### ResuFit:

# **Precision CV Matching System**



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# Supervised by:

Eng: Reham Mohamed Kamal

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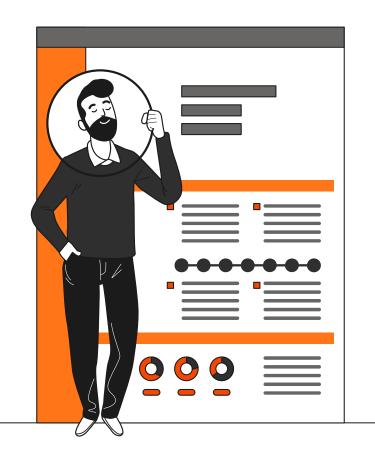
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## Introduction





### ResuFit

ResuFit is an applicant tracking system that manages and streamline the recruitment process. ResuFit improves the efficiency of the recruitment process, reduces time-to-hire, and enhances the overall candidate experience.

### • The Applicant Tracking System market: [1]

20%

70%

**75%** 

94%



Of small and

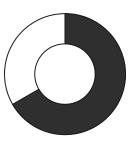
mid-sized

businesses

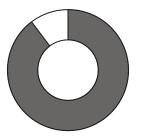
currently use

an ATS.

 Of large companies currently use an ATS



 Of recruiters use an ATS or another tech-driven recruiting tool to review applicants and strengthen the overall candidate experience



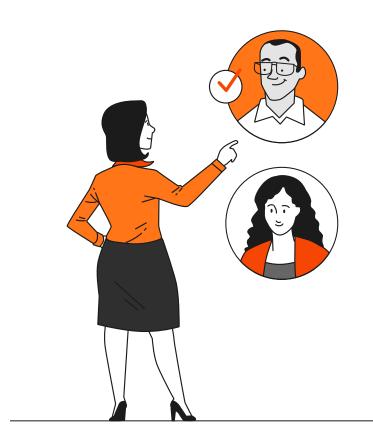
 Of recruiters agree that their ATS has had a positive impact on their organization's hiring processes

# Problem Statement

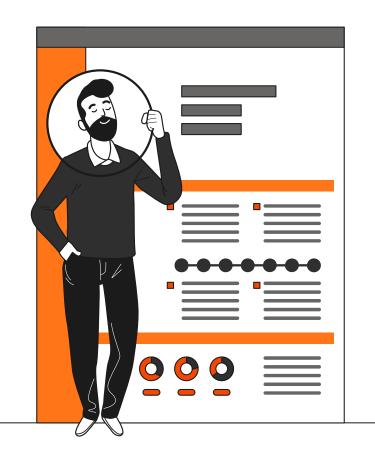


### It's a big problem..

Traditional recruitment processes involving manual resume screening and paper-based workflows lead to inefficiencies and delays in the hiring process. These challenges can result in missed opportunities and suboptimal candidate experiences.



# **Objectives**

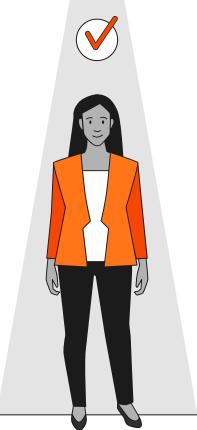


### **Our Goals**

- ResuFit aims to streamline the hiring process by providing a platform for quick applicant CV submission, parsing, and review.
- Integrate this system with the HR module using the Odoo ERP system.

