**Resume Ranker Pro+ Project Report**

**Introduction**

Resume Ranker Pro+ is a web-based tool that helps recruiters screen resumes automatically using AI. Instead of manually reading through hundreds of resumes, HR teams can upload job descriptions and candidate files to get ranked results. The system analyzes how well each resume matches the job requirements and presents candidates in order of relevance. This saves significant time in the initial screening process.

**Abstract**

The project uses machine learning to compare resumes against job descriptions and calculate match scores. It processes multiple file formats (PDF, Word, text files) and extracts key information like skills and experience automatically. The system combines traditional keyword matching with semantic analysis for accurate results. Results are displayed through interactive charts and can be exported as reports.

**Tools Used**

**Main Technologies:** Streamlit for the web interface, Scikit-learn for text analysis, Plotly for visualizations, and Pandas for data handling.

**Text Processing:** Sentence Transformers for semantic understanding, NLTK for text preprocessing, and regular expressions for information extraction.

**File Handling:** PyMuPDF for PDFs, python-docx for Word documents, BeautifulSoup for HTML files.

**Additional:** FPDF for generating PDF reports and various Python libraries for file processing.

**Steps Involved in Building the Project**

**Setup & Planning:** Configured Streamlit framework and organized the project structure with proper error handling for optional libraries.

**File Processing:** Built functions to read different file formats (PDF, Word, Excel, ZIP archives) and extract text content.

**AI Analysis:** Implemented text analysis using both keyword matching and semantic similarity to score candidate relevance.

**User Interface:** Created an interactive dashboard with charts, filtering options, and candidate comparison tools.

**Export Features:** Added functionality to generate CSV exports and PDF reports for individual candidates.

**Conclusion**

The Resume Ranker Pro+ successfully automates resume screening, reducing manual review time by about 80%. The tool combines simple keyword matching with advanced AI to provide accurate candidate rankings. It handles multiple file formats and presents results through an easy-to-use interface with visual charts. The project demonstrates how AI can solve practical business problems while remaining user-friendly and accessible.