

# Building AI Chatbot with RAG

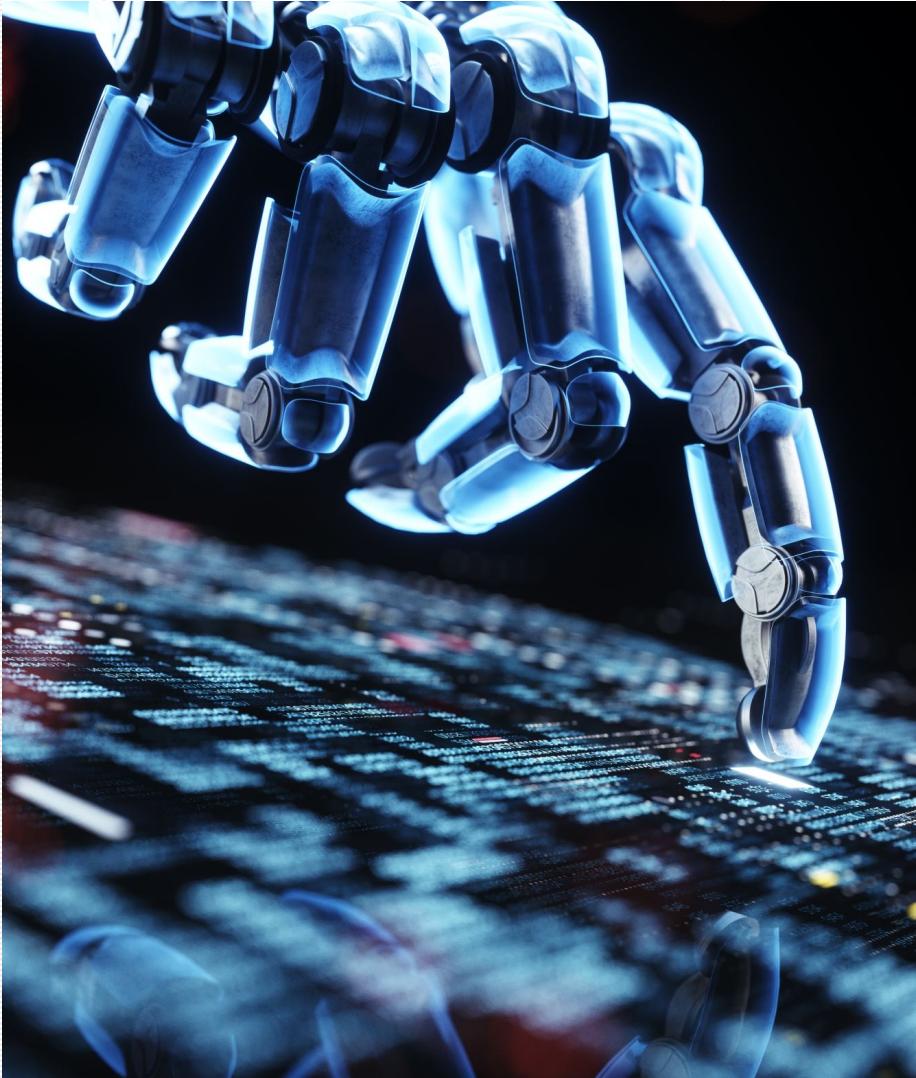
TAUTOLOGY - 27/07/2567

# KRIN CHINPRASATSAK

DATASCIENTIST  
INSTRUCTOR  
SPEAKER

Experienced data scientist, instructor and speaker,  
AI consultant for the public and private sectors,  
CEO & Co-founder of MADEBYAI and QuantMetric





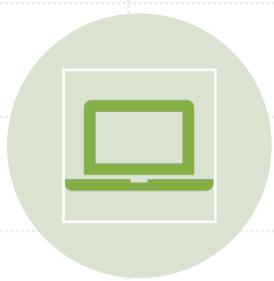
# Agenda

- Setting up AI chatbot
- Chatbot without RAG
- Chatbot with RAG (pdf)
- Chatbot with RAG (json)
- General chatbot with RAG
- Connect with Line
- Connection with FB messenger
- Deployment