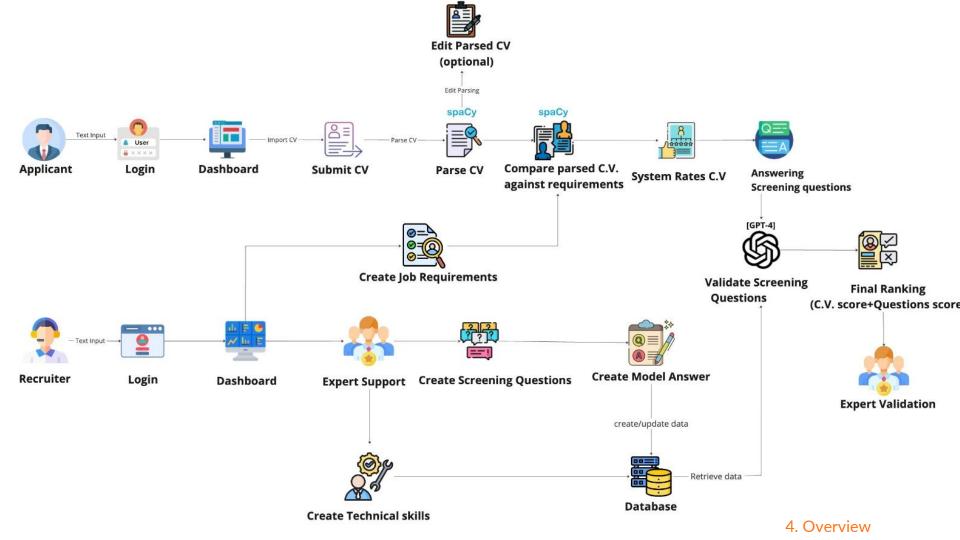


- Reduce manual efforts in the applicant assessment process so that recruiters may concentrate on strategic decision-making rather than routine tasks.
- Recruiters will be able to find applicants whose resumes closely match the job vacancies by using the cosine and Jaccard similarity methods, which provides an objective CV ranking.

