```
pip install langchain langchain-community langchainhub chromadb pypdf groq pymupdf
```

```
Requirement already satisfied: langchain in /usr/local/lib/python3.11/dist-packages (0.3.26)
Collecting langchain-community
  Downloading langchain_community-0.3.27-py3-none-any.whl.metadata (2.9 kB)
Collecting langchainhub
  Downloading langchainhub-0.1.21-py3-none-any.whl.metadata (659 bytes)
Collecting chromadb
  Downloading chromadb-1.0.15-cp39-abi3-manylinux_2_17_x86_64.manylinux2014_x86_64.whl.metadata (7.0 kB)
Collecting pypdf
  Downloading pypdf-5.9.0-py3-none-any.whl.metadata (7.1 kB)
Collecting groq
  Downloading groq-0.30.0-py3-none-any.whl.metadata (16 kB)
Collecting pymupdf
  Downloading pymupdf-1.26.3-cp39-abi3-manylinux_2_28_x86_64.whl.metadata (3.4 kB)
Requirement already satisfied: langchain-core<1.0.0,>=0.3.66 in /usr/local/lib/python3.11/dist-packages (from langchain) (0.3.71)
Requirement already satisfied: langchain-text-splitters<1.0.0,>=0.3.8 in /usr/local/lib/python3.11/dist-packages (from langchain) (0.3.8)
Requirement already satisfied: langsmith>=0.1.17 in /usr/local/lib/python3.11/dist-packages (from langchain) (0.4.8)
Requirement already satisfied: pydantic<3.0.0,>=2.7.4 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.11.7)
Requirement already satisfied: SQLAlchemy<3,>=1.4 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.0.41)
Requirement already satisfied: requests<3,>=2 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.32.3)
Requirement already satisfied: PyYAML>=5.3 in /usr/local/lib/python3.11/dist-packages (from langchain) (6.0.2)
Requirement already satisfied: aiohttp<4.0.0,>=3.8.3 in /usr/local/lib/python3.11/dist-packages (from langchain-community) (3.12.14)
Requirement already satisfied: tenacity!=8.4.0,<10,>=8.1.0 in /usr/local/lib/python3.11/dist-packages (from langchain-community) (8.5.0)
Collecting dataclasses-json<0.7,>=0.5.7 (from langchain-community)
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Collecting pydantic-settings<3.0.0,>=2.4.0 (from langchain-community)
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Collecting httpx-sse<1.0.0,>=0.4.0 (from langchain-community)
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Requirement already satisfied: numpy>=1.26.2 in /usr/local/lib/python3.11/dist-packages (from langchain-community) (2.0.2)
Collecting packaging<25,>=23.2 (from langchainhub)
  Downloading packaging-24.2-py3-none-any.whl.metadata (3.2 kB)
Collecting types-requests<3.0.0.0,>=2.31.0.2 (from langchainhub)
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Requirement already satisfied: build>=1.0.3 in /usr/local/lib/python3.11/dist-packages (from chromadb) (1.2.2.post1)
Collecting pybase64>=1.4.1 (from chromadb)
  Downloading pybase64-1.4.2-cp311-cp311-manylinux1_x86_64.manylinux2014_x86_64.manylinux_2_17_x86_64.manylinux_2_5_x86_64.whl.metadata (8.7 k
Requirement already satisfied: uvicorn>=0.18.3 in /usr/local/lib/python3.11/dist-packages (from uvicorn[standard]>=0.18.3->chromadb) (0.35.0)
Collecting posthog<6.0.0,>=2.4.0 (from chromadb)
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Requirement already satisfied: typing-extensions>=4.5.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (4.14.1)
Collecting onnxruntime>=1.14.1 (from chromadb)
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Collecting opentelemetry-exporter-otlp-proto-grpc>=1.2.0 (from chromadb)
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Collecting opentelemetry-sdk>=1.2.0 (from chromadb)
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Requirement already satisfied: tokenizers>=0.13.2 in /usr/local/lib/python3.11/dist-packages (from chromadb) (0.21.2)
Collecting pypika>=0.48.9 (from chromadb)
  Downloading PyPika-0.48.9.tar.gz (67 kB)
                               ──────────────────────────────── 67.3/67.3 kB 3.0 MB/s eta 0:00:00
  Installing build dependencies ... done
