



AI and Data Workshop in Rwanda

# “RISEN” Framework for Prompting

Shanghai Jiao Tong University

Aug 6, 2025

Kigali, Rwanda



# What is prompt?



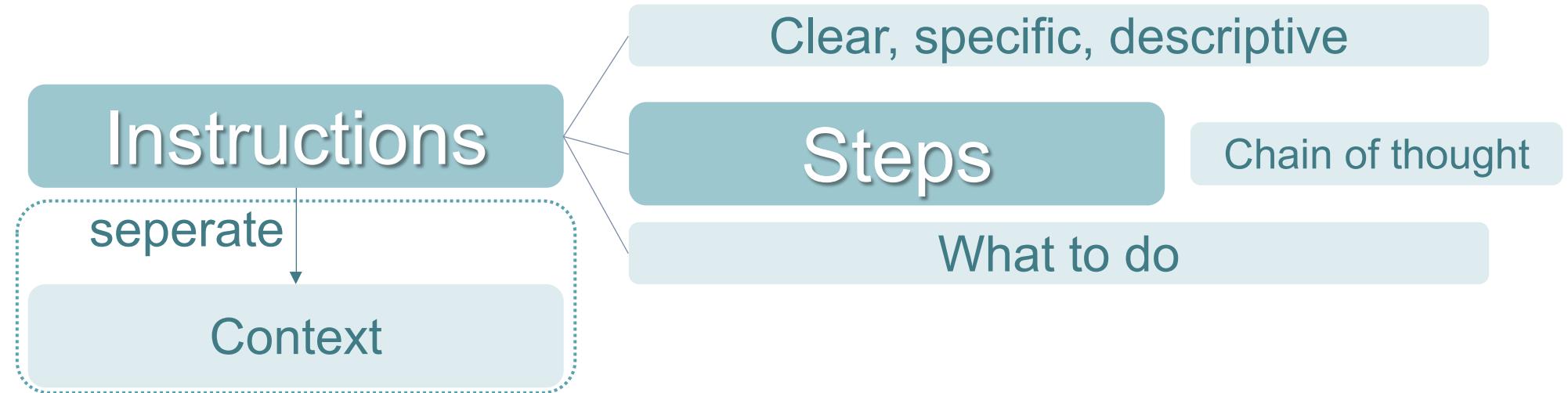
A prompt is the **input or instruction** you give to an AI like ChatGPT to **get a response**.

- A prompt can be a question, command, or **any kind of text you enter**.
- The better and more **clear** your prompt is, the better the response you'll get.

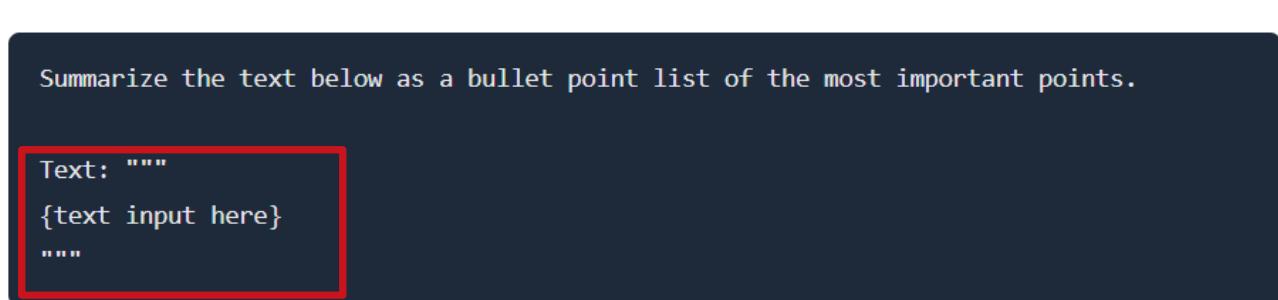
# Overview: RISEN



# Best practices for prompt engineering



- Put instructions at the beginning of the prompt and use **### or " " " "** to separate the instruction and context



# Best practices for prompt engineering



- Be **specific, descriptive and as detailed** as possible about the desired context, outcome, length, format, style, etc

