

How to work with Lisette

An Introduction to Answer.ai's Lisette Library

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This is how to write some text including some citations as sidenotes

Quarto (abbreviated Qto, 4to or 4^o) is the format of a book or pamphlet produced from full sheets printed with eight pages of text, four to a side, then folded twice to produce four leaves. The leaves are then trimmed along the folds to produce eight book pages. Each printed page presents as one-fourth size of the full sheet.¹

The earliest known European printed book is a quarto, the Sibyllenbuch, believed to have been printed by Johannes Gutenberg in 1452–53, before the Gutenberg Bible, surviving only as a fragment. Quarto is also used as a general description of size of books that are about 12 inches (30 cm) tall, and as such does not necessarily indicate the actual printing format of the books, which may even be unknown, as is the case for many modern books. These terms are discussed in greater detail in book sizes.

```
# this is a sample code block to reverse a list
def reverse_list(list):
    if something_happens:
        print('this happened')
    else:
        print('this happened because the other did not')
```

① will this code annotation work ? hardly

This is how to embed an image



What can we do with lisette lib

Overview

Feature	Description
DataBlock API	A flexible, lego-like system to build datasets from scratch.
lr_find()	Automatically plots loss vs. learning rate to find the optimal hyperparameter.
fine_tune()	One-line transfer learning method to adapt pre-trained models.
One-Cycle Policy	A training schedule that varies learning rates for faster convergence.
Layered API	A hierarchy of APIs ranging from high-level defaults to pure PyTorch access.

Pro Tip: This dataset was cleaned using the Pandas library before ingestion.

```
!uv pip list # this is how you look for what is installed
```

this is the exact code-block used to render this table.

Imagine you need to write a simple tools(or fuctions).How can you do that ?. Here is how and it is so easy.

```
def adder(a:float,b:float):
    '''This adds two number a and b'''①
    return a + b
```

① you always need to add a docstring.

```
!uv pip install lisette -qq
```

```
from lisette import *
```

```
import os
from dotenv import load_dotenv
```

```
load_dotenv()
```

True

```
model = 'gemini/gemini-2.5-pro'
```

```
c = Chat(model)
```

```
c('hey')
```

Hey there! How can I help you today?

- id: f7kwaZ22HP3w4-EPrqXEgQ4
- model: gemini-2.5-pro
- finish_reason: stop
- usage: Usage(completion_tokens=777, prompt_tokens=2, total_tokens=779, completion_tokens_details=CompletionTokensDetailsWrapper(accepted_predictions=None, audio_tokens=None, reasoning_tokens=767, rejected_prediction_tokens=None, text_tokens=10, image_tokens=None), prompt_tokens_details=PromptTokensDetailsWrapper(audio_tokens=None, cached_tokens=None, text_tokens=2, image_tokens=None))

Import Cachy

```
from cachy import enable_cachy  
enable_cachy()
```

```
res = c('This is nice, can you tell me a joke?')  
res
```

Of course!

Why don't scientists trust atoms?

...Because they make up everything!

- id: YbwwaeaPMd7ijuMPriGt2AO
- model: gemini-2.5-pro
- finish_reason: stop
- usage: Usage(completion_tokens=556, prompt_tokens=25, total_tokens=581, completion_tokens_details=CompletionTokensDetailsWrapper(accepted_prediction_tokens=None, reasoning_tokens=535, rejected_prediction_tokens=None, text_tokens=21, image_tokens=None), prompt_tokens_details=PromptTokensDetailsWrapper(audio_tokens=None, cached_tokens=None, text_tokens=25, image_tokens=None))

Ok now if we try to do the same prompt again what would happen?

```
res_2 = c('This is nice, can you tell me a joke?')  
res_2
```

Glad you liked it! Here's another one for you:

What do you call a fake noodle?

...An impasta!

- id: srwwafe4EofKg8UPjvDlkQ4
- model: gemini-2.5-pro
- finish_reason: stop

- usage: Usage(completion_tokens=544, prompt_tokens=59, total_tokens=603, completion_tokens_details=CompletionTokensDetailsWrapper(accepted_prediction_tokens=None, reasoning_tokens=515, rejected_prediction_tokens=None, text_tokens=29, image_tokens=None), prompt_tokens_details=PromptTokensDetailsWrapper(audio_tokens=None, cached_tokens=None, text_tokens=59, image_tokens=None))

I think you need `patch_litellm()`

```
patch_litellm()
```

```
first = c('Tell me about Sri Lanka')
```

```
first
```

Of course! Sri Lanka is a fascinating and beautiful country with a rich history and diverse culture. Here's a comprehensive overview for you.