  Getting requirements to build wheel ... done
  Preparing metadata (pyproject.toml) ... done
Requirement already satisfied: tqdm>=4.65.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (4.67.1)
Collecting overrides>=7.3.1 (from chromadb)
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Requirement already satisfied: grpcio>=1.58.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (1.73.1)
Collecting bcrypt>=4.0.1 (from chromadb)
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Requirement already satisfied: typer>=0.9.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (0.16.0)
Collecting kubernetes>=28.1.0 (from chromadb)
  Downloading kubernetes-33.1.0-py2.py3-none-any.whl.metadata (1.7 kB)
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Requirement already satisfied: orjson>=3.9.12 in /usr/local/lib/python3.11/dist-packages (from chromadb) (3.11.0)
Requirement already satisfied: httpx>=0.27.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (0.28.1)
Requirement already satisfied: rich>=10.11.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (13.9.4)
Requirement already satisfied: jsonschema>=4.19.0 in /usr/local/lib/python3.11/dist-packages (from chromadb) (4.25.0)
Requirement already satisfied: anyio<5,>=3.5.0 in /usr/local/lib/python3.11/dist-packages (from groq) (4.9.0)
Requirement already satisfied: distro<2,>=1.7.0 in /usr/local/lib/python3.11/dist-packages (from groq) (1.9.0)
Requirement already satisfied: sniffio in /usr/local/lib/python3.11/dist-packages (from groq) (1.3.1)
Requirement already satisfied: aiohappyeyeballs>=2.5.0 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-commu
Requirement already satisfied: aiosignal>=1.4.0 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community) (
Requirement already satisfied: attrs>=17.3.0 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community) (25.
Requirement already satisfied: frozenlist>=1.1.1 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community)
Requirement already satisfied: multidict<7.0,>=4.5 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community
Requirement already satisfied: propcache>=0.2.0 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community) (
Requirement already satisfied: yarl<2.0,>=1.17.0 in /usr/local/lib/python3.11/dist-packages (from aiohttp<4.0.0,>=3.8.3->langchain-community)
Requirement already satisfied: idna>=2.8 in /usr/local/lib/python3.11/dist-packages (from anyio<5,>=3.5.0->groq) (3.10)
Requirement already satisfied: pyproject_hooks in /usr/local/lib/python3.11/dist-packages (from build>=1.0.3->chromadb) (1.2.0)
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Requirement already satisfied: certifi in /usr/local/lib/python3.11/dist-packages (from httpx>=0.27.0->chromadb) (2025.7.14)
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Requirement already satisfied: httpcore==1.* in /usr/local/lib/python3.11/dist-packages (from httpx>=0.27.0->chromadb) (1.0.9)
Requirement already satisfied: h11>=0.16 in /usr/local/lib/python3.11/dist-packages (from httpcore==1.*->httpx>=0.27.0->chromadb) (0.16.0)
Requirement already satisfied: jsonschema-specifications>=2023.03.6 in /usr/local/lib/python3.11/dist-packages (from jsonschema>=4.19.0->chrom
Requirement already satisfied: referencing>=0.28.4 in /usr/local/lib/python3.11/dist-packages (from jsonschema>=4.19.0->chromadb) (0.36.2)
Requirement already satisfied: rpds-py>=0.7.1 in /usr/local/lib/python3.11/dist-packages (from jsonschema>=4.19.0->chromadb) (0.26.0)
Requirement already satisfied: six>=1.9.0 in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (1.17.0)
Requirement already satisfied: python-dateutil>=2.5.3 in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (2.9.0.po
Requirement already satisfied: google-auth>=1.0.1 in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (2.38.0)
Requirement already satisfied: websocket-client!=0.40.0,!=0.41.*,!=0.42.*,>=0.32.0 in /usr/local/lib/python3.11/dist-packages (from kubernetes
