Project Proposal

COSC 4P02 Software Engineering II

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Problem

PRJ5: AI-Powered Resume Builder – As suggested by Professor in the project outline

Objective

This initiative seeks to build an AI driven online resume generation system which will enhance the work of users in creating refined, professional resumes best suited for a particular job role. By using AI algorithms, the system will study a user's educational background, working experience, skill sets and job requirements to help build a personalized resume. The application will provide several resume templates along with AI tools to optimize the content and resume downloads in multiple formats. Such an application will be suitable for anyone wanting to improve or tailor their resume including job applicants or professionals.

Importance

The project is significant because it helps individuals to develop high-quality resumes within the shortest time possible, customized according to a given job vacancy. Resume AI will optimize resumes to increase their chances of going through Applicant Tracking Systems (ATS) and impressing future employers. The features of this tool shall be divided into free services as well as premium ones so as to accommodate various categories of people. Free options will include rudimentary templates for CVs while paid options will enable better personalization, AI made suggestions and many download choices.

Description

The AI- Powered Resume Builder will have several key features which can assist users in creating professional and complex resumes:

1. Customizable Templates: The tool will offer customizable templates that are specific to industry. Users will select from a variety of template options based on their job sectors, making amendments as appropriate.

2. Step-by-Step Guide: The tool will offer guidance to the user through a structured input process for entering personal details, skills, work experience, and education. It also allows uploading existing resumes or LinkedIn profiles to auto-fill information faster.

3. AI-Powered Content Optimization: The AI will rephrase job descriptions into impact driven bullet points that are action-oriented. Moreover, it will suggest relevant skills, keywords and phrases so that the resumes match with job descriptions and ATS requirements. If users upload target job descriptions, the resume can be optimized by highlighting related qualifications and skills.

4. Resume Download & Dashboard: Resumes can be downloaded in different formats like PDF or Word for instance; they can also be saved in dashboard and later accessed for editing purposes easily.

As we progress with this project, additional features shall be introduced and pro version options refined so as to ensure it is valuable both for free and paid subscribers too.

Software Engineering Process

For this project, we will utilize the Agile-Scrum approach in our software engineering process. This approach allows us to split development into smaller portions (sprints), each one dedicated to constructing and improving the software gradually. Consequently, every sprint will have user stories that are equitably distributed among the developers so that no member is left idle or overwhelmed with work. The team will have regular meetings at least once every four days throughout the sprint whereby progress is reviewed, problems discussed and if necessary adjustments made on the overall project. During any given sprint closure retrospective sessions are conducted by our team to establish what went well, areas for improvement and planning for next sprints.

The tools that will be used include (but are not limited to):

IDEs: VSCode

Version Control: GitHub

Programming Languages: React (Frontend) and Node.js (Backend)

Database: OracleDB or PostgreDB

Open-source LLM: GPT-3 or GPT-4

Cloud Hosting/Deployment: Heroku or AWS

This process will ensure that we remain agile, meet project deadlines, and deliver a high-quality product.

Team Members

Team Member	Role
Rohit Pillai	Developer
Priyanshu Vora	Developer
Jenny Dobariya	Scrum Master
Harsh Kapoor	Developer
Neeti Pandya	Product Owner

Neeti Pandya and Jenny Dobariya will also work in the development team as there are only 5 members in the team.

Github Repository

https://github.com/RohittPillai/COSC-4P02-PROJECT

Meeting Schedules

Sprint Size - 2 weeks

Daily Scrum Meeting
After every 4 days at 5:15 pm (15-20 minutes) for progress and updates.

Sprint Retrospective Meetings:
15th January 2025
28th January 2025
10th February 2025
23rd February 2025
8th March 2025
21st March 2025
3rd April 2025

22nd February 2025 - Release Planning Document Submission
23rd February 2025 - 1st Progress Report
15th March 2025 - Meeting before 2nd report submission
22nd March 2025 - 2nd Progress Report

Contributions

So far, we have had first 2 meetings regarding the schedule and the allocation of roles of developer, scrum master and product owner. Rohit has set up the GitHub page which is being maintained by everyone. We have begun our design phase where we are designing the overall website.