An Introduction to Sri Lanka

Often called the “**Pearl of the Indian Ocean**” or the “**Resplendent Isle**,” Sri Lanka is a teardrop-shaped island nation located just south of India. It’s a country of incredible diversity packed into a relatively small area. You can go from sun-drenched beaches to cool, misty mountains covered in tea plantations in just a few hours.

Key Aspects of Sri Lanka

1. Geography and Nature

- Diverse Landscapes:** The coastal belt is lined with stunning beaches and lagoons. The interior features a central highland region with mountains, waterfalls, and vast tea estates. The northern and eastern parts are flatter and drier.

- **Incredible Wildlife:** Sri Lanka is one of the world's top biodiversity hotspots. It's famous for its large population of **Asian elephants**, which can be seen in national parks like Udawalawe and Minneriya. It's also one of the best places in the world to spot **leopards** (in Yala National Park) and **blue whales** (off the southern coast near Mirissa).
- **National Parks:** The country has numerous protected areas, including Sinharaja Forest Reserve, a UNESCO World Heritage Site and the last viable area of primary tropical rainforest in the country.

2. History and Culture

- **Ancient Roots:** Sri Lanka has a documented history of over 2,500 years. The ancient cities of **Anuradhapura** and **Polonnaruwa** were magnificent capitals with enormous stupas (dome-shaped Buddhist shrines) and advanced irrigation systems.
- **The Cultural Triangle:** This area in the center of the country is home to several UNESCO World Heritage Sites, including:
 - **Sigiriya Rock Fortress:** An ancient palace and fortress built atop a massive rock column, famous for its stunning frescoes.
 - **Dambulla Cave Temple:** A complex of caves filled with hundreds of Buddha statues and intricate paintings.
 - **The Sacred City of Kandy:** Home to the Temple of the Tooth Relic, which houses a sacred tooth of the Buddha.
- **Colonial Influence:** The island was colonized by the Portuguese, Dutch, and finally the British, who introduced tea cultivation on a massive scale. This colonial past is visible in the architecture of cities like **Galle**, with its famous Dutch Fort.
- **People and Religion:** The majority of the population is **Sinhalese** (mostly Buddhist), with a significant **Tamil** minority (mostly Hindu). There are also Muslim and

Christian communities. This mix of cultures makes for a vibrant tapestry of festivals, traditions, and languages (Sinhala and Tamil are the official languages).

3. The Economy and Famous Exports

- **Ceylon Tea:** Sri Lanka (formerly known as Ceylon) is one of the world's largest tea exporters. A visit to the hill country isn't complete without a tour of a tea plantation.
- **Spices:** The island has been a hub for the spice trade for centuries. It's famous for its high-quality **cinnamon**, as well as cloves, nutmeg, and pepper.
- **Gems:** Known as the "Gem Island," Sri Lanka is a source of beautiful sapphires, rubies, and other precious stones.
- **Tourism:** Tourism is a vital part of the economy, attracting visitors with its blend of nature, culture, adventure, and wellness.

4. Food

Sri Lankan cuisine is a treat! It's known for its vibrant colors and rich, spicy flavors. * **Rice and Curry:** This is the national dish, but it's not just one curry. It's a plate of rice served with a variety of small, flavorful dishes made from vegetables, meat, or fish, often using coconut milk and a unique blend of spices.

* **Kottu Roti:** A popular street food made from chopped flatbread, vegetables, egg, and/or meat, all stir-fried on a hot griddle with a rhythmic clanging of metal blades. * **Hoppers (Appa):** Bowl-shaped pancakes made from fermented rice flour and coconut milk. They are crispy on the edges and soft in the center, often served with an egg cooked inside (**Egg Hopper**).
* **String Hoppers (Idiyappam):** Steamed nests of rice flour noodles, usually eaten for breakfast with a coconut sambol and curry.

Recent History

It's also important to acknowledge that Sri Lanka has faced significant challenges. The country endured a long and painful civil war from 1983 to 2009. In recent years, it has also faced economic difficulties. Despite these hardships, the people are known for their resilience, warmth, and hospitality.

In short, Sri Lanka is a land of contrasts and immense beauty, offering everything from ancient history and spiritual sites to thrilling wildlife safaris and relaxing beach holidays.

