

Team Name:**Team Members:**

- Shane Barrera
- Silas Rayes
- Celia Mercier

Project Name: "Résum-eh?"

Problem: The problem we are trying to solve is the time-consuming and challenging task of creating a tailored resume for a specific job. Many individuals struggle to highlight the most relevant information from their educational background, work experience, and skills when applying for different positions. Our goal is to automate this process and provide users with a program that generates a customized resume based on their input and the job listing.

Motivation: This is a problem because crafting an effective resume can significantly impact a candidate's chances of landing a job interview. Tailoring a resume to match the requirements and preferences of a particular job increases the likelihood of capturing the attention of employers and demonstrating suitability for the role. By automating this process, we aim to save users time and increase their chances of success in their job applications.

Features: We will know that we have solved the problem when the program successfully takes user input (desired job, educational background, previous work experience) and generates a resume that incorporates the relevant information. The program should effectively match the user's skills, education, and work experience with the job listing description, populating the template resume with the stored information. The final output should be a well-structured and professional-looking resume.

Data: Users will input their own information and the job posting they want to tailor their resume to. If we have time we will also implement a web scraper that finds relevant job postings for the user as well.

Tools:

- Programming Languages: C++, Python
- Data Collection and Processing: Web scraping tools like BeautifulSoup
- APIs: We can use the ChatGPT API to write the final resume once our data structures have been used to pick out the relevant keywords.

Visuals: We plan to design a user-friendly interface where users can input their desired job, educational background, and work experience. The program will display a template resume populated with the relevant information.

Resume Generator

User Input	Desired Resume Style
User's Name	STEM Resume Format
Desired Job	Humanities Resume Format
College Experience	Project Inclusive Resume Format
Year Graduated	Visuals Inclusive Resume Format
Prior Positions Held	
Skills	

Generate!

Potential User Design

ALBERTA GATOR

Address | Email | Phone Number | LinkedIn URL

EDUCATION

Bachelor of Science in Industrial & Systems Engineering December 2020
University of Florida, Gainesville, FL
Minor: Business Administration
GPA: 3.0/4.0

Osnabrück University of Applied Sciences August 2016
UF Study Abroad Program, Osnabrück, Germany

EXPERIENCE

Field Services Intern May 2018 – July 2018
General Electric Transportation Division, Kansas City, KS

- Reduced inventory in account service warehouses through computation of parts usage
- Coordinated with internal and external suppliers to ensure availability of parts for service kits
- Negotiated price and buying terms with domestic and international suppliers
- Streamlined part selection process through implementation of QR codes

Supply Chain Co-Op May 2017 – August 2017
GE Appliances, a Haier Company, Trenton, NJ

- Developed cost-effective solutions to address ergonomic problems
- Analyzed cost data history to identify potential savings and to eliminate manufacturing waste
- Managed design team to ensure solutions were implemented in a timely manner

Undergraduate Research Intern August 2016 – December 2016
UF Transportation Institute, Gainesville, FL

- Programmed code to help optimize automated car movement
- Reviewed dissertations to understand principles behind automated vehicles
- Demonstrated initiative by self-teaching Java programming through various resources

INVOLVEMENT

Student Assistant, UF/IFAS Dean for Research Office January 2017 – Present
Gainesville, FL

- Part-time job working 20-25 hours/weekly as a student assistant in an administrative dean's office
- Organized and maintained financial records for multiple offices
- Supported deans with project management to better administer research programs

Vice President of Scholarship May 2016 – April 2017
Phi Sigma Rho, University of Florida, Gainesville, FL

- Planned a diverse range of scholarship events to build an alumni foundation and expand networking opportunities for members
- Appointed and managed activities of multiple chair positions to oversee event details and effective communication

Potential Design for Output:

Program may output a **plaintext Word document** that can be further formatted and customized by user while still including the key words that make the user stand out

Strategy: We will implement preliminary algorithms and data structures to achieve the desired functionality. Some possible approaches include:

- Storing the words used in a job posting and ranking them by relevance.
- Storing personal information in data structures like **unordered maps** (key-value pairs) for efficient retrieval and comparison.
- Utilizing **tree structures** to compare user information with scraped job posting data, ensuring relevant information is matched effectively. Possibly a **trie**, or another tree structure, however we will finalize such soon.

Distribution of Responsibility and Roles:

Name	Implementation	Deliverables	Product
Shane	Parsing user input; unordered maps data structure	Unordered_map test cases, graphics to utilize for finalized demo	Netlify an open-source interactive demo for users to test; edit a professional, finalized demo video

Silas	All the Python coding including a web scraper if we decide to implement that; chat GPT API implementation	Python graphics	Code review, refinement, and overall leadership amongst the process
Celia	Sorting keywords by importance and finding logical places to implement them in the resume	Examining data in tree structure and comparing speed and functionality	Try to make the resume more ready to use by adding formatting and visuals to the different possible templates

Goal Priority: The following is a priority list that we are using as guidance toward our developmental time frame.

1. Personal information
2. Input job listing
3. Output resume information
4. Tailor resume into a downloadable word document
5. Create a UI online to allow users to utilize