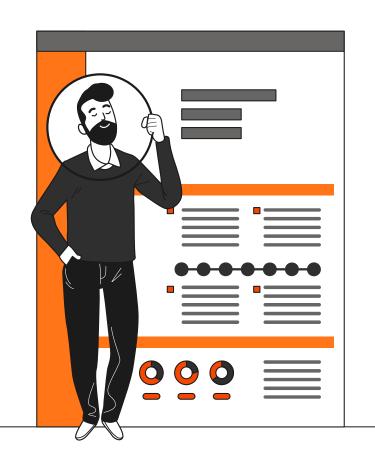


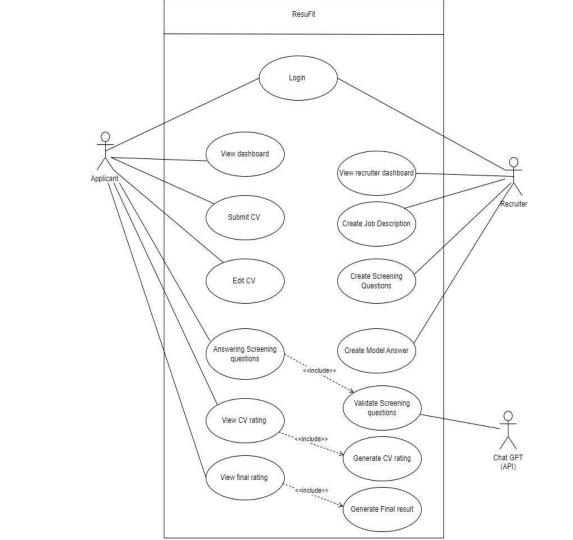
# System Overview



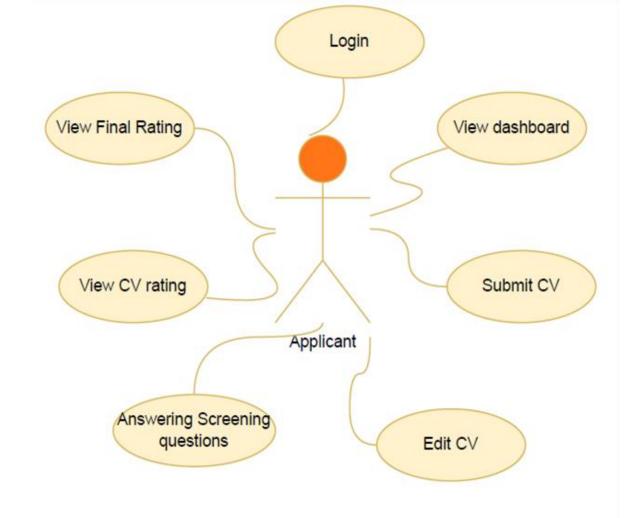


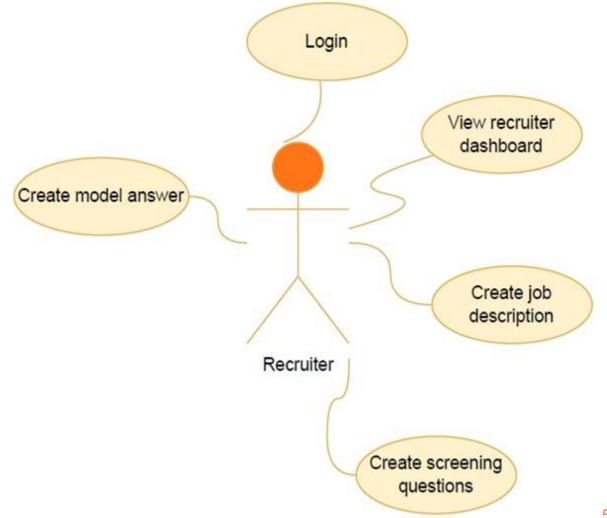
# Use-Case Diagram

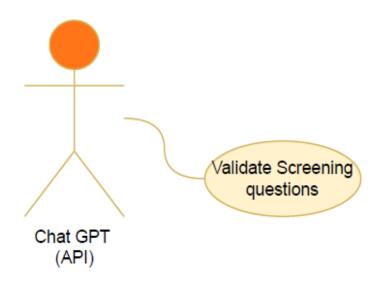




5.1. Use-Case Diagram







# Functional Requirements



Name:	Parsing CV	
Code:	Fn7	A L
Priority:	Extreme	
Critical:	Submit CV	
Description:	Extracts keywords from the CV using SpaCy.	
Input:	CV	
Output:	Parsed CV	
Pre-condition:	Submit CV	
Post-condition:	None	
Dependency:	Fn3	
Risk:	Lack of context understanding	6.1. Functional Req.

Name:	<u>CV Ranking</u>	
Code:	Fn8	
Priority:	Extreme	
Critical:	Parsed CV	
Description:	CV gets ranked using methods of similarities	
Input:	Parsed CV	
Output:	Ranked CV	
Pre-condition:	CV gets parsed	
Post-condition:	None	
Dependency:	Fn 7	
Risk:	None	6.2. Functional Req.

Name:	<u>Create screening questions</u>	?
Code:	Fn6	
Priority:	Extreme	
Critical:	Open screening questions	
Description:	The recruiter will create a screening question.	
Input:	Questions, key answers	
Output:	Final rating (CV score + Questions Score)	
Pre-condition:	CV ranking	
Post-condition:	Final rating	
Dependency:	Fn5	
Risk:	None	6.3. Functional Req.

# Non-Functional Requirements





ResuFit should be up and running 99.9% of the time with scheduled down-time that is communicated to applicants and recruiters in advance.

### **Scalability:**

The database must be designed to grow along with the volume of CVs and assessment data that are gathered.



### **Performance:**

ResuFit must support at least 100 concurrent applicants without exhibiting a discernible decrease in performance.

### **Security:**

Encrypting all data communications, including CV submissions and validation results, requires the use of industry-standard protocols.

### **Usability:**

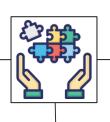
The user interface must be easy to use and give applicants and recruiters clear instructions and help.

### **Integration:**

Resufit ought to have the ability to interface with external services, such as ChatGPT, to verify the screening questions

### **Privacy:**

To guarantee the confidentiality of applicants, CVs, and evaluation data, the system needs to adhere to data protection regulations.







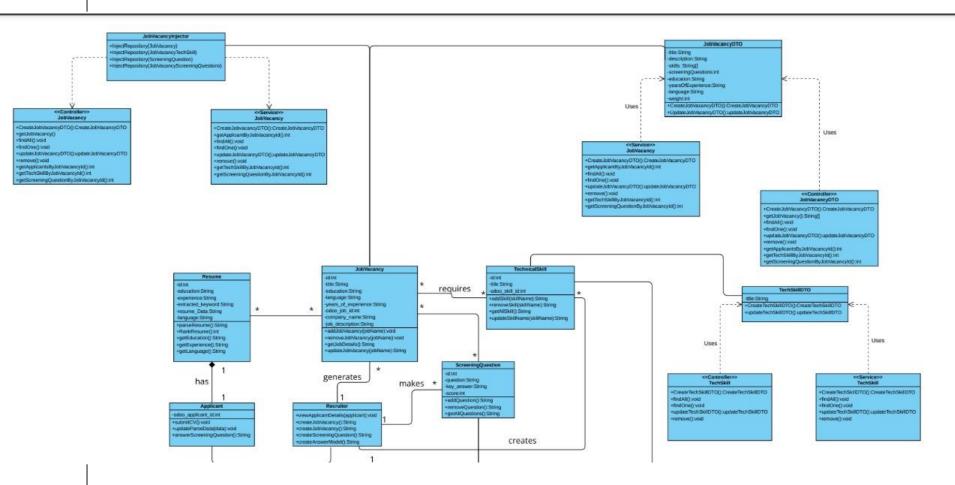
Code should be modular, follow best practices for coding, and have extensive documentation to facilitate maintenance.