- id: chatcmpl-xxx
- model: gemini-2.5-pro
- finish_reason: stop
- usage: Usage(completion_tokens=2564, prompt_tokens=95, total_tokens=2659, completion_tokens_details=CompletionTokensDetailsWrapper(accepted_prediction_tokens=None, reasoning_tokens=1471, rejected_prediction_tokens=None, text_tokens=1093, image_tokens=None), prompt_tokens_details=PromptTokensDetailsWrapper(audio_tokens=None, cached_tokens=None, text_tokens=95, image_tokens=None))

```
# now let's see how cached response work
cached_response = c('Tell me about Sri Lanka')
cached_response
```

You got it! Since we've covered the general overview, let's dive into some of the most unique and fascinating facts about Sri Lanka.

Here are some things that make the island truly special:

1. The Origin of the Word “Serendipity” The English word “serendipity,” which means a fortunate or happy accident, comes from *Serendib*, an old Arabic name for Sri Lanka. The term was coined by Horace Walpole in 1754, inspired by a Persian fairy tale about three princes from Serendib who were always making discoveries by accident.

2. Home to the World’s First Female Prime Minister
In 1960, Sri Lanka (then Ceylon) made history when Sirimavo Bandaranaike became the world’s first-ever female head of government.

3. The National Flag is One of the Oldest in the World

The Sri Lankan flag is rich with symbolism. The golden lion represents the Sinhalese people, the four Bo leaves in the corners represent the four Buddhist virtues, and the orange and green stripes represent the Tamil and Muslim minorities, respectively.

4. It's the True Home of Cinnamon While many countries use cinnamon, the “true cinnamon” (*Cinnamomum verum*) is native to Sri Lanka. For centuries, the island was the world’s primary source, making it a priceless hub for spice traders.

5. The National Sport Isn't Cricket Although cricket is wildly popular and the country has a world-class team, the official national sport of Sri Lanka is actually **volleyball**.

6. A Haven for Elephants Sri Lanka has the highest density of wild Asian elephants in the world. Every year, hundreds of elephants gather at the Minneriya National Park in an event known as “The Gathering,” which is the largest meeting of Asian elephants on the planet.

7. The Sacred Tooth of the Buddha The city of Kandy is home to the *Sri Dalada Maligawa* (Temple of the Sacred Tooth Relic). This temple houses what is believed to be a real tooth of the Buddha, making it one of the most sacred pilgrimage sites for Buddhists worldwide.

8. A Very High Literacy Rate Despite its economic challenges, Sri Lanka boasts one of the highest literacy rates in South Asia, at over 92%. Education is highly valued in the culture.

Is there any of these points you’d find interesting to explore further? For example, we could talk more about the history of the spice trade or the significance of the Temple of the Tooth.

- id: chatcmpl-xxx
- model: gemini-2.5-pro
- finish_reason: stop
- usage: Usage(completion_tokens=1617, prompt_tokens=1677, total_tokens=3294, completion_tokens_details=CompletionTokensDetailsWrapper(accepted_predictions=1617, rejected_predictions=0, total_predictions=1677), audio_tokens=None, reasoning_tokens=1068, rejected_prediction_tokens=None, text_tokens=549,

```
image_tokens=None), prompt_tokens_details=PromptTokensDetailsWrapper(audio_tokens=None,  
cached_tokens=None, text_tokens=1677, image_tokens=None))
```

```
dir(Chat)
```

```
[('__call__',  
 '__class__',  
 '__delattr__',  
 '__dict__',  
 '__dir__',  
 '__doc__',  
 '__eq__',  
 '__format__',  
 '__ge__',  
 '__getattribute__',  
 '__getstate__',  
 '__gt__',  
 '__hash__',  
 '__init__',  
 '__init_subclass__',  
 '__le__',  
 '__lt__',  
 '__module__',  
 '__ne__',  
 '__new__',  
 '__reduce__',  
 '__reduce_ex__',  
 '__repr__',  
 '__setattr__',  
 '__sizeof__',  
 '__str__',  
 '__subclasshook__',  
 '__weakref__',  
 '_call',  
 '_prep_msg',  
 'print_hist']
```

```
display(c.print_hist())
```

```
{'role': 'user', 'content': 'hey'}
```

```
Message(content='Hey there! How can I help you today?', role='assistant', tool_calls=None, function_name='chatbot')

{'role': 'user', 'content': 'This is nice, can you tell me a joke?'}

Message(content="Of course! \n\n Why don't scientists trust atoms? \n\n ... Because they make up everything!")

{'role': 'user', 'content': 'This is nice, can you tell me a joke?'}

Message(content="Glad you liked it! Here's another one for you: \n\n What do you call a fake noodle?")

{'role': 'user', 'content': 'Tell me about Sri Lanka'}
```

