Documentation for Resume Matcher Project

Introduction

The Resume Matcher is a Python application that ranks resumes based on a given job description. The application Dependencies

The application uses the following Python packages:

csv: This module implements classes to read and write tabular data in CSV format. It allows programmers to sare: This module provides regular expression matching operations similar to those found in Perl. Both patterns a operator: The operator module exports a set of efficient functions corresponding to the intrinsic operators of Py sklearn.feature\_extraction.text.CountVectorizer: Convert a collection of text documents to a matrix of token consklearn.metrics.pairwise.cosine\_similarity: Compute cosine similarity between samples in X and Y. Cosine simplify: The Natural Language Toolkit, or more commonly NLTK, is a suite of libraries and programs for symbolic streamlit: Streamlit's open-source app framework is the easiest way for data scientists and machine learning exconcepts

The main concepts used in this application are:

Tokenization: This is the process of breaking down text into words, phrases, symbols, or other meaningful elen Stop Words: Stop words are a set of commonly used words in a language. Examples of stop words in English a Cosine Similarity: This is a measure of similarity between two non-zero vectors of an inner product space that a Code Explanation

The application is implemented as a Python class named ResumeMatcher. Here is a brief explanation of the match\_resumes\_from\_csv(self, csv\_file\_path): This method loads resume data from a CSV file. The data is store preprocess\_text(self, text): This method preprocesses the given text by tokenizing it, converting it to lowercase calculate\_cosine\_similarity(self, text1, text2): This method calculates the cosine similarity between text1 and tematch\_resume\_to\_requirements(self, resume, requirements\_text): This method calculates the suitability score rank\_candidates(self, requirements\_text, n): This method ranks the resumes based on their suitability scores for the application also includes a main function that uses the ResumeMatcher class to rank resumes based on a