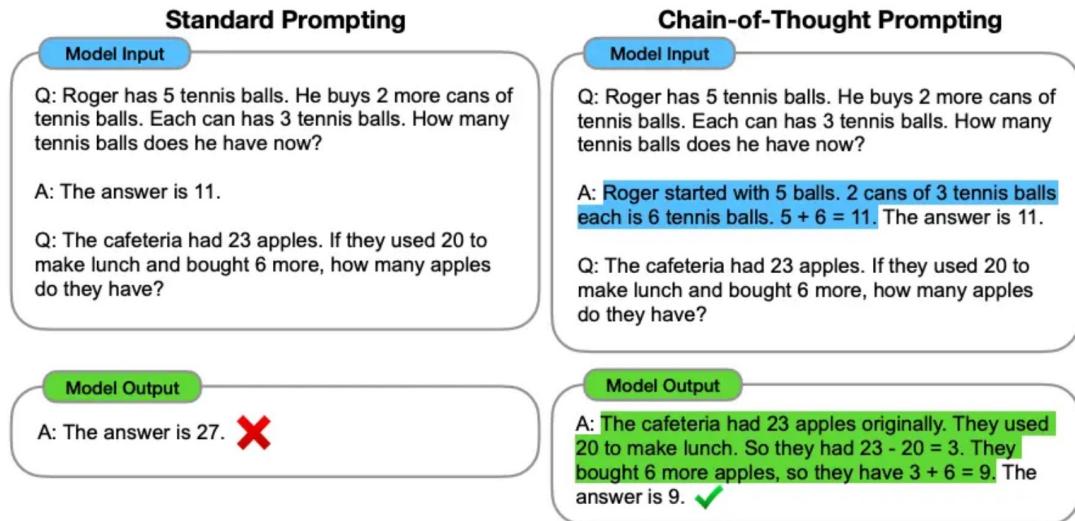
Write a short inspiring poem about OpenAI, focusing on the recent DALL-E product launch (DALL-E is a text to image ML model) in the style of a {famous poet}



# More to learn

Steps

## Chain of Thought



## Prompt Chaining



- model's step-by-step reasoning process.
- breaks down complex problems into smaller, intermediate steps.
- helps the model reach more accurate and logical conclusions.



# Best practices for prompt engineering



- Code Generation Specific - Use **“leading words”** to nudge the model toward a particular pattern

```
# Write a simple python function that
# 1. Ask me for a number in mile
# 2. It converts miles to kilometers

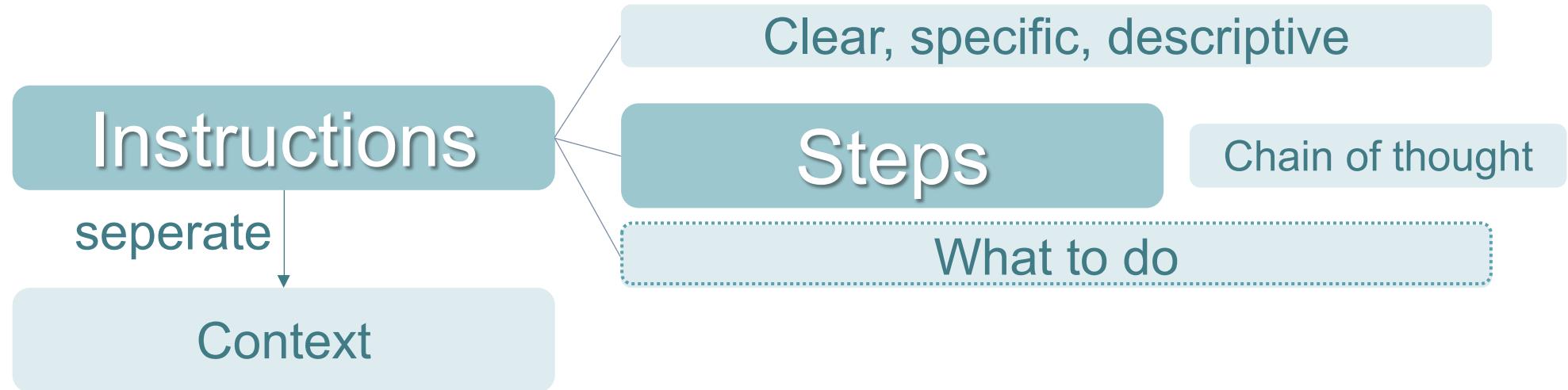
import
```

**In Python: import panda**

**In R: library(dplyr)**



# Best practices for prompt engineering



- Instead of just saying **what not to do**, say what to do instead

The following is a conversation between an Agent and a Customer. The agent will attempt to diagnose the problem and suggest a solution, whilst refraining from asking any questions related to PII. Instead of asking for PII, such as username or password, refer the user to the help article [www.samplewebsite.com/help/faq](http://www.samplewebsite.com/help/faq)

Customer: I can't log in to my account.