# Setting up AI chatbot



# Setting up chatbot



GOOGLE  
COLAB



API KEYS



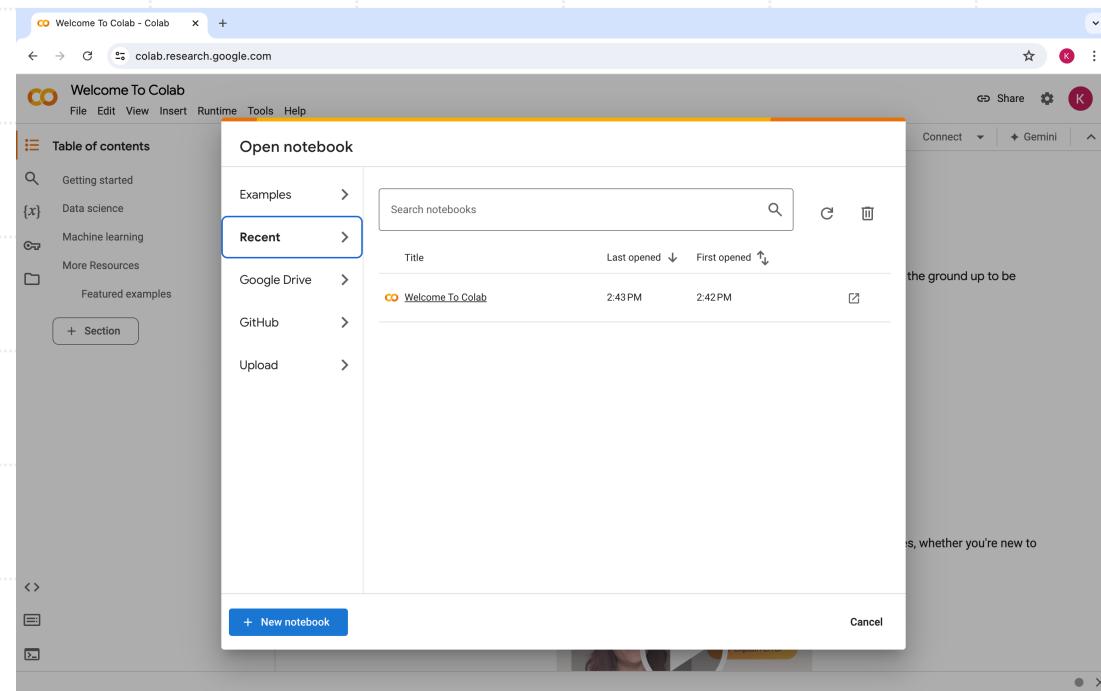
API PRICING



WHY NOT  
LLAMA?