Message(content='Of course! Sri Lanka is a fascinating and beautiful country with a rich history and diverse culture. It is a teardrop-shaped island nation located just south of India. It\'s a country of incredible diversity packed into a small space, from lush green tea plantations in the highlands to golden sand beaches on the coast. The landscape is a mix of rugged mountains, rolling hills, and pristine coastline. The weather is generally warm and humid, with monsoon seasons bringing heavy rains at certain times of the year. Sri Lanka is known for its rich biodiversity, with many unique species found nowhere else in the world. The capital city, Colombo, is a bustling metropolis with a mix of modern skyscrapers and traditional architecture. Other major cities include Kandy, Galle, and Jaffna. The country is also famous for its ancient Buddhist heritage, with numerous temples and shrines scattered throughout the land. Some of the most famous include the Temple of the Tooth in Kandy and the Lion Rock in Sigiriya. Sri Lanka is a popular destination for tourists, who come to experience its natural beauty, rich culture, and friendly people. The food is also a highlight, with a variety of delicious dishes like curries, roti, and sambals. The people are known for their warmth and hospitality, making it a welcoming place for visitors. Overall, Sri Lanka is a truly remarkable country with a lot to offer both tourists and locals alike.')

```
{'role': 'user', 'content': 'Tell me about Sri Lanka'}
```

Message(content='Of course! We just touched on it, but I can give you a more focused summary or even a "quick overview". Let\'s take a "at-a-glance" look at Sri Lanka: \n\n **Sri Lanka: The Essentials** \n\n * **Nickname:** The Pearl of the Orient \n\n * **Geography:** A teardrop-shaped island nation located in the Indian Ocean, just off the southern tip of India. It has a diverse landscape with high mountains in the interior, rolling hills along the coast, and numerous rivers and waterfalls. The coastline is dotted with beautiful white-sand beaches and rocky coves. \n\n * **Climate:** Tropical climate with distinct wet and dry seasons. The wet season typically occurs from May to September, while the dry season runs from October to April. \n\n * **Flora and Fauna:** Biodiversity hotspot with over 8,000 plant species and many endemic bird and mammal species. Notable animals include elephants, leopards, and various species of monkeys. \n\n * **Culture:** Rich Buddhist culture with ancient temples like the Temple of the Tooth in Kandy. Other religions include Hinduism, Islam, and Christianity. Traditional arts like Kandyan dance and Sri Lankan music are popular. \n\n * **Economy:** A developing economy based on agriculture, tourism, and services. Key exports include tea, rubber, and gemstones. \n\n * **History:** A long history of colonization by Portugal, Britain, and France, followed by independence in 1948. The country has faced significant political challenges, including a long-running civil war that ended in 2009. \n\n * **Future:**致力于可持续发展和经济多元化。正在努力减少对旅游业的依赖，同时促进农业、制造业和服务业的发展。')

```
{'role': 'user', 'content': 'Tell me about Sri Lanka'}
```

Message(content='You got it! Since we\'ve covered the general overview, let\'s dive into some specific facts about Sri Lanka. Did you know that Sri Lanka has the longest continuous history of democracy in Asia? The first female prime minister of Sri Lanka was Indira Gandhi, who served from 1966 to 1977. The national flag of Sri Lanka is one of the oldest in the world, having been adopted in 1948. The official national sport of Sri Lanka is volleyball, which is played at a high level. The country is also known for its rich biodiversity, with over 8,000 plant species and many endemic bird and mammal species. The capital city, Colombo, is a bustling metropolis with a mix of modern skyscrapers and traditional architecture. Other major cities include Kandy, Galle, and Jaffna. The country is also famous for its ancient Buddhist heritage, with numerous temples and shrines scattered throughout the land. Some of the most famous include the Temple of the Tooth in Kandy and the Lion Rock in Sigiriya. Sri Lanka is a popular destination for tourists, who come to experience its natural beauty, rich culture, and friendly people. The food is also a highlight, with a variety of delicious dishes like curries, roti, and sambals. The people are known for their warmth and hospitality, making it a welcoming place for visitors. Overall, Sri Lanka is a truly remarkable country with a lot to offer both tourists and locals alike.')

None