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Automatic Cover Letter Generator

Project Description: (3-4 paragraphs)

In recruitment, many companies require candidates to submit cover letters along with job applications. However, in most cases, neither the candidate nor the recruiter gives careful consideration to the cover letter. Our project, the cover letter generator, is a tool which automatically generates cover letters, greatly reducing effort for the applicant.

Given the description of a company, its history and culture, a job listing which has requirements for candidates and the candidate's resume, the cover letter writer will produce a letter that is customized for the given candidate and company pair.

If time permits, we will extend our project so that the tool will only need the name of the company and its website url instead of the description. In this case, the tool will automatically search the website to identify the key characteristics and details about the company.

General Approach:

Our approach broadly consists of two parts. The first part is responsible for the processing of input information. Using a natural language processing library (NLTK by *Bird, Steven, Edward Loper and Ewan Klein*), analyze the input text, identify the key phrases related to the descriptions of the quality the company is looking for or the characteristic of the company, using training and NLTK to look for suitable adjectives to be used in the target cover letter.

The second part includes matching the extracted information with the skill sets of the user. During this part, using the algorithm again offered by NLTK, train a model that classifies extracted information from the previous part into predefined categories of characteristics to be matched with skills. Finally, the prepared information will be paraphrased to output the result cover letter.

Plan for Quantitative/Qualitative evaluation of the system: (Explicit, Coherent)

For the first version of the tool, our goal is to produce letters which are grammatically correct and relevant.

To qualitatively evaluate our system, we will ask at least 20 human participants to try the tool and rate the quality of the cover letter produced. With this data, we can judge the user satisfaction of using our tool.

We also plan to have recruiters or employers compare human written letters with our system generated letters. This data will help us determine the effectiveness of our system.

Timeline for implementation and evaluation:

Date	**Milestone to complete**
25th October	Setting Up Framework
4th November	Working Prototype
22nd November	Testing, Evaluation, fine-tuning