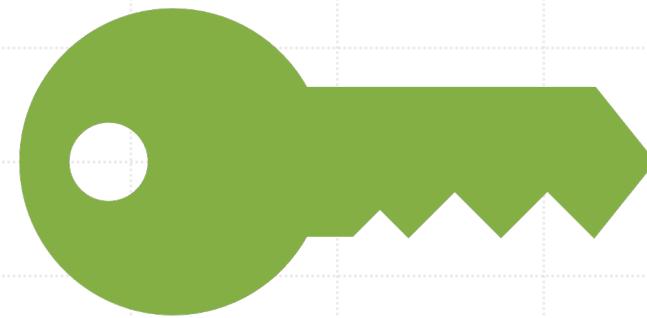
# Google Colab

<https://colab.research.google.com/>



# API keys

way\_to\_get\_API\_keys.pdf





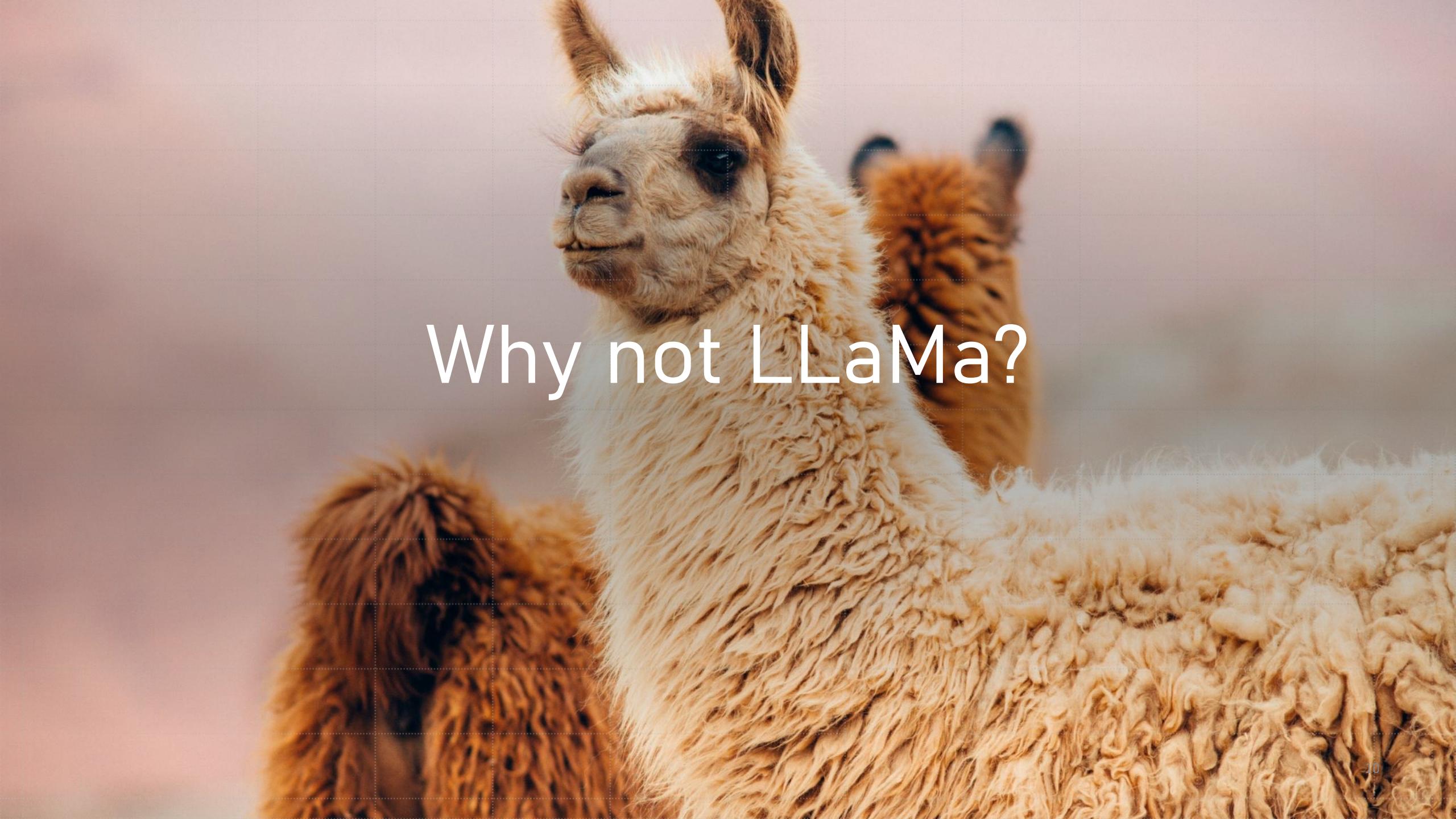
# Pricing

- <https://openai.com/api/pricing/>
- <https://ai.google.dev/pricing>
- <https://www.anthropic.com/pricing#anthropic-api>



A blurred background image of a concert crowd with bright stage lights, creating a bokeh effect with various colors like blue, yellow, and red.

# SMALL LANGUAGE MODEL VS LARGE LANGUAGE MODEL



Why not LLaMa?

# LLaMa3.1

405B requires 8xH100  
8xH100 = \$64/hour  
= \$1536/day  
= \$46080/month  
≈ 1.7 ล้านบาท/เดือน



# Chatbot without RAG



# Chatbot without RAG

- ChatGPT\_without\_RAG.ipynb
- Claude without RAG.ipynb
- Gemini without RAG.ipynb



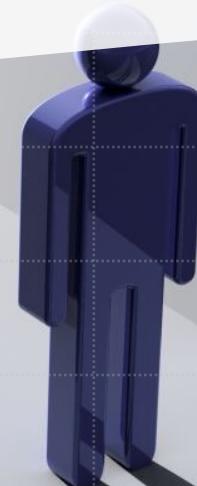
# Chatbot with RAG (pdf)