Requirement already satisfied: requests-oauthlib in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (2.0.0)
Requirement already satisfied: oauthlib>=3.2.2 in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (3.3.1)
Requirement already satisfied: urllib3>=1.24.2 in /usr/local/lib/python3.11/dist-packages (from kubernetes>=28.1.0->chromadb) (2.5.0)
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Requirement already satisfied: requests-toolbelt<2.0.0,>=1.0.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain)
Requirement already satisfied: zstandard<0.24.0,>=0.23.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain) (0.23.
Collecting coloredlogs (from onnxruntime>=1.14.1->chromadb)
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Requirement already satisfied: flatbuffers in /usr/local/lib/python3.11/dist-packages (from onnxruntime>=1.14.1->chromadb) (25.2.10)
Requirement already satisfied: protobuf in /usr/local/lib/python3.11/dist-packages (from onnxruntime>=1.14.1->chromadb) (5.29.5)
Requirement already satisfied: sympy in /usr/local/lib/python3.11/dist-packages (from onnxruntime>=1.14.1->chromadb) (1.13.1)
Requirement already satisfied: importlib-metadata<8.8.0,>=6.0 in /usr/local/lib/python3.11/dist-packages (from opentelemetry-api>=1.2.0->chrom
Requirement already satisfied: googleapis-common-protos~=1.57 in /usr/local/lib/python3.11/dist-packages (from opentelemetry-exporter-otlp-pro
Collecting opentelemetry-exporter-otlp-proto-common==1.35.0 (from opentelemetry-exporter-otlp-proto-grpc>=1.2.0->chromadb)
  Downloading opentelemetry_exporter_otlp_proto_common-1.35.0-py3-none-any.whl.metadata (1.8 kB)
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Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (0.7
Requirement already satisfied: pydantic-core==2.33.2 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (2.33
Requirement already satisfied: typing-inspection>=0.4.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (0
Collecting python-dotenv>=0.21.0 (from pydantic-settings<3.0.0,>=2.4.0->langchain-community)
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Requirement already satisfied: markdown-it-py>=2.2.0 in /usr/local/lib/python3.11/dist-packages (from rich>=10.11.0->chromadb) (3.0.0)
Requirement already satisfied: pygments<3.0.0,>=2.13.0 in /usr/local/lib/python3.11/dist-packages (from rich>=10.11.0->chromadb) (2.19.2)
Requirement already satisfied: greenlet>=1 in /usr/local/lib/python3.11/dist-packages (from SQLAlchemy<3,>=1.4->langchain) (3.2.3)
Requirement already satisfied: huggingface-hub<1.0,>=0.16.4 in /usr/local/lib/python3.11/dist-packages (from tokenizers>=0.13.2->chromadb) (0.
Requirement already satisfied: click>=8.0.0 in /usr/local/lib/python3.11/dist-packages (from typer>=0.9.0->chromadb) (8.2.1)
Requirement already satisfied: shellingham>=1.3.0 in /usr/local/lib/python3.11/dist-packages (from typer>=0.9.0->chromadb) (1.5.4)
Collecting httptools>=0.6.3 (from uvicorn[standard]>=0.18.3->chromadb)
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Collecting uvloop>=0.15.1 (from uvicorn[standard]>=0.18.3->chromadb)
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Requirement already satisfied: websockets>=10.4 in /usr/local/lib/python3.11/dist-packages (from uvicorn[standard]>=0.18.3->chromadb) (15.0.1)
Requirement already satisfied: cachetools<6.0,>=2.0.0 in /usr/local/lib/python3.11/dist-packages (from google-auth>=1.0.1->kubernetes>=28.1.0-
Requirement already satisfied: pyasn1-modules>=0.2.1 in /usr/local/lib/python3.11/dist-packages (from google-auth>=1.0.1->kubernetes>=28.1.0->
Requirement already satisfied: rsa<5,>=3.1.4 in /usr/local/lib/python3.11/dist-packages (from google-auth>=1.0.1->kubernetes>=28.1.0->chromadb
Requirement already satisfied: filelock in /usr/local/lib/python3.11/dist-packages (from huggingface-hub<1.0,>=0.16.4->tokenizers>=0.13.2->chr
