# AI Resume Analyzer: NLP App that Categorizes Resumes Automatically

## Overview

AI Resume Analyzer is a Streamlit-based web application that leverages **Natural Language Processing (NLP)** and **Machine Learning** to automatically categorize resumes into job-specific folders. It helps HR teams save time and efficiently handle large volumes of CVs.

The app can classify resumes into categories such as **AI Engineer**, **QA Engineer**, **Java Developer**, and **Python Developer**. It extracts text from PDFs, cleans it, predicts the correct category using a pre-trained model, and generates downloadable organized folders.

## Features

* Upload multiple resumes (PDF format) at once
* Automatic text extraction from resumes using PyPDF2
* Text cleaning pipeline for better prediction accuracy
* Machine Learning classification with Scikit-learn
* Download all categorized resumes as a ZIP file
* Built with **Streamlit** for an interactive web interface

## Tech Stack

* Python 3.10+
* Streamlit
* Scikit-learn
* PyPDF2
* Joblib
* Pandas & NumPy
* Regex for text cleaning

## Installation & Setup

1. **Clone the repository:**

git clone https://github.com/https://github.com/sufyan1087/Resume-screaning-app.git

1. **Create a virtual environment (optional but recommended):**

python -m venv venv  
source venv/bin/activate # Linux/Mac  
venv\Scripts\activate # Windows

1. **Install dependencies:**

pip install -r requirements.txt

1. **Run the Streamlit app:**

streamlit run app.py

1. **Open in browser:**

* The app will launch automatically in your default browser. If not, visit http://localhost:8501.

## Usage

1. Upload multiple PDF resumes.
2. Click the **Classify Resumes** button.
3. The app will extract and clean the text, predict categories, and generate a ZIP file with categorized CV folders.

## Project Structure

ai-resume-analyzer/  
│  
├── app.py # Main Streamlit application  
├── rf\_model.pkl # Pre-trained ML model  
├── tfidf.pkl # TF-IDF vectorizer  
├── encoder.pkl # Label encoder  
├── requirements.txt # Python dependencies  
├── README.md  
└── sample\_resumes/ # Optional: sample resumes for testing

## Contribution

Contributions are welcome! Please open an issue or submit a pull request.

## License

This project is licensed under the MIT License.

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