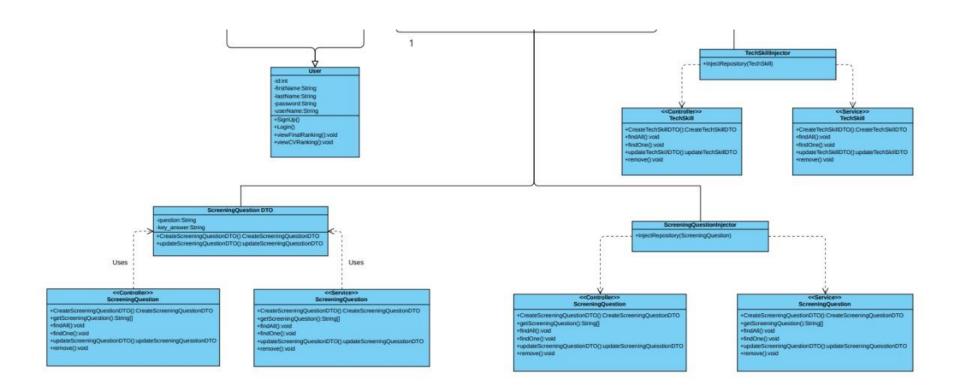
### **Compatibility:**

The majority of web browsers, including Edge, Firefox, Safari, and Chrome, ought to work with the system.

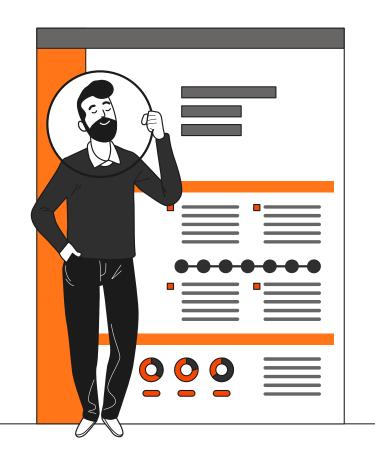
# Class Diagram

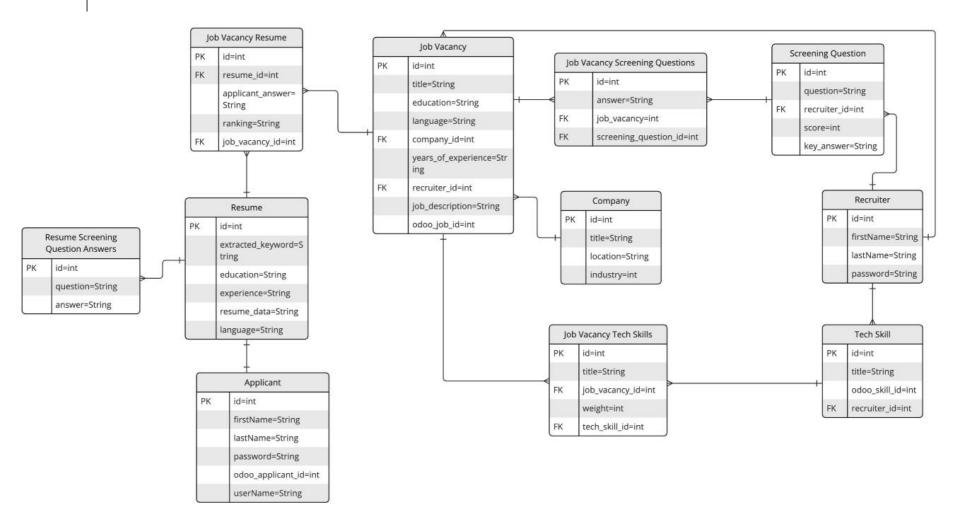






# **Data Design**





9.1 Data Design

### **Our Dataset:**

• Our used dataset, is 32 CVs collected from a company.





