Project Report: AI-Powered Resume Ranker

1. Introduction

This project simulates a real-world Applicant Tracking System (ATS) used by recruiters to rank candidate resumes.

It intelligently scores each resume by comparing it to a job description using Python, Streamlit, and synonym-aware keyword matching.

2. Abstract

The tool reads resume PDFs, extracts text, matches skills using a predefined synonym dictionary, and ranks resumes by relevance.

This helps recruiters save time and select the most suitable candidates based on skill match percentage.

3. Tools Used

- Python

- Streamlit (for user interface)

- PyMuPDF (for extracting PDF text)

- Pandas (for data processing)

- Custom logic for synonym matching and scoring

4. Steps Involved

1. User uploads resume PDFs and a job description file

2. The app extracts skills from the job description using a synonym-aware dictionary

3. Each resume is parsed and compared to the extracted skills

4. A match score and matched skills list is generated per resume

5. Results are shown in a ranked table and available for CSV download

5. Conclusion

This project provides a fast, smart, and explainable way to shortlist resumes.

Unlike black-box AI, this approach is interpretable and lightweight, making it ideal for hackathons and entry-level HR tools.

The project is submission-ready for internships and stipend selection with a strong technical and practical foundation.