**CS590 DEEP LEARNING PROJECT**

**RESUME BUILDER**

**REQUIREMENTS SPECIFICATIONS**

# INTRODUCTION

The Resume Builder project aims to generate resumes aligning a user's skills and experiences to a specific job description. This helps job applicants quickly customize resumes for different jobs, increasing their chances of getting a particular job.

The target end users of the system are Purdue University Fort Wayne (PFW) Career Development Center and PFW students looking for internships and jobs. This tool will not only digitize the Career Development Center’s resume writing service offered to students but also has the potential to increase the employability of PFW students as the job application process is simplified.

# REQUIREMENTS SPECIFICATIONS

## 2.1 FUNCTIONAL REQUIREMENTS

### 2.1.1 Must Have

#### **1. Resume Upload and Profile Management**

As a user, I want to upload my existing resume so that the system can extract my skills, experience, and qualifications to build a personalized profile.

#### **2. Job Description Analysis**

As a user, I want to upload or paste a job description so that the system can analyze the job requirements and identify the key skills and qualifications needed for the role.

#### **3. Skill Gap Analysis - Job Matching**

1. As a user, I want the system to identify any skill gaps between my profile and the job description so that I know what areas I need to improve.
2. As a user, I want the system to provide a score of how well I fit the job description so that I can know my chances of getting the job.
3. As a user, I want the system to provide a detailed explanation of the score that indicates how well I fit the job, including the key factors that contributed to the score, so that I can understand my strengths and areas for improvement with the job requirements.

#### **4. Resume Generation**

1. As a user, I want the system to generate a resume that aligns my skills and experiences with the job description so that my resume is tailored to the job I am applying for.
2. As a user, I want the generated resume to be formatted into key sections such as a summary, skills, experience, and education, so that it looks complete.
3. As a user, I want the system to prioritize and reorder my skills and experience based on the job description's requirements so that the most relevant information appears first.
4. As a user, I want the system to generate a one-page resume so that it meets US resume standards.

#### **5. Saving and Exporting**

As a user, I want to be able to save the generated resume in different formats (e.g., PDF, Word, plain text) so that I can submit it to various job applications.

#### **6. Feedback and Iteration**

As a user, I want to provide feedback on the generated resume’s quality and relevance so that the system can improve future suggestions.

#### **7. Resume Customization**

As a user, I want to edit the generated resume so that I can adjust and add any personal touches before submitting it.

### 2.1.2 Nice to Have

1. **Resume Generation**

1. As a user, I want the system to generate multiple versions of the resume with different layouts so that I can choose the one that suits my application best.

1. As a user, I want the system to compare the generated resume with the input resume so that I can verify that it has been enhanced.

**2. User Guidance and Support**

1. As a user, I want to receive tips and explanations on how the system generated the resume and matched my profile to the job description so that I understand the process and can make informed edits.
2. As a user, I want access to a help section or tutorial that guides me through using the system so that I can maximize its potential for my job applications.
3. **Security and Privacy**

As a user, I want my personal information, skills, and experience to be handled securely so that my data remains private and protected.

## 2.2 NON-FUNCTIONAL REQUIREMENTS

### 2.2.1 Must Have

#### **Performance**

1. As a user, I want the resume generation process to be completed within 10 seconds so that I don't have to wait long for the results.
2. As a user, I want the system to handle at least 10 concurrent users without performance degradation so that the service is reliable during peak times.

#### **Usability**

1. As a user, I want the user interface to be intuitive so that I can generate and customize resumes without needing technical knowledge.
2. As a user, I want clear and concise error messages so that I understand what went wrong and how to resolve it.

#### **Maintainability**

As a developer, I want the codebase to be well-documented so that future developers can easily understand and modify the system.

#### **Data Quality**

As a user, I want the extracted skills and experience data to be accurate so that the generated resume reflects my true qualifications.

### 2.2.2 Nice to Have

As a developer, I want the ability to integrate third-party services (e.g., LinkedIn API, Indeed, Job Portals) so that the system can be extended with additional capabilities.