### **User Interface**



€ RESUFIT root LOGOUT

### Welcome Admin 🕏

JOB SCREENING QUESTION TECHNICAL SKILL

+ NEW JOB

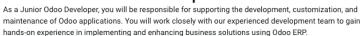
Odoo Junior Developer

Python Developer

Java Developer

CSS Developer

### Odoo Junior Developer 🗸

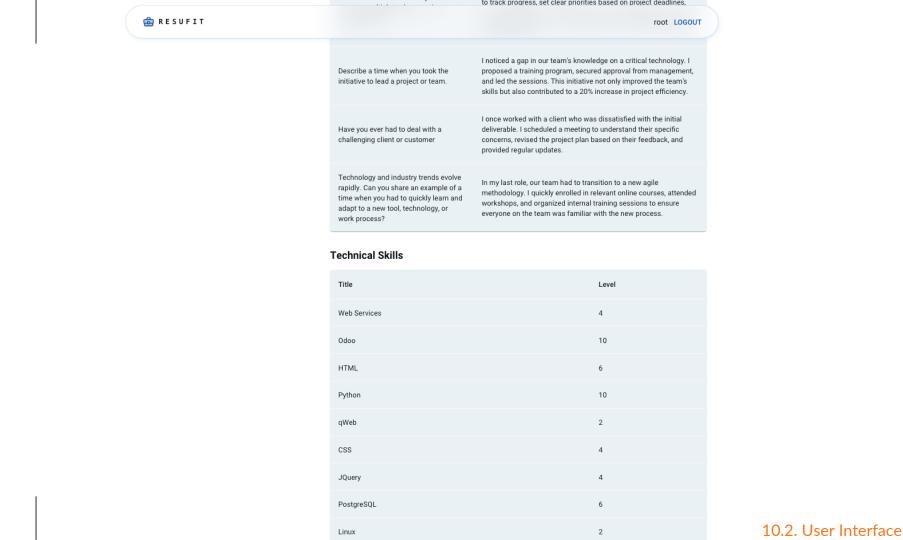


#### Applicants

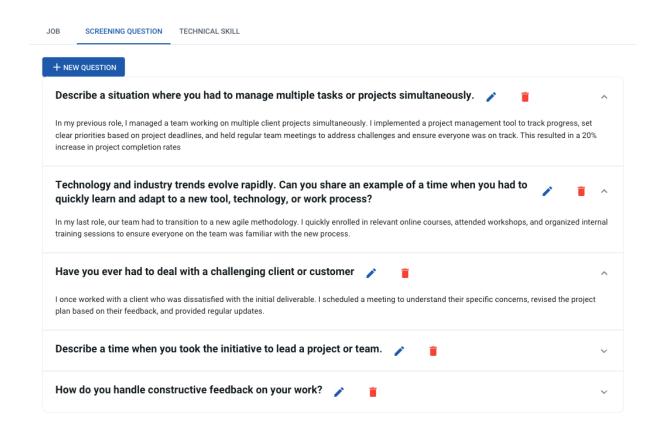
Name	Email	Phone Number	Rating
sara mohamed	sara@gmail.com	01115586868	****
Youssef gamal el din	youssef@gmail.com	01116671234	****

#### **Screening Questions**

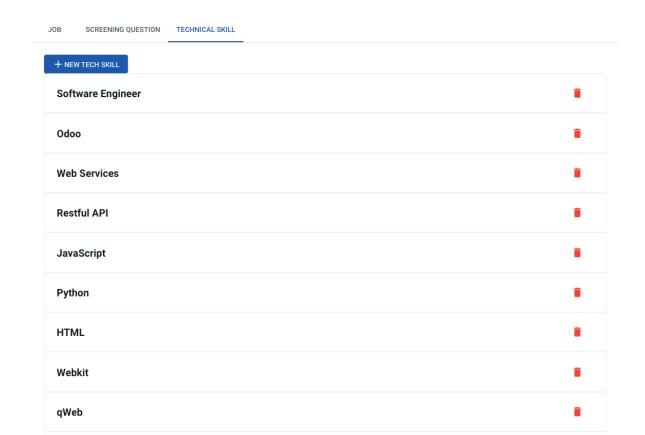
Question	Key Answer
How do you handle constructive feedback on your work?	I welcome feedback as an opportunity for growth. In a recent project review, I received feedback on the user interface design. I took the suggestions to heart, collaborated with the design team, and implemented changes that not only addressed the feedback but also enhanced the overall user experience.
Describe a situation where you had to manage multiple tasks or projects simultaneously.	In my previous role, I managed a team working on multiple client projects simultaneously. I implemented a project management tool to track progress, set clear priorities based on project deadlines, and held regular team meetings to address challenges and ensure everyone was on track. This resulted in a 20% increase in project completion rates