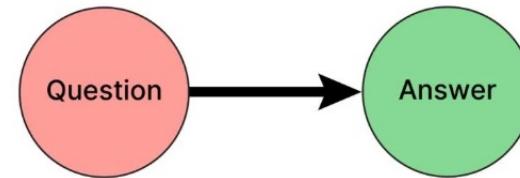
Agent:



# Best practices for prompt engineering

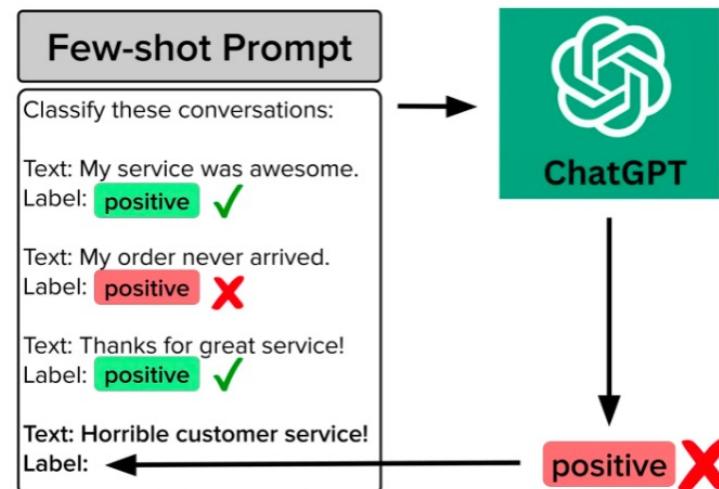
End Goal

examples



Zero-shot

- Start with zero-shot, then few-shot, neither of them worked, then fine-tune



# Best practices for prompt engineering

## Narrowing

- Articulate the desired output format through examples

## Desire format

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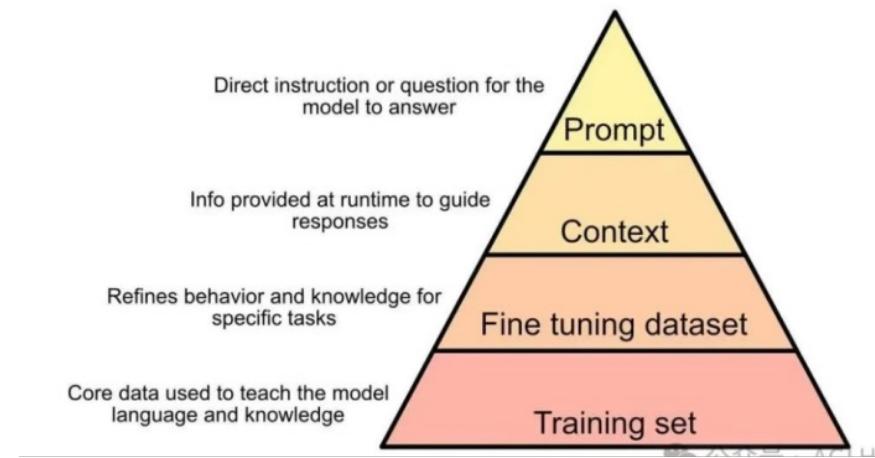
Agent:



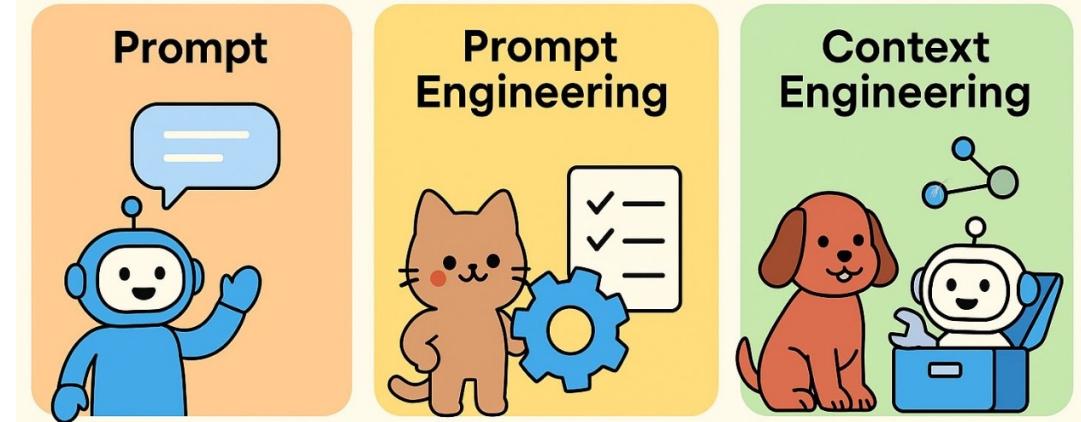
# More to learn

## "context engineering"

LLM levels of conditioning



## Prompt vs Prompt Engineering vs Context Engineering



- Current : fitting relevant information into limited context windows
- The next step : involve richer, real-world awareness

