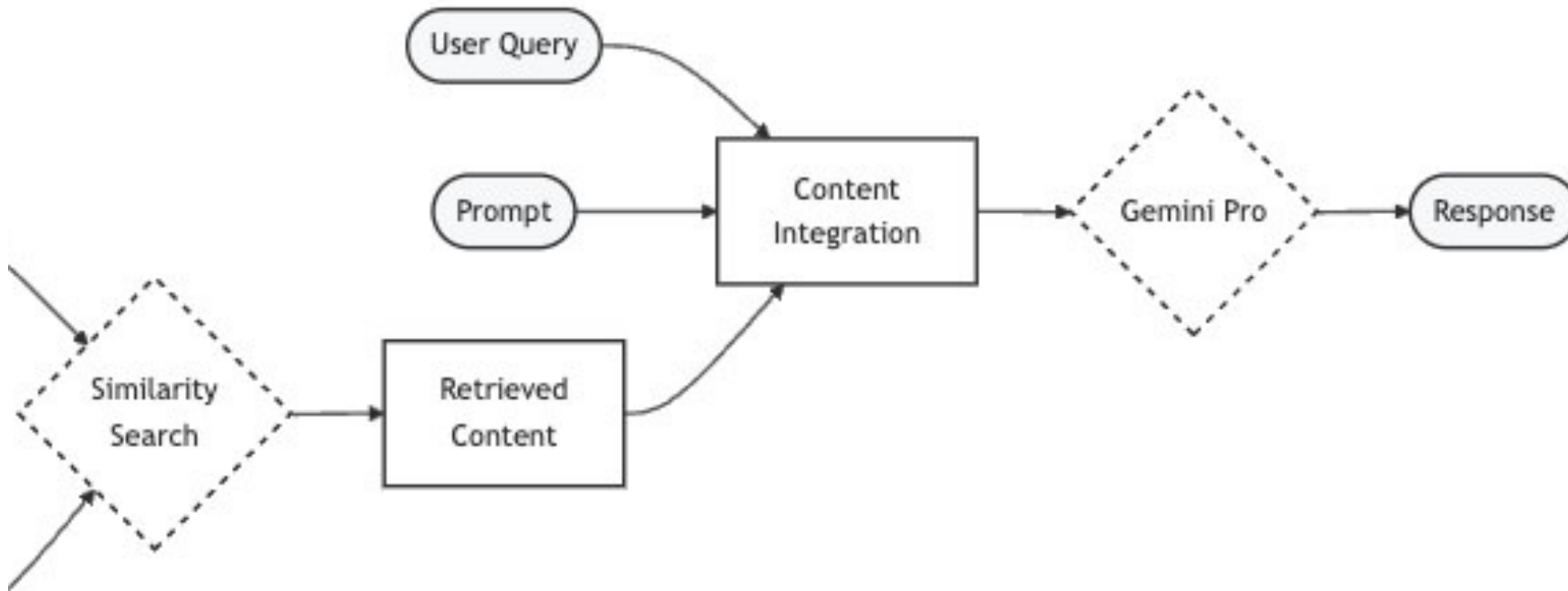


| id | company | year | quarter | filename | content | embedding |
|----|---------|------|---------|----------|---|---|
| 1 | Amazon | 2020 | 1 | FIN | Company: Amazon Year: 2020 Quarter: Q1 Financial Index: Cost of Goods Sold Value (USD): \$44,257.00 Million Local Currency: USD Local Value: 44,257.00 Million TWD Value: 1,457,383.01 Million TWD | [-0.00727612990885973, -0.0619744248688221, 0.03506 -0.04142202064394951, 0.004189203958958387, -0.0169 0.0722273513674736, -0.021231817081570625, -0.01345 |

Vector Search



LLM Integration



GENERATIVE_MODEL="gemini-1.5-pro-002"

API Endpoints

- /api/get_transcript_url
- /api/fetch_transcript_content
- /api/graphics
- /api/chat
- /api/chat/summary

Data Trustworthiness

- 使用者授權設計
 - 讓系統管理者賦予權限
- 資料授權設計
 - 透過區分不同Region Index區分資料權限
 - 以API封裝 Transcript data 資訊
- 避免資料幻覺設計
 - 註明資料來源，提供連結驗證

Future Work

- 結合更多Tools
- 更精簡的資料處理，優化資料分類邏輯
- 將服務部署到雲端

Live Demo





Thank you

All Questions are Welcome!