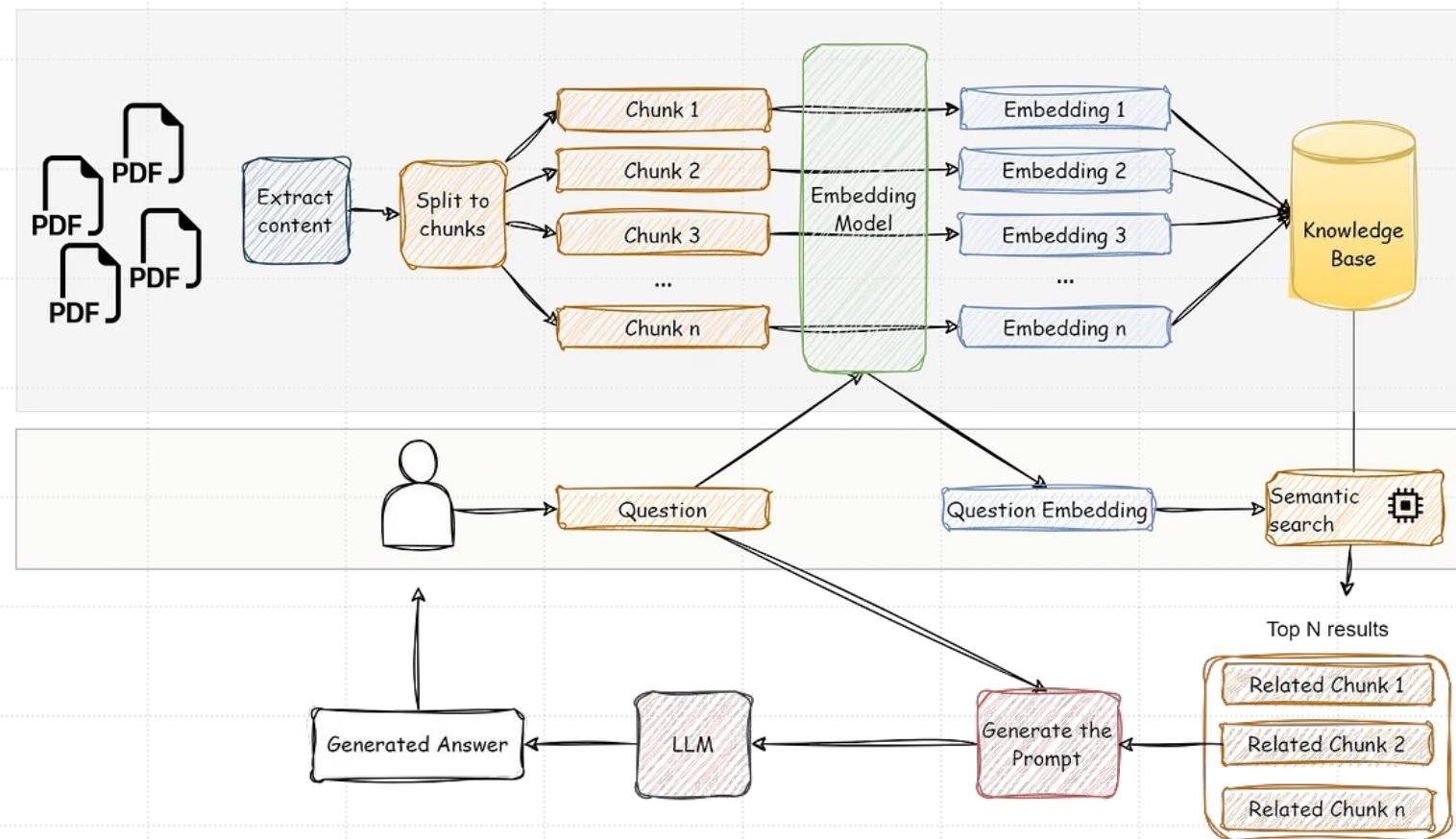
# What is RAG?