# Conclusion



# Challenge- one of the answer

EICV7	Migrant (%)	95%CI lower bound	95%CI upper bound
City of Kigali	33.03	30.87	35.18
Southern	9.9	9.04	10.76
Western	7.02	6.32	7.72
Northern	6.92	5.96	7.89
Eastern	16.1	14.71	17.5

**Table A2.4: Percentage (%) of population that migrated in the last five years, by Area of residence, province, consumption quintile, sex, and age**

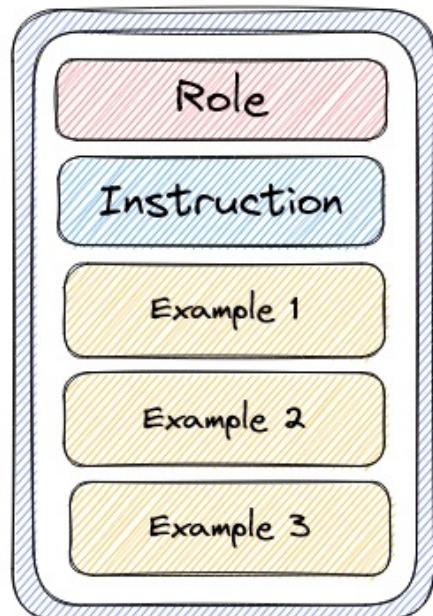
EICV7	Migrant (%)	Std. error (%)	95%CI lower bound	95%CI upper bound	CV (%)	Design effect
Rwanda	13.67	0.28	13.12	14.22	2.06	4.19
Sex						
Male	13.48	0.32	12.85	14.10	2.37	2.60
Female	13.85	0.31	13.24	14.45	2.22	2.56
Area of residence						
Urban	26.44	0.71	25.05	27.82	2.67	4.51
Rural	8.62	0.28	8.06	9.17	3.28	4.52
Province						
City of Kigali	33.03	1.10	30.87	35.18	3.33	4.66
Southern	9.90	0.44	9.04	10.76	4.42	2.98
Western	7.02	0.36	6.32	7.72	5.08	2.60
Northern	6.92	0.49	5.96	7.89	7.09	3.60
Eastern	16.10	0.71	14.71	17.50	4.2	6.28

**EICV7**

- visualize all of this information in a single chart
- using the RISEN framework
- choose any model you like
- generate images directly instead of code