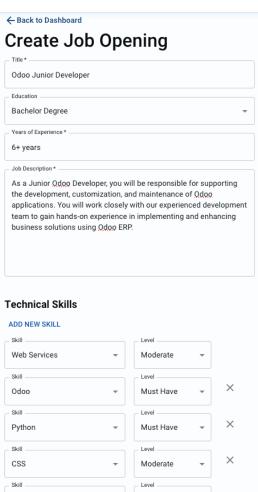
### Welcome Admin 🕏



### Welcome Admin 🕏



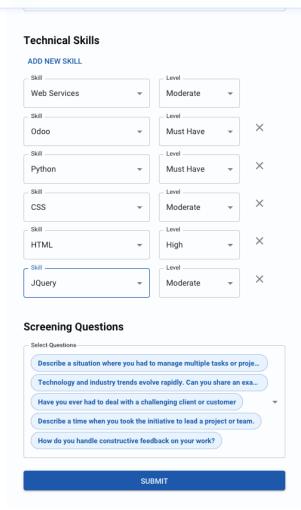
RESUFIT root LOGOUT



High

HTML

₫ RESUFIT root LOGOUT





### **Job Vacancies**

#### **Odoo Junior Developer**

As a Junior Odoo Developer, you will be responsible for supporting the development, customization, and maintenance of Odoo applications. You will work closely with our experienced development team to gain hands-on experience in implementing and enhan...

APPLY NOW

#### Java Developer

Qualifications: Proven experience as a Full-Stack Web Developer or similar role. Strong organizational and project management skills. Proficiency in fundamental front-end languages such as HTML, CSS, and JavaScript. Familiarity with JavaScript frame...

APPLY NOW

#### **Python Developer**

We are seeking a skilled and dynamic Python Developer to join our team. The ideal candidate will have a strong background in software development, with a deep understanding in Python programming. You will be responsible for developing and enhancing v...

APPLY NOW

### **CSS Developer**

We are seeking a motivated CSS/Computer Science Undergraduate Intern to join our [specific department, e.g., web development, software engineering] team. This position offers the opportunity to work on exciting projects and contribute to the developm...

APPLY NOW

🖨 ResuFit

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Job Opportunity

### **Odoo Junior Developer**

As a Junior Odoo Developer, you will be responsible for supporting the development, customization, and maintenance of Odoo applications. You will work closely with our experienced development team to gain hands-on experience in implementing and enhancing business solutions using Odoo ERP.

#### Candidate Name Youssef gamal el din

#### Personal Details

youssef@gmail.com

Phone Number \* — 01116671234

#### **Education and Qualifications**

Experience \* 5+ years

Education\*
bachelor computer science

english

#### Resume (C.V.)



Click to change selected file Selected File: Youssef Gamaleldin.pdf

### Additional Questions

How do you handle constructive feedback on your work?

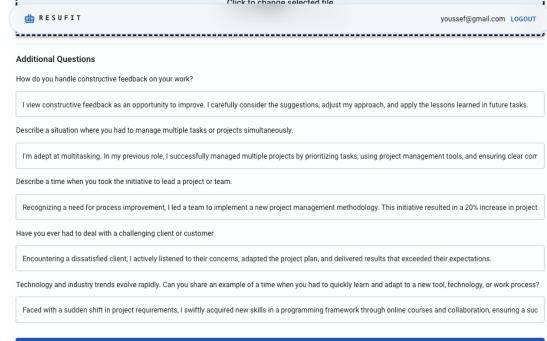
I view constructive feedback as an opportunity to improve. I carefully consider the suggestions, adjust my approach, and apply the lessons learned in future tasks.