Requirement already satisfied: fsspec>=2023.5.0 in /usr/local/lib/python3.11/dist-packages (from huggingface-hub<1.0,>=0.16.4->tokenizers>=0.1
Requirement already satisfied: hf-xet<2.0.0,>=1.1.2 in /usr/local/lib/python3.11/dist-packages (from huggingface-hub<1.0,>=0.16.4->tokenizers>
Requirement already satisfied: zipp>=3.20 in /usr/local/lib/python3.11/dist-packages (from importlib-metadata<8.8.0,>=6.0->opentelemetry-api>=
Requirement already satisfied: jsonpointer>=1.9 in /usr/local/lib/python3.11/dist-packages (from jsonpatch<2.0,>=1.33->langchain-core<1.0.0,>=
Requirement already satisfied: mdurl~=0.1 in /usr/local/lib/python3.11/dist-packages (from markdown-it-py>=2.2.0->rich>=10.11.0->chromadb) (0.
Collecting mypy-extensions>=0.3.0 (from typing-inspect<1,>=0.4.0->dataclasses-json<0.7,>=0.5.7->langchain-community)
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Collecting humanfriendly>=9.1 (from coloredlogs->onnxruntime>=1.14.1->chromadb)
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Requirement already satisfied: pyasn1<0.7.0,>=0.6.1 in /usr/local/lib/python3.11/dist-packages (from pyasn1-modules>=0.2.1->google-auth>=1.0.1
Downloading langchain_community-0.3.27-py3-none-any.whl (2.5 MB)
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Downloading langchainhub-0.1.21-py3-none-any.whl (5.2 kB)
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Downloading dataclasses_json-0.6.7-py3-none-any.whl (28 kB)
Downloading httpx_sse-0.4.1-py3-none-any.whl (8.1 kB)
Downloading kubernetes-33.1.0-py2.py3-none-any.whl (1.9 MB)
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Downloading mmh3-5.1.0-cp311-cp311-manylinux_2_5_x86_64.manylinux1_x86_64.manylinux_2_17_x86_64.manylinux2014_x86_64.whl (101 kB)
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Downloading opentelemetry_api-1.35.0-py3-none-any.whl (65 kB)
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Downloading opentelemetry_exporter_otlp_proto_grpc-1.35.0-py3-none-any.whl (18 kB)
Downloading opentelemetry_exporter_otlp_proto_common-1.35.0-py3-none-any.whl (18 kB)
Downloading opentelemetry_proto-1.35.0-py3-none-any.whl (72 kB)
                              ———————————————————————— 72.5/72.5 kB 4.2 MB/s eta 0:00:00
Downloading opentelemetry_sdk-1.35.0-py3-none-any.whl (119 kB)
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Downloading opentelemetry_semantic_conventions-0.56b0-py3-none-any.whl (201 kB)
                              ———————————————————————— 201.6/201.6 kB 12.1 MB/s eta 0:00:00
Downloading overrides-7.7.0-py3-none-any.whl (17 kB)
Downloading packaging-24.2-py3-none-any.whl (65 kB)
                              ———————————————————————— 65.5/65.5 kB 3.5 MB/s eta 0:00:00
Downloading posthog-5.4.0-py3-none-any.whl (105 kB)
                              ———————————————————————— 105.4/105.4 kB 5.7 MB/s eta 0:00:00
Downloading pybase64-1.4.2-cp311-cp311-manylinux1_x86_64.manylinux2014_x86_64.manylinux_2_17_x86_64.manylinux_2_5_x86_64.whl (71 kB)
                              ———————————————————————— 71.4/71.4 kB 4.5 MB/s eta 0:00:00
Downloading pydantic_settings-2.10.1-py3-none-any.whl (45 kB)
                              ———————————————————————— 45.2/45.2 kB 2.6 MB/s eta 0:00:00
Downloading types_requests-2.32.4.20250611-py3-none-any.whl (20 kB)
Downloading backoff-2.2.1-py3-none-any.whl (15 kB)
Downloading durationpy-0.10-py3-none-any.whl (3.9 kB)
Downloading httptools-0.6.4-cp311-cp311-manylinux_2_5_x86_64.manylinux1_x86_64.manylinux_2_17_x86_64.manylinux2014_x86_64.whl (459 kB)
                              ———————————————————————— 459.8/459.8 kB 24.0 MB/s eta 0:00:00
Downloading marshmallow-3.26.1-py3-none-any.whl (50 kB)
                              ———————————————————————— 50.9/50.9 kB 3.1 MB/s eta 0:00:00
Downloading python_dotenv-1.1.1-py3-none-any.whl (20 kB)
Downloading typing_inspect-0.9.0-py3-none-any.whl (8.8 kB)
Downloading uvloop-0.21.0-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (4.0 MB)