# Challenge- one of the answer

A Combined Techniques Prompt

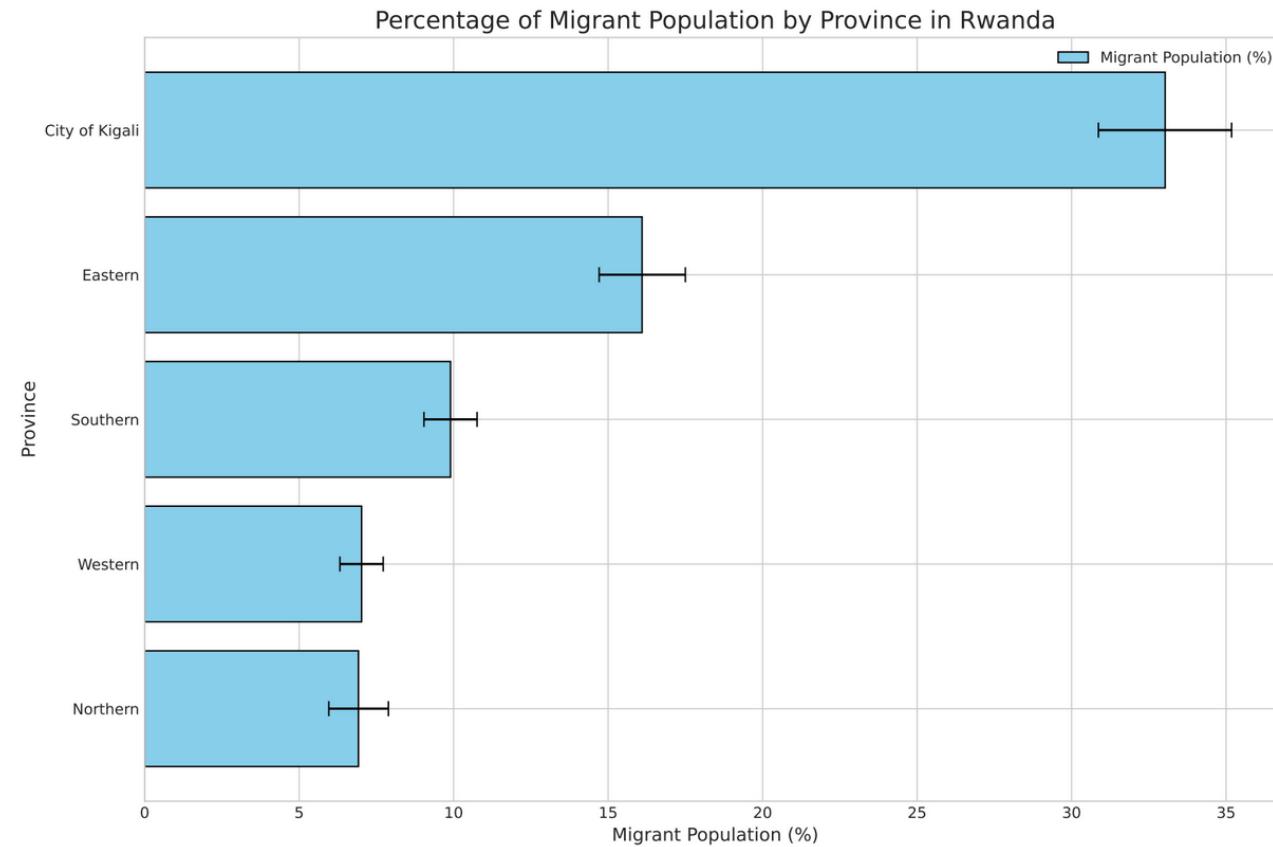


- Role: Data analyst at Rwanda's National Institute of Statistics.
- Instruction: Visualize migration data. Follow the steps below:
  - ① Understand the meaning of each column and create visualizations using Python's plotting libraries.
  - ② Group by region, and create a diagram showing the percentage of migrant population and confidence interval, all in one figure.
  - ③ Add English titles and legends, and make it as aesthetically pleasing as possible.
- Example: Previous image templates can be provided. (optional)
- Narrowing: Output as images, supporting formats such as PDF and JPG, which need to be aesthetically pleasing and easy to read.

