



THE INSTITUTE
Empowering Israel's Future Through AI

AI Developers

Practice



Declarative Self-improving Python

Basic Usage

DSPy Basics

This notebook demonstrates a minimal DSPy Signature with Predict, plus a Chain-of-Thought variant. It uses Gemini via `dspy.LM` and expects `GOOGLE_API_KEY` in a `.env` at the project root.

```
# Setup: imports and LM configuration (Gemini)
import os
from dotenv import load_dotenv
import dspy

load_dotenv()
api_key = os.getenv("GOOGLE_API_KEY")
if not api_key:
    raise ValueError("GOOGLE_API_KEY not found. Create a .env with GOOGLE_API_KEY=...")

lm = dspy.LM("gemini/gemini-2.5-flash", api_key=api_key, max_output_tokens=512)
dspy.configure(lm=lm)
print("DSPy configured with Gemini.")
```

Exercise – DSPy Book RAG

Ask Moby Dick (with DSPy and Gemini)

This is a simple RAG application that uses DSPy to answer questions about Herman Melville's Moby Dick. The text has been indexed using FAISS, and answers are generated by Google's Gemini model.

Ask a Question about Moby Dick

Who is Captain Ahab?

Clear Submit

Answer

Captain Ahab is the Captain of the ship.

Based on these passages:

1. "Who is Captain Ahab, sir?"
2. "Captain Ahab."
3. "What Captain?—Ahab?"

עליכם להוריד ספר (או ספרים)
כלשהו מהאתר:

<https://www.gutenberg.org/>
ועליו לבנות RAG בעזרת DSPy.



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תודה!