NLP Text Smell Analysis:

Overview:
This project uses Natural Language Processing (NLP) to find and fix bad writing patterns (called “text smells”) like:
- Passive Voice
- Conditional Modals (e.g., *should, could, might*)

It scans PDF files (like Software Requirement Specifications), detects unclear sentences, and suggests active voice versions to make the text more direct and readable.

Main Features:
- Detects Passive Voice and Conditional Modal sentences
- Converts passive sentences to Active Voice
- Generates a PDF report with:
  - Sentence found
  - Issue type
  - Suggested correction
- Calculates frequency,

Tools & Libraries
-spaCy – for NLP parsing
- PyMuPDF (fitz) – for reading PDF files
- ReportLab – for creating output reports
- Python 3.x

Folder Structure:

NLP_Text_Smell_Analysis/
│
├── req/ # Input PDF files
├── outputs/ # Generated reports
├── passive_to_active.py # Converts sentences
├── nlp_analysis.py # Main script
└── README.md # This file

How to Run

1. Install Dependencies
   ```bash
   pip install spacy pymupdf reportlab
   python -m spacy download en_core_web_sm
Place your PDF files inside the req/ folder.
   ```

Run the program

bash
Copy code
python nlp_analysis.py
The final report will appear in the outputs/ folder.