RAG stands for Retrieval-Augmented Generation

# Vector search → Semantic understanding

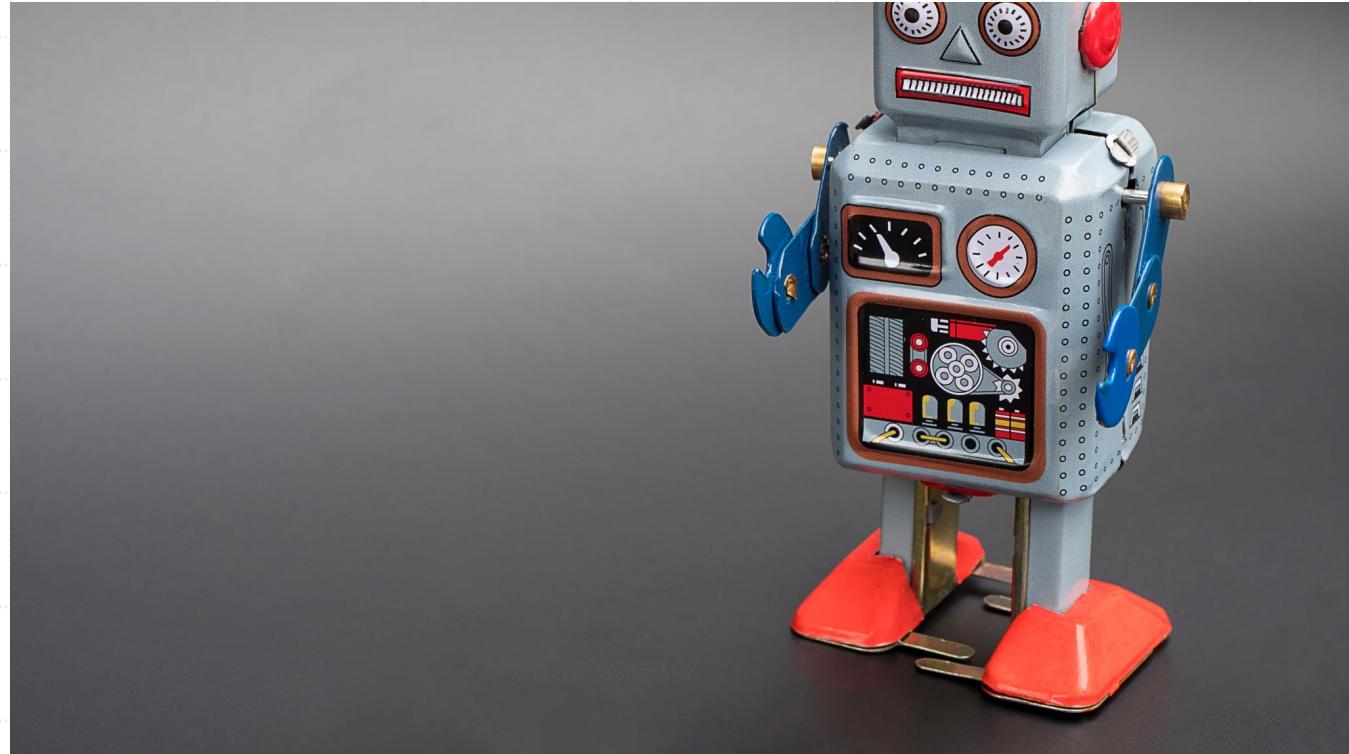


# Chatbot with RAG (pdf)

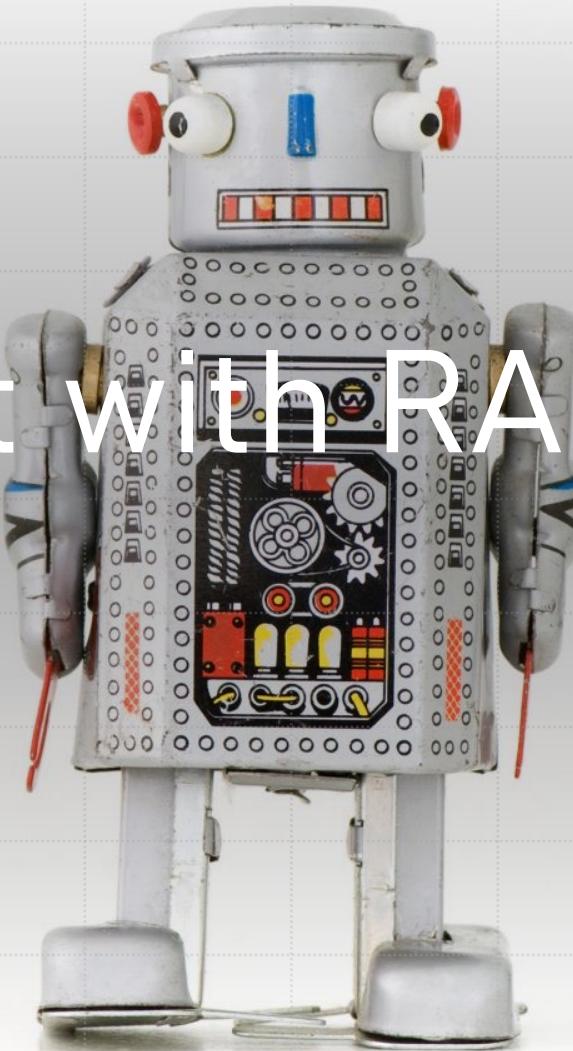


# Chatbot with RAG (pdf)

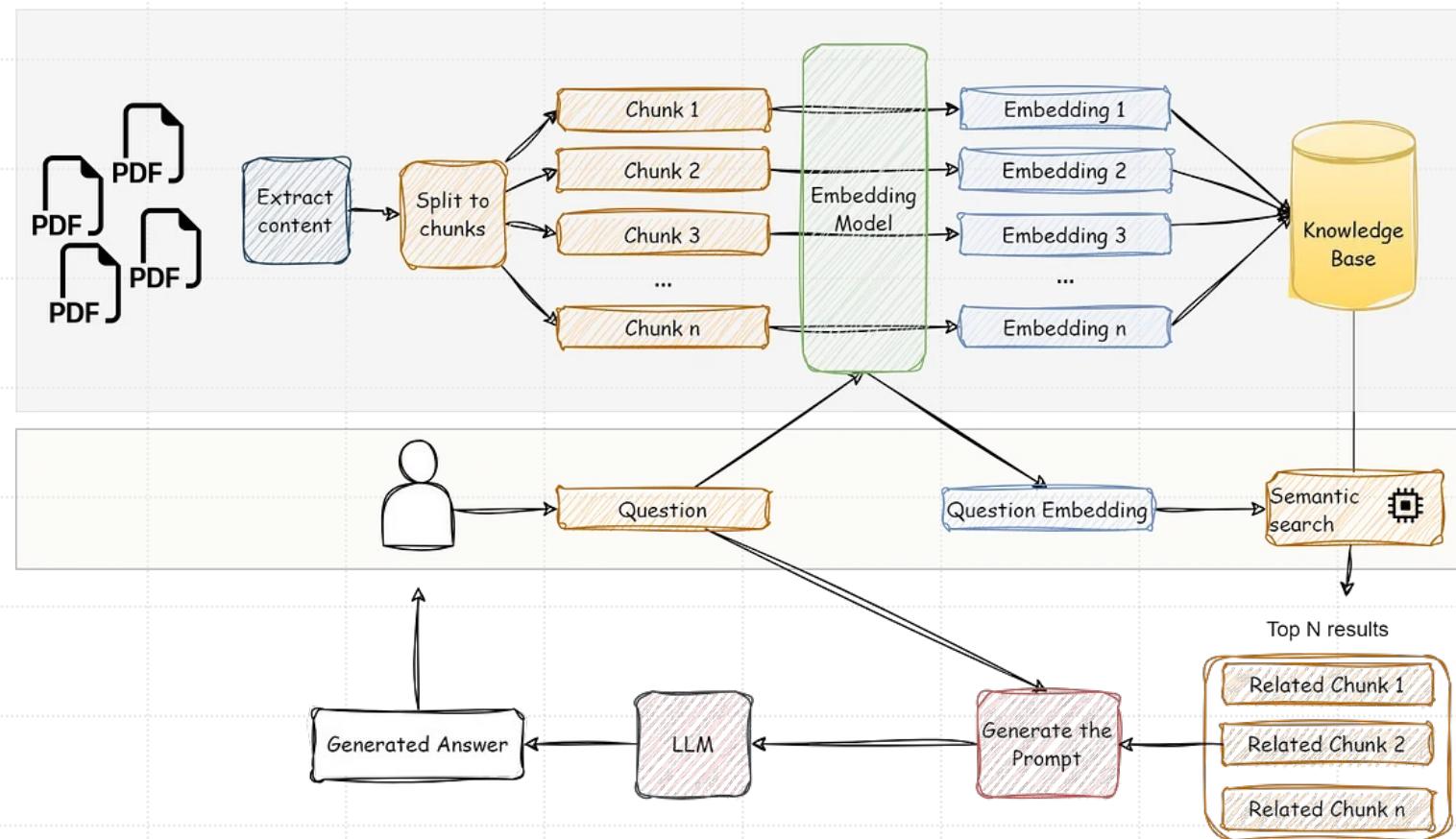
- ChatGPT\_with\_RAG\_(pdf).ipynb
- Claude\_with\_RAG\_(pdf).ipynb
- Gemini\_without\_RAG\_(pdf).ipynb



# Chatbot with RAG (json)

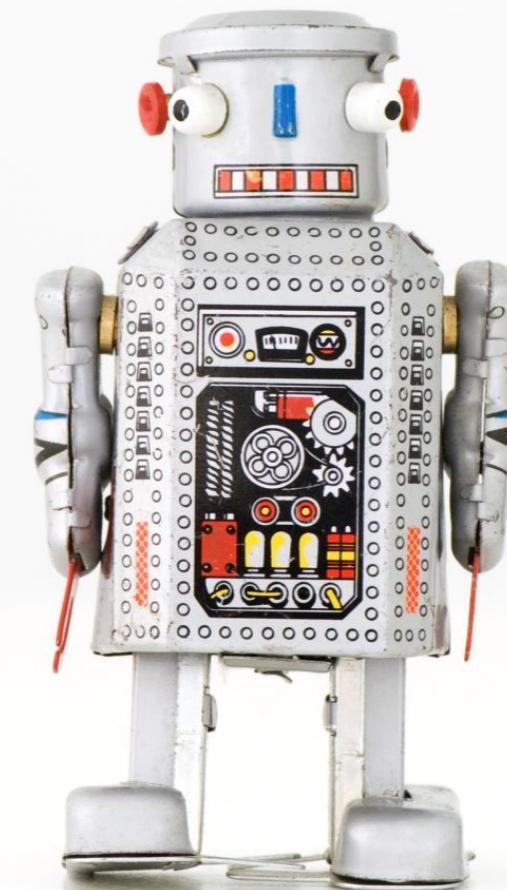


# Chatbot with RAG (pdf)



# Chatbot with RAG (json)

- ChatGPT\_with\_RAG\_(json).ipynb
- Claude\_with\_RAG\_(json).ipynb
- Gemini\_without\_RAG\_(json).ipynb



A blue pen with a silver clip and a translucent blue barrel lies diagonally across a sheet of paper. The paper features several horizontal blue bars of varying shades, suggesting a bar chart or a grid pattern. The background is a light grey.