Describe a situation where you had to manage multiple tasks or projects simultaneously.

I'm adept at multitasking. In my previous role, I successfully managed multiple projects by prioritizing tasks, using project management tools, and ensuring clear com

Describe a time when you took the initiative to lead a project or team.

Recognizing a need for process improvement, I led a team to implement a new project management methodology. This initiative resulted in a 20% increase in project



APPLY

Resufit Company

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Phone: +1 234 567 8901

### **Ranking Against Job Required**



Good effort! 🎇 You've achieved a 60% match in your CV against the job requirements, which is a solid foundation. There's potential for growth, and with a bit more hard work to refine and enhance your CV, you can increase your alignment with the job's demands. Focus on areas where you can demonstrate more relevant skills, experiences, or qualifications. Keep striving for the best match possible!

CONTINUE

### **Demo**



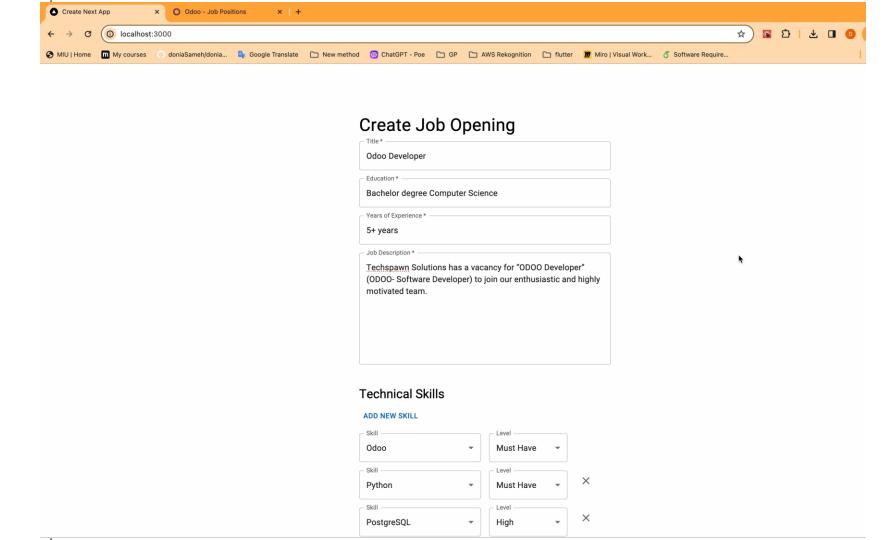
```
for jd_word in job_keywords:
           js_word_lower = jd_word.lower()
           jd_word_results = []
           jd_word_results_filtered = []
           jd_word_nlp = nlp(js_word_lower)
           if jd_word_nlp.vector.any():
               for resume_word in resume_keywords_lower:
                   resume_word_nlp = nlp(resume_word)
                   if resume word nlp.has vector:
                       similarity = np.dot(jd_word_nlp.vector, resume_word_nlp.vector) / (np.linalg.norm(jd_word_nlp.vector) * np.linalg.norm(resume_word_nlp.vector))
                       jd_word_results.append(similarity)
                       jd_word_results.append(0)
               for result in jd_word_results:
                   if result >= 0.8:
                       jd_word_results_filtered.append(result)
                       jd_word_results_filtered.append(0)
               result = max(jd_word_results_filtered)
               print("Max for " + js_word_lower + ": " + str(result))
               results.append(result)
               results weighted.append(result * job keywords[jd word])
               if js_word_lower in resume_keywords_lower:
                  print("Word found! " + js_word_lower)
                   results.append(1)
                   results_weighted.append(1 * job_keywords[jd_word])
                  print("Word not found! " + js_word_lower)
                   results.append(0)
                  results_weighted.append(0)
                   results_weighted.append(0 * job_keywords[jd_word])
           total_weights += job_keywords[jd_word]
       print(results_weighted)
       return round((sum(results_weighted) / (len(results) + total_weights)) * 100, 2)
BLEMS OUTPUT DEBUG CONSOLE TERMINAL
d not found! gweb
.0, 10, 1.0000001192092896, 0.8651658892631531, 0.8787528276443481, 0, 0, 0]
############ Resume with Match: /Resume-Mohannad's CV.pdf.