

Internship Program: Python Development Task

Task Title: PDF to Excel Converter Application

Introduction:

In this task, interns are required to develop an application that converts data from a PDF file into an Excel sheet. The application can be either a standalone desktop application or a web-based solution. This task will help interns enhance their skills in Python programming, file handling, and data extraction techniques.

Technologies to Use:

- **Programming Language:** Python
 - **Libraries & Tools:**
 - PyPDF2 / pdfplumber (for extracting text from PDF)
 - pandas (for handling Excel data)
 - openpyxl / xlswriter (for writing to Excel files)
 - Tkinter / Flask / Django (for UI development if applicable)
 - Streamlit (for a simple web-based interface)
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Task Explanation:

1. **Input:**
 - The user should be able to upload a PDF file containing structured or tabular data.
2. **Processing:**
 - Extract relevant data from the PDF using libraries like PyPDF2 or pdfplumber.
 - Process the extracted data using pandas.
 - Convert and format the extracted data into an Excel-compatible format.
3. **Output:**
 - Save the extracted data into an Excel file (.xlsx format) using openpyxl or xlswriter.
 - Provide a download option for the generated Excel file.
4. **Optional Features:**
 - A simple GUI (using Tkinter for desktop apps or Flask/Django/Streamlit for web apps).
 - Error handling for non-readable or invalid PDFs.

- Option to extract specific pages or sections from the PDF.
 - User-friendly interface with progress indicators.
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Conclusion:

This task will allow interns to apply their Python programming skills to a real-world problem. It will help them understand how to handle different file formats, extract and manipulate data, and build a user-friendly application. Interns are encouraged to optimize their solution for efficiency and usability.

Deliverables:

- Source code in a GitHub repository (or shared via a zip file).
 - A short report/documentation explaining the implementation approach.
 - A demonstration video (if possible) showcasing the application.
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Good luck! Happy coding! 🚀