# What if company data?

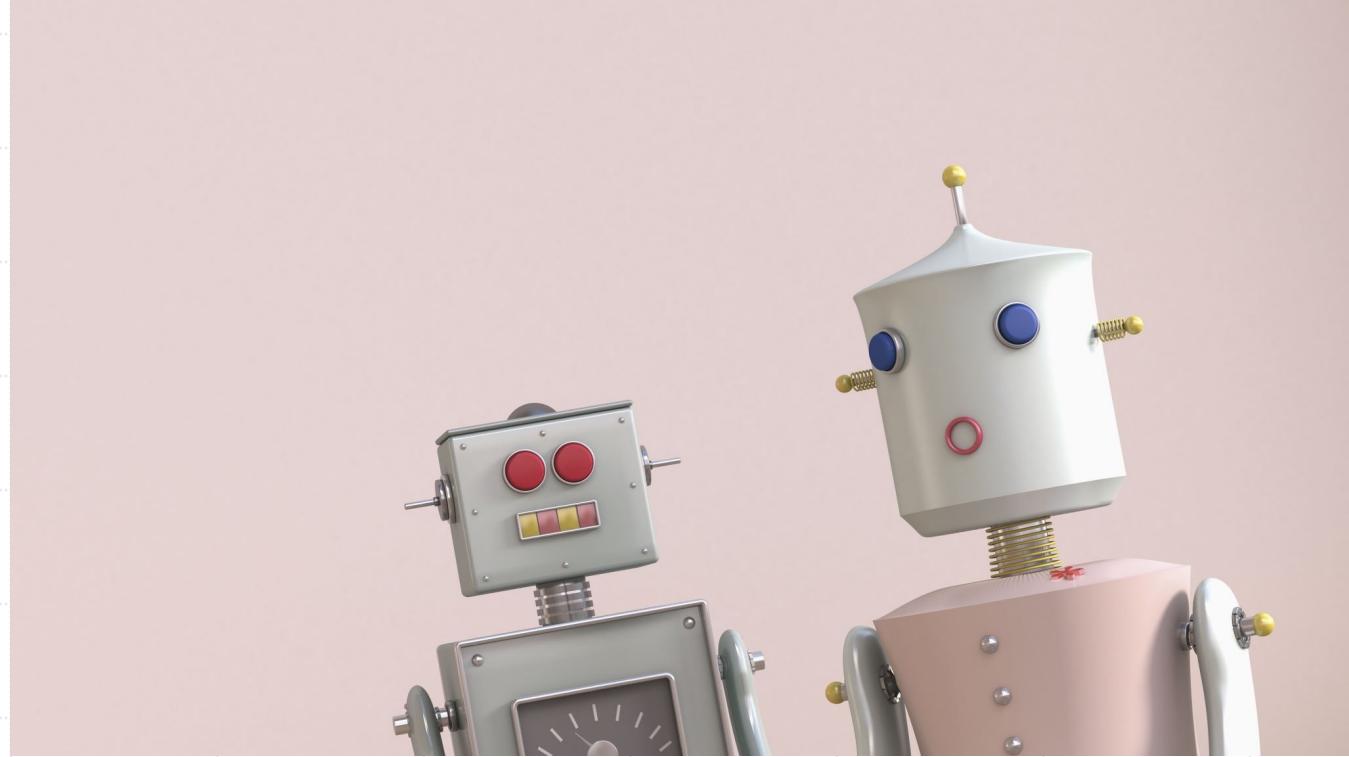
Export it as json

# General chatbot with RAG



# General chatbot with RAG

- General\_ChatGPT\_with\_RAG.ipynb
- General\_Claude\_with\_RAG.ipynb
- General\_Gemini\_with\_RAG.ipynb





# Connect with Line

Line\_Console.pdf



# Connect with Line



Tabby\_Channel  
เพื่อน 4



แมว



ໄພສຕ

Tabby\_CH  
@892xdsfb

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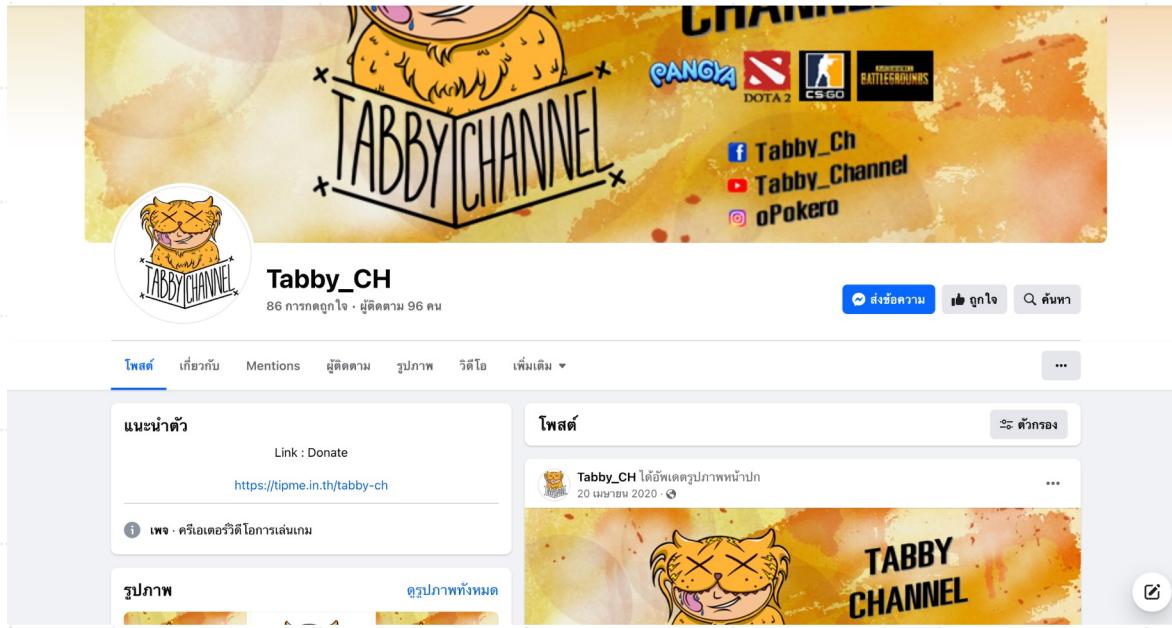
ປະເທດ: ລາວ