**Try it !**

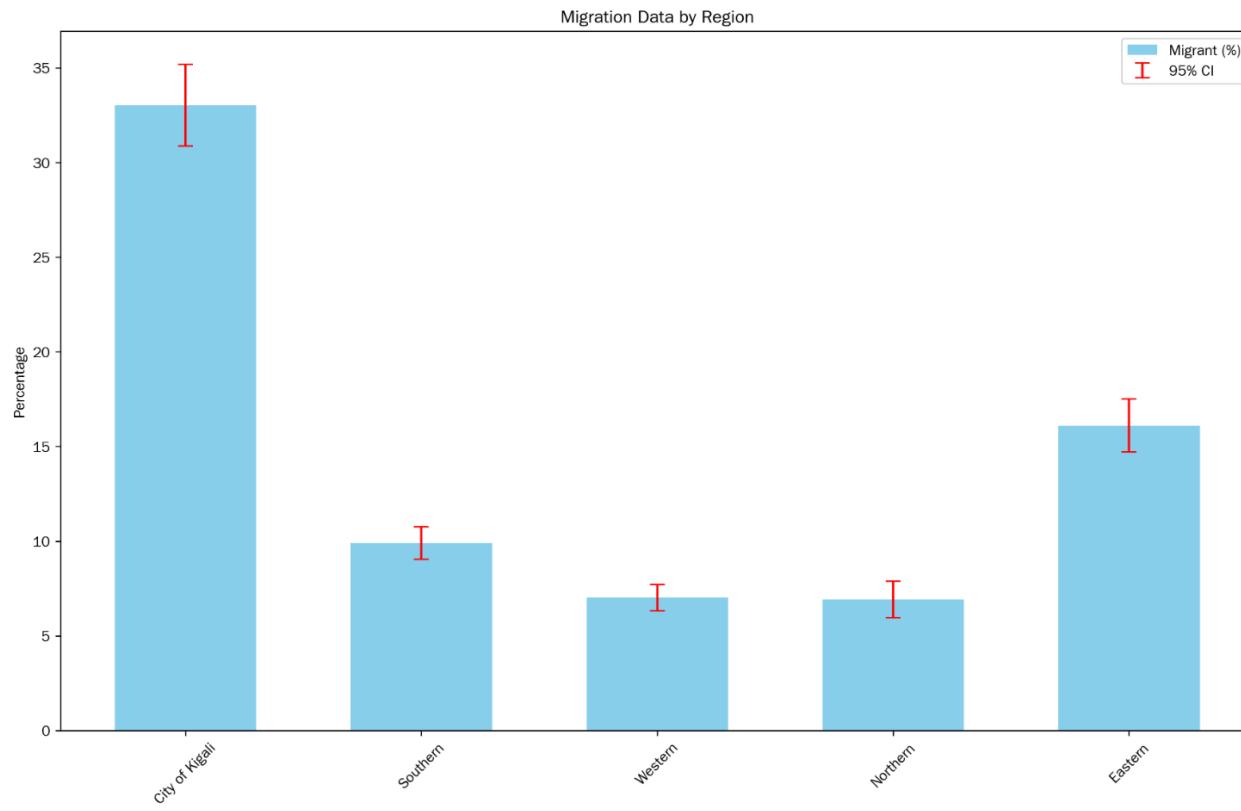
# Challenge- different model

## Gemini



# Challenge- different model

## DoubaO(Chinese model from ByteDance)



migrant province.xlsx  
Excel - 10KB

Role: Data analyst at Rwanda's National Institute of Statistics.

Instruction: Visualize migration data. Follow the steps below:

Understand the meaning of each column and create visualizations using Python's plotting libraries.

Group by region, and create a diagram showing the percentage of migrant population, standard error, and confidence interval, all in one figure.

Add English titles and legends, and make it as aesthetically pleasing as possible.

Example: Previous image templates can be provided.  
Narrowing: Output as images, supporting formats such as PDF and JPG, which need to be aesthetically pleasing and easy to read.

I will visualize the migration data by grouping by region and creating a diagram that shows the percentage of the migrant population, standard error, and confidence interval all in one figure.

展开过程 ▾

Based on the execution results, there is only one worksheet named 'Sheet1' in the file. Next, I will explore the basic information and the first few rows of the 'Sheet1' worksheet to prepare for subsequent analysis.

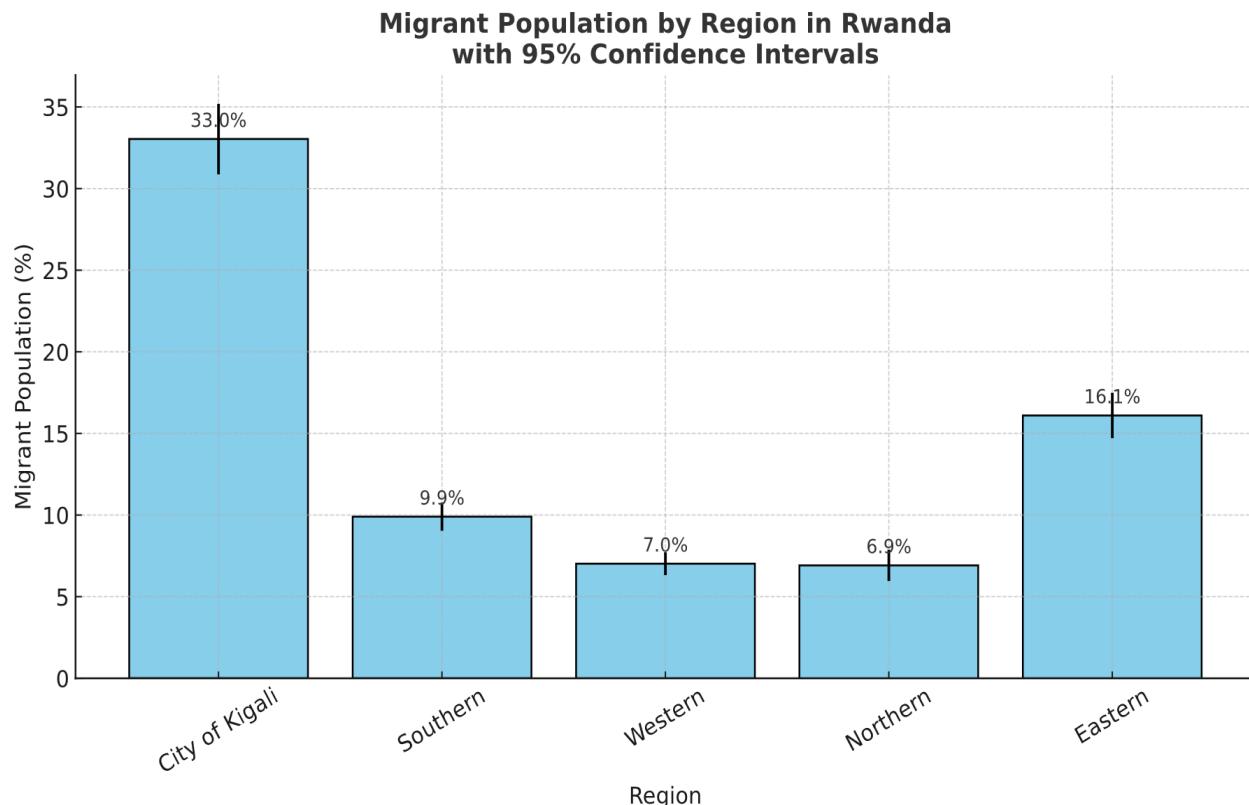
展开过程 ▾

Based on the output, the dataset contains information on migration statistics by region in Rwanda. The columns and their meanings are as follows:

- EICV7: Presumably represents different regions in Rwanda (such as City of Kigali, Southern, Western, Northern, and Eastern)

# Challenge- different model

ChatGPT



migrant province.xlsx  
电子表格

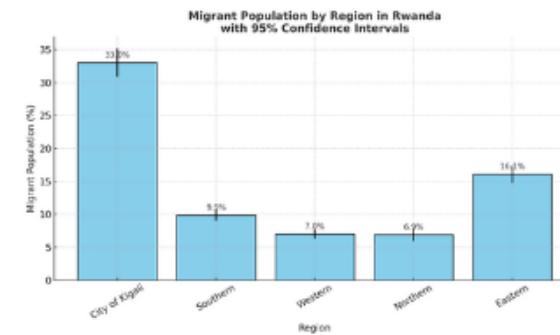
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Example: Previous image templates can be provided. (optional)

Narrowing: Output as images, supporting formats such as PDF and JPG, which need to be aesthetically pleasing and easy to read.



Here is the visualization of Rwanda's migrant population by region, including 95% confidence intervals. The figure is aesthetically styled with clear labels and annotations.

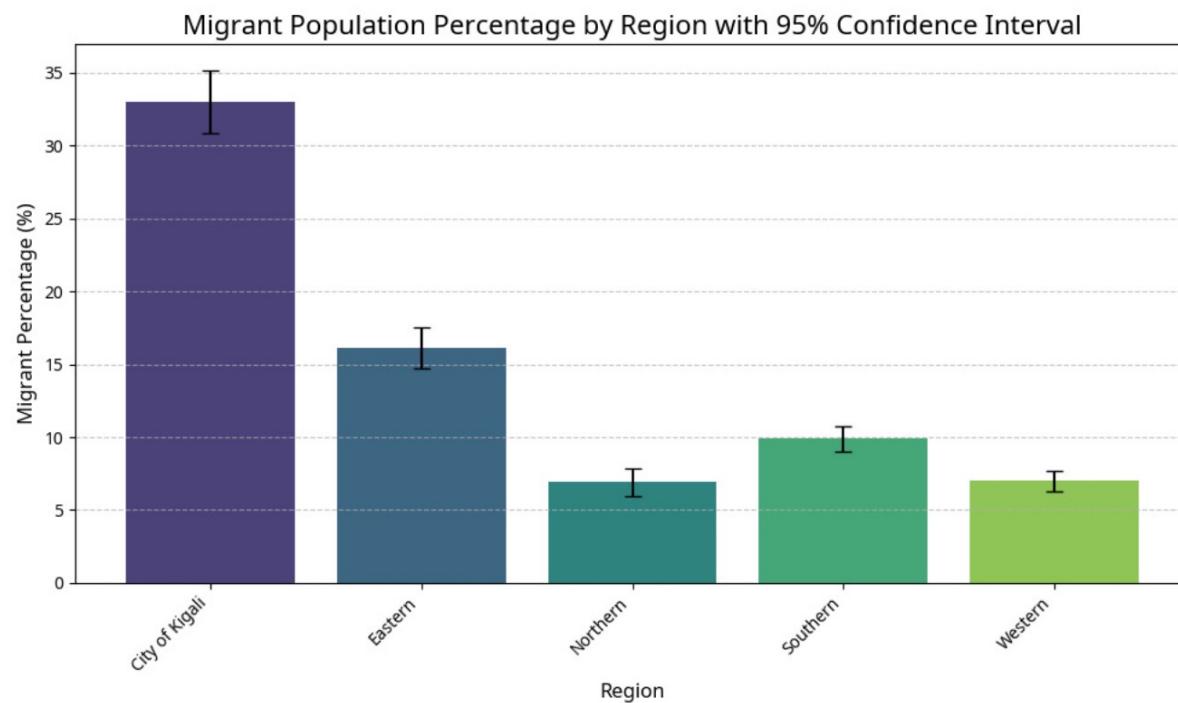
You can download the high-resolution versions below:

- PDF version
- JPG version

Let me know if you'd like additional formatting, French labels, or regional maps included.

