

# DAILY INTERNSHIP REPORT

Date: 1st July 2025

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Topics Covered:

1. Runnable Primitives & Pipeline Control
2. Document Loaders in LangChain (TextLoader, PyPDFLoader)

## WORK SUMMARY

- Recapped previous concepts on RAG (Retrieval-Augmented Generation) and its key components:
  - Document Loaders, Text Processing, Embedding & Retrieval
- Reviewed and used TextLoader and PyPDFLoader in LangChain to ingest documents for RAG-based applications.
- Tested pipelines using the LangChain Expression Language (LCEL) for clean composition.

## TECHNOLOGIES / TOOLS USED

- LangChain (Runnables, Loaders), Python, Jupyter Notebook
- LCEL chaining syntax (|), ChatGPT for troubleshooting

## WHAT I COMPLETED TODAY

- Created advanced Runnable pipelines using LCEL chaining.
- Loaded and processed .txt and .pdf documents using LangChain's built-in loaders.

## WHAT I LEARNED TODAY

- RAG helps enhance LLMs with external knowledge via document retrieval.
- Document Loaders like TextLoader and PyPDFLoader help extract text from files for downstream processing.
- Runnable patterns like Branch, Retry, and Parallel improve pipeline design in LangChain.

## CHALLENGES FACED

- No major issues faced today.
- Created and activated a clean Python venv.
- Used ChatGPT to find compatible versions and install missing dependencies.

## CODE / GITHUB LINK

- [https://github.com/Ruchin0203/Corp8-AI/tree/main/9.Runnable\\_primitives](https://github.com/Ruchin0203/Corp8-AI/tree/main/9.Runnable_primitives)