# Connect with FB messenger

FB\_Messenger\_Console.pdf

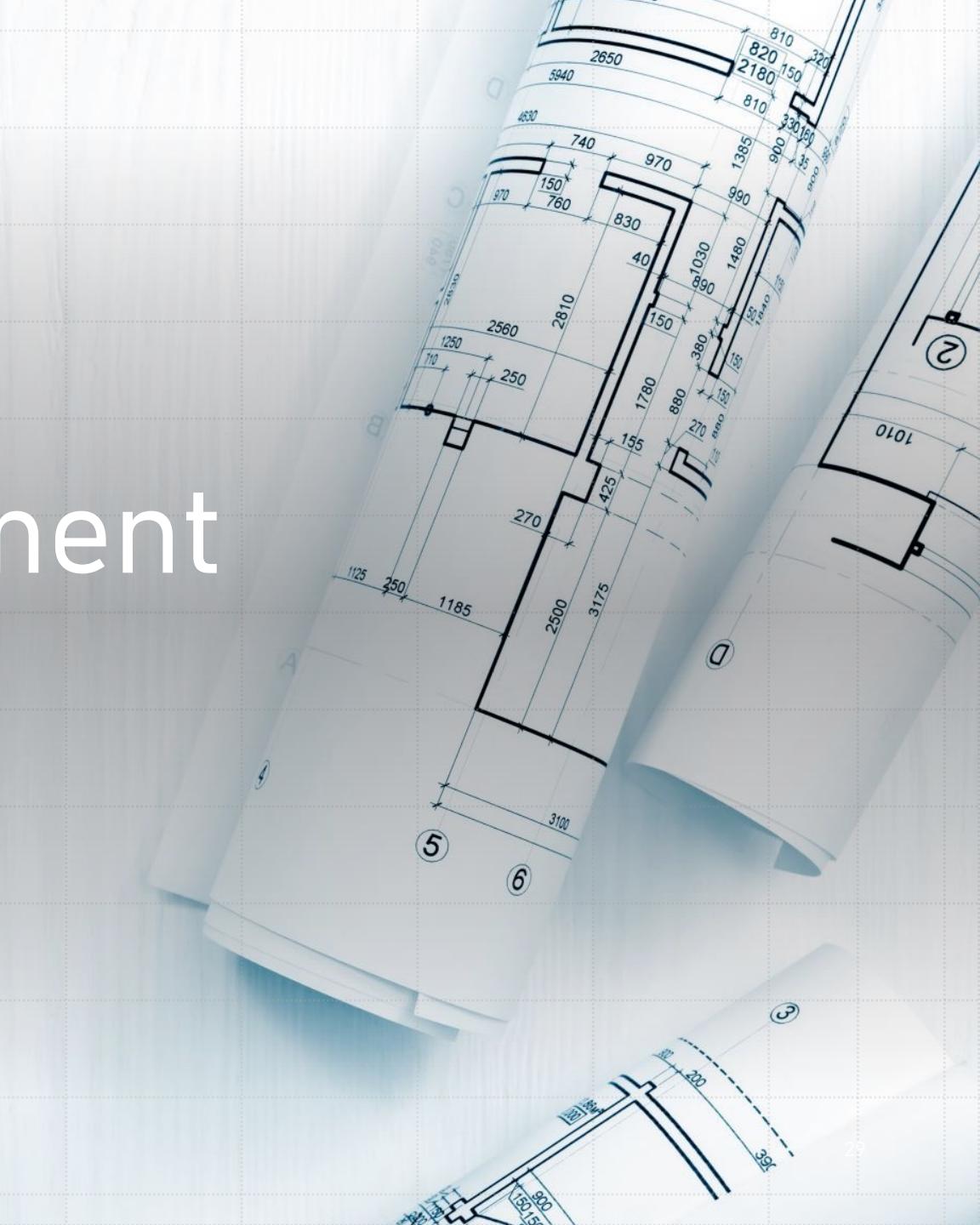


# Connect with FB messenger



<https://www.facebook.com/TabbyChannel>

# Deployment



THANK YOU