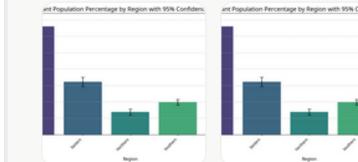
# Challenge- different model

## Manus(Chinese agent platform)



manus

Here are the visualizations of the migrant population data by region, including the percentage of migrant population and 95% confidence intervals. I have provided the visualization in PNG, JPG, and PDF formats for your convenience.



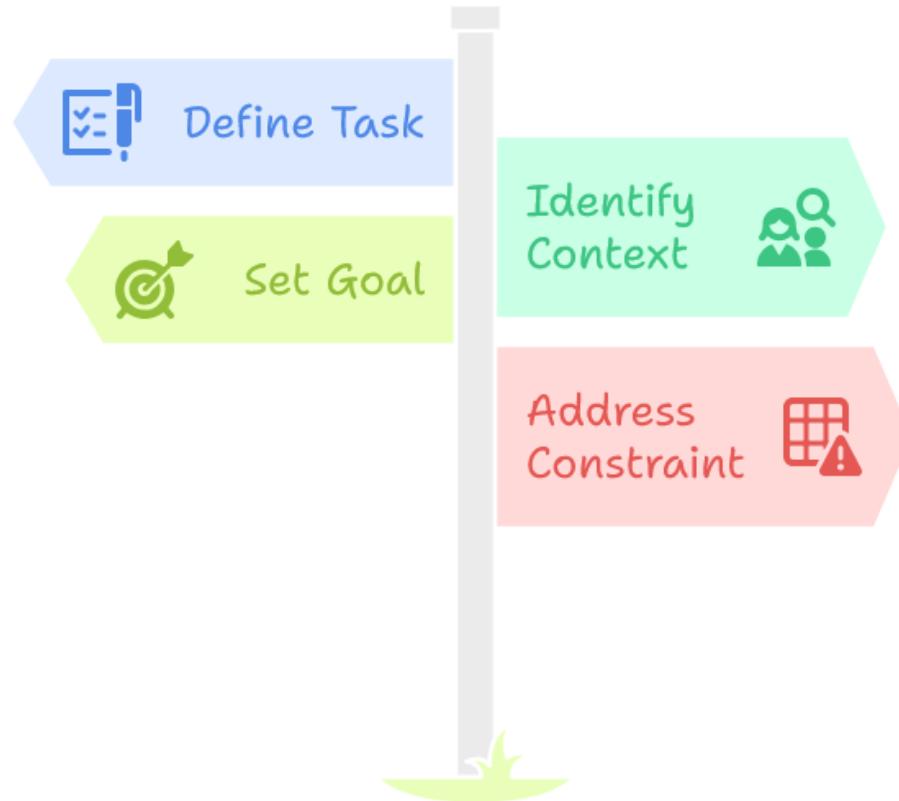
migrant\_population\_by\_region...

查看此任务中的所有文件

# Do all AI models require such rigorous prompting?

No! DeepSeek Prompting Tips : Sincere + Direct

What action should be taken?



DeepSeek

- Task: What to do?
- Context: Who is it for?
- Goal: Desired effect?
- Negative Constraint: Worried about what problem?



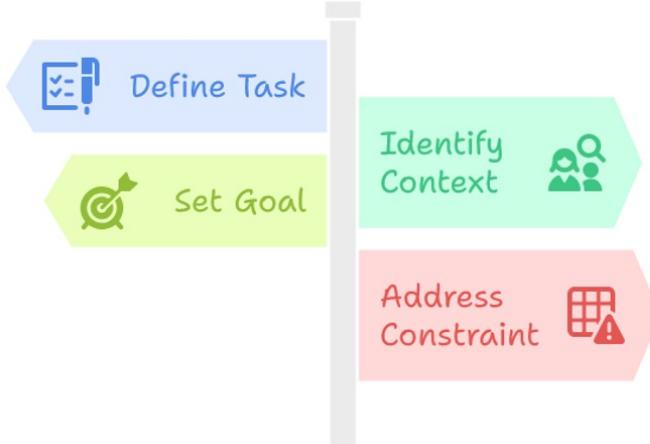
# Do all AI models require such rigorous prompting?

No!

DeepSeek Prompting Tips : Sincere + Direct



DeepSeek



I want to [do something], for [someone/something], hoping to achieve [desired effect], but I'm worried about [potential problem].

Example: I want to create a travel schedule from Rwanda to China, for my parents, hoping they can enjoy their 20 days in China, but I'm worried they might get tired.



To prevent DeepSeek's replies from being too official or professional, you can try these three words: "**In plain language.**"





Thank you!



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