                              ———————————————————————— 4.0/4.0 MB 68.0 MB/s eta 0:00:00
Downloading watchfiles-1.1.0-cp311-cp311-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (453 kB)
                              ———————————————————————— 453.1/453.1 kB 24.4 MB/s eta 0:00:00
Downloading coloredlogs-15.0.1-py2.py3-none-any.whl (46 kB)
                              ———————————————————————— 46.0/46.0 kB 2.7 MB/s eta 0:00:00
Downloading humanfriendly-10.0-py2.py3-none-any.whl (86 kB)
                              ———————————————————————— 86.8/86.8 kB 5.8 MB/s eta 0:00:00
Downloading mypy_extensions-1.1.0-py3-none-any.whl (5.0 kB)
Building wheels for collected packages: pypika
  Building wheel for pypika (pyproject.toml) ... done
  Created wheel for pypika: filename=pypika-0.48.9-py2.py3-none-any.whl size=53803 sha256=6bd06ab4d91ea9800af791d4d2a577777fc3f06beb928a6cbba7
  Stored in directory: /root/.cache/pip/wheels/a3/01/bd/4c40ceb9d5354160cb186dcc153360f4ab7eb23e2b24daf96d
Successfully built pypika
Installing collected packages: pypika, durationpy, uvloop, types-requests, python-dotenv, pypdf, pymupdf, pybase64, packaging, overrides, open
  Attempting uninstall: packaging
    Found existing installation: packaging 25.0
    Uninstalling packaging-25.0:
      Successfully uninstalled packaging-25.0
Successfully installed backoff-2.2.1 bcrypt-4.3.0 chromadb-1.0.15 coloredlogs-15.0.1 dataclasses-json-0.6.7 durationpy-0.10 groq-0.30.0 httpto
```

```
pip install --upgrade langchain


⊟  Requirement already satisfied: langchain in /usr/local/lib/python3.11/dist-packages (0.3.26)
   Collecting langchain
     Downloading langchain-0.3.27-py3-none-any.whl.metadata (7.8 kB)
   Collecting langchain-core<1.0.0,>=0.3.72 (from langchain)
     Downloading langchain_core-0.3.72-py3-none-any.whl.metadata (5.8 kB)
   Collecting langchain-text-splitters<1.0.0,>=0.3.9 (from langchain)
     Downloading langchain_text_splitters-0.3.9-py3-none-any.whl.metadata (1.9 kB)
   Requirement already satisfied: langsmith>=0.1.17 in /usr/local/lib/python3.11/dist-packages (from langchain) (0.4.8)
   Requirement already satisfied: pydantic<3.0.0,>=2.7.4 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.11.7)
   Requirement already satisfied: SQLAlchemy<3,>=1.4 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.0.41)
   Requirement already satisfied: requests<3,>=2 in /usr/local/lib/python3.11/dist-packages (from langchain) (2.32.3)
   Requirement already satisfied: PyYAML>=5.3 in /usr/local/lib/python3.11/dist-packages (from langchain) (6.0.2)
   Requirement already satisfied: tenacity!=8.4.0,<10.0.0,>=8.1.0 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.72-
   Requirement already satisfied: jsonpatch<2.0,>=1.33 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.72->langchain)
   Requirement already satisfied: typing-extensions>=4.7 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.72->langchai
   Requirement already satisfied: packaging>=23.2 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.72->langchain) (24.
   Requirement already satisfied: httpx<1,>=0.23.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain) (0.28.1)
   Requirement already satisfied: orjson<4.0.0,>=3.9.14 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain) (3.11.0)
   Requirement already satisfied: requests-toolbelt<2.0.0,>=1.0.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain)
   Requirement already satisfied: zstandard<0.24.0,>=0.23.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.1.17->langchain) (0.23.
   Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (0.7
   Requirement already satisfied: pydantic-core==2.33.2 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (2.33
   Requirement already satisfied: typing-inspection>=0.4.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3.0.0,>=2.7.4->langchain) (0
   Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages (from requests<3,>=2->langchain) (3.4.2)
   Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.11/dist-packages (from requests<3,>=2->langchain) (3.10)
   Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.11/dist-packages (from requests<3,>=2->langchain) (2.5.0)
   Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from requests<3,>=2->langchain) (2025.7.14)
   Requirement already satisfied: greenlet>=1 in /usr/local/lib/python3.11/dist-packages (from SQLAlchemy<3,>=1.4->langchain) (3.2.3)
   Requirement already satisfied: anyio in /usr/local/lib/python3.11/dist-packages (from httpx<1,>=0.23.0->langsmith>=0.1.17->langchain) (4.9.0)
   Requirement already satisfied: httpcore==1.* in /usr/local/lib/python3.11/dist-packages (from httpx<1,>=0.23.0->langsmith>=0.1.17->langchain)
   Requirement already satisfied: h11>=0.16 in /usr/local/lib/python3.11/dist-packages (from httpcore==1.*->httpx<1,>=0.23.0->langsmith>=0.1.17->
   Requirement already satisfied: jsonpointer>=1.9 in /usr/local/lib/python3.11/dist-packages (from jsonpatch<2.0,>=1.33->langchain-core<1.0.0,>=
   Requirement already satisfied: sniffio>=1.1 in /usr/local/lib/python3.11/dist-packages (from anyio->httpx<1,>=0.23.0->langsmith>=0.1.17->langc
   Downloading langchain-0.3.27-py3-none-any.whl (1.0 MB)
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   Downloading langchain_core-0.3.72-py3-none-any.whl (442 kB)
   ──────────────────────────────────────── 442.8/442.8 kB 25.0 MB/s eta 0:00:00
   Downloading langchain_text_splitters-0.3.9-py3-none-any.whl (33 kB)
   Installing collected packages: langchain-core, langchain-text-splitters, langchain
     Attempting uninstall: langchain-core
       Found existing installation: langchain-core 0.3.71
       Uninstalling langchain-core-0.3.71:
         Successfully uninstalled langchain-core-0.3.71
     Attempting uninstall: langchain-text-splitters
       Found existing installation: langchain-text-splitters 0.3.8
       Uninstalling langchain-text-splitters-0.3.8:
         Successfully uninstalled langchain-text-splitters-0.3.8
     Attempting uninstall: langchain
       Found existing installation: langchain 0.3.26
       Uninstalling langchain-0.3.26:
         Successfully uninstalled langchain-0.3.26
   Successfully installed langchain-0.3.27 langchain-core-0.3.72 langchain-text-splitters-0.3.9



!pip install -U langchain-groq

⊟  Collecting langchain-groq
     Downloading langchain_groq-0.3.6-py3-none-any.whl.metadata (2.6 kB)
   Requirement already satisfied: langchain-core<1.0.0,>=0.3.68 in /usr/local/lib/python3.11/dist-packages (from langchain-groq) (0.3.72)
   Requirement already satisfied: groq<1,>=0.29.0 in /usr/local/lib/python3.11/dist-packages (from langchain-groq) (0.30.0)
   Requirement already satisfied: anyio<5,>=3.5.0 in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (4.9.0)
   Requirement already satisfied: distro<2,>=1.7.0 in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (1.9.0)
   Requirement already satisfied: httpx<1,>=0.23.0 in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (0.28.1)
   Requirement already satisfied: pydantic<3,>=1.9.0 in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (2.11.7)
   Requirement already satisfied: sniffio in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (1.3.1)
   Requirement already satisfied: typing-extensions<5,>=4.10 in /usr/local/lib/python3.11/dist-packages (from groq<1,>=0.29.0->langchain-groq) (4
   Requirement already satisfied: langsmith>=0.3.45 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.68->langchain-gro
   Requirement already satisfied: tenacity!=8.4.0,<10.0.0,>=8.1.0 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.68-
   Requirement already satisfied: jsonpatch<2.0,>=1.33 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.68->langchain-
   Requirement already satisfied: PyYAML>=5.3 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.68->langchain-groq) (6.
