

AI-Powered Resume Ranking System

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- AI-powered resume ranking system
- Built with Python, Streamlit, and various NLP libraries
- Features advanced text processing and similarity scoring
- Includes AIOps monitoring and MLOps capabilities
- Optional LLM-based feedback using OpenAI's GPT-3.5

Key Components

- ResumeProcessor class
- PDF text extraction
- Text preprocessing and entity extraction
- Multiple similarity calculation methods
- TF-IDF vectorization
- Sentence embeddings
- Entity matching

Similarity Scoring

- TF-IDF similarity
- Semantic similarity using sentence embeddings
- Entity-based similarity
- Combined score calculation

- Streamlit-based web application
- File upload for job description and resumes
- Configuration options in sidebar
- Results displayed in interactive table
- Expandable LLM feedback sections

AIOps and MLOps Features

- Real-time metrics tracking
- Total processed resumes
- Average processing time
- Last processed timestamp
- Mock model retraining option
- Error logging

LLM Integration

- Optional GPT-3.5 feedback
- Secure API key handling
- Personalized feedback for each resume
- Error handling for API requests

Technical Stack

- Python 3.x
- Libraries: Streamlit, spaCy, PyPDF2, pandas, scikit-learn
- NLP: TF-IDF, Sentence Transformers
- API: OpenAI GPT-3.5
- Data visualization: Streamlit native components

Future Enhancements

- Improved entity recognition
- More advanced NLP techniques
- Integration with ATS systems
- Customizable scoring weights
- Enhanced visualization of resume matches