   Requirement already satisfied: packaging>=23.2 in /usr/local/lib/python3.11/dist-packages (from langchain-core<1.0.0,>=0.3.68->langchain-groq)
   Requirement already satisfied: idna>=2.8 in /usr/local/lib/python3.11/dist-packages (from anyio<5,>=3.5.0->groq<1,>=0.29.0->langchain-groq) (3
   Requirement already satisfied: certifi in /usr/local/lib/python3.11/dist-packages (from httpx<1,>=0.23.0->groq<1,>=0.29.0->langchain-groq) (20
   Requirement already satisfied: httpcore==1.* in /usr/local/lib/python3.11/dist-packages (from httpx<1,>=0.23.0->groq<1,>=0.29.0->langchain-gro
   Requirement already satisfied: h11>=0.16 in /usr/local/lib/python3.11/dist-packages (from httpcore==1.*->httpx<1,>=0.23.0->groq<1,>=0.29.0->la
   Requirement already satisfied: jsonpointer>=1.9 in /usr/local/lib/python3.11/dist-packages (from jsonpatch<2.0,>=1.33->langchain-core<1.0.0,>=
   Requirement already satisfied: orjson<4.0.0,>=3.9.14 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.3.45->langchain-core<1.0.0,
   Requirement already satisfied: requests<3,>=2 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.3.45->langchain-core<1.0.0,>=0.3.6
   Requirement already satisfied: requests-toolbelt<2.0.0,>=1.0.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.3.45->langchain-c
   Requirement already satisfied: zstandard<0.24.0,>=0.23.0 in /usr/local/lib/python3.11/dist-packages (from langsmith>=0.3.45->langchain-core<1.
   Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3,>=1.9.0->groq<1,>=0.29.0->la
   Requirement already satisfied: pydantic-core==2.33.2 in /usr/local/lib/python3.11/dist-packages (from pydantic<3,>=1.9.0->groq<1,>=0.29.0->lan
   Requirement already satisfied: typing-inspection>=0.4.0 in /usr/local/lib/python3.11/dist-packages (from pydantic<3,>=1.9.0->groq<1,>=0.29.0->
```

```python
import os
os.environ["GROQ_API_KEY"] = "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"
```

```python
from langchain_groq import ChatGroq
```

```python
from langchain_community.document_loaders import PyMuPDFLoader
from langchain.text_splitter import RecursiveCharacterTextSplitter
from langchain_community.vectorstores import Chroma
from langchain_community.embeddings import HuggingFaceEmbeddings
from langchain.chains import RetrievalQA
from langchain_groq import ChatGroq


# 📄 Load the PDF file
pdf_path = "/content/budget_speech.pdf"
loader = PyMuPDFLoader(pdf_path)
documents = loader.load()

# 🧩 Split into chunks
text_splitter = RecursiveCharacterTextSplitter(chunk_size=500, chunk_overlap=50)
chunks = text_splitter.split_documents(documents)

# 📊 Embed and store in Chroma
embedding_model = HuggingFaceEmbeddings(model_name="all-MiniLM-L6-v2")
vector_store = Chroma.from_documents(chunks, embedding=embedding_model, persist_directory="./chroma_db")
retriever = vector_store.as_retriever()

# Use LLaMA3-70B from Groq
llm = ChatGroq(model_name="llama3-70b-8192", temperature=0)

# Set up RetrievalQA
qa_chain = RetrievalQA.from_chain_type(
    llm=llm,
    chain_type="stuff",
    retriever=retriever,
    return_source_documents=True
)

#    Main loop
print("\n📄 PDF Q&A Bot (Groq + LLaMA3-70B)")
print("Ask anything from the PDF. Type 'exit' to quit.\n")

while True:
    query = input("🟣 You: ")
    if query.lower() in ["exit", "quit"]:
        print("👋 Bye!")
        break

    result = qa_chain({"query": query})
    answer = result['result'].strip()

    # Handle empty/irrelevant answers
    if not answer or answer.lower() in ["i don't know", "i cannot answer that", ""]:
        print("\n❌ Sorry, I couldn't find the answer in the document.\n")
    else:
        print("\n🤖 Answer:", answer)

    # Optional: show source info
    print("\n📚 Source(s):")
    for doc in result['source_documents']:
        print(f"• {doc.metadata.get('source', 'Unknown')} | Page: {doc.metadata.get('page', 'N/A')}")
    print("\n" + "-"*60 + "\n")
```

📄 PDF Q&A Bot (Groq + LLaMA3-70B)
Ask anything from the PDF. Type 'exit' to quit.

🗨 You: the great telugu poet

🤖 Answer: The great Telugu poet mentioned in the text is Gurajada Appa Rao.

🗂 Source(s):
- /content/budget_speech.pdf | Page: 5
- /content/budget_speech.pdf | Page: 5
- /content/budget_speech.pdf | Page: 0
- /content/budget_speech.pdf | Page: 0

🗨 You: Building Rural Prosperity and Resilience

🤖 Answer: Based on the provided context, Building Rural Prosperity and Resilience is a comprehensive multi-sectoral program that aims to:

1. Enhance agricultural productivity
2. Adopt crop diversification and sustainable agriculture practices
3. Augment post-harvest storage at the panchayat and block level
4. Improve irrigation facilities
5. Facilitate availability of long-term and short-term credit

This program is likely to help 1.7 crore farmers.

Additionally, the program will focus on:

1. Catalyzing enterprise development, employment, and financial independence for rural women
2. Accelerating creation of new employment and businesses for young farmers and rural youth
3. Nurturing and modernizing agriculture for productivity improvement and warehousing, especially for marginal and small farmers
4. Diversifying opportunities for landless families.

🗂 Source(s):
- /content/budget_speech.pdf | Page: 6
- /content/budget_speech.pdf | Page: 6
- /content/budget_speech.pdf | Page: 32
- /content/budget_speech.pdf | Page: 32

🗨 You: National Mission on High Yielding Seeds

🤖 Answer: The National Mission on High Yielding Seeds aims to:

1. Strengthen the research ecosystem
2. Develop and propagate seeds with high yield, pest resistance, and climate resilience
3. Make more than 100 seed varieties commercially available, which were released since July 2024.

🗂 Source(s):
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- /content/budget_speech.pdf | Page: 8
- /content/budget_speech.pdf | Page: 32
- /content/budget_speech.pdf | Page: 32

🗨 You: is there Atmanirbharta in urea production in pdf?

🤖 Answer: According to the provided context, yes, there is a mention of Atmanirbharta in urea production. Specifically, it is mentioned in pa

🗂 Source(s):
- /content/budget_speech.pdf | Page: 7
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🗨 You: who get Credit Cards with a 5 lakh limit?

🤖 Answer: According to the context, micro enterprises registered on the Udyam portal will get customized Credit Cards with a ` 5 lakh limit.

🗂 Source(s):
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- /content/budget_speech.pdf | Page: 9
- /content/budget_speech.pdf | Page: 9

🗨 You: the Saksham Anganwadi and Poshan 2.0 programme provides what?

🤖 Answer: The Saksham Anganwadi and Poshan 2.0 programme provides nutritional support to:

* more than 8 crore children

* 1 crore pregnant women and lactating mothers all over the country
* about 20 lakh adolescent girls

🗂️ Source(s):
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- /content/budget_speech.pdf | Page: 6

💬 You: how many people are benefitted from PM SVANidhi?

🖨️ Answer: According to the text, more than 68 lakh (6.8 million) street vendors have been benefitted from the PM SVANidhi scheme.

🗂️ Source(s):
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💬 You: Greenfield Airport is in which city?

🖨️ Answer: According to the provided context, the Greenfield Airport is in Bihar, but the specific city is not mentioned.

🗂️ Source(s):
- /content/budget_speech.pdf | Page: 15
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- /content/budget_speech.pdf | Page: 12

💬 You: Jan Vishwas Act in which year?

🖨️ Answer: According to the context, the Jan Vishwas Act was in 2023.

🗂️ Source(s):
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- /content/budget_speech.pdf | Page: 29

💬 You: tax rebate is being provided to?

🖨️ Answer: According to the context, the tax rebate is being provided to resident individuals with a total income up to ` 12,00,000.

🗂️ Source(s):
- /content/budget_speech.pdf | Page: 49
- /content/budget_speech.pdf | Page: 49
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- /content/budget_speech.pdf | Page: 31

💬 You: who present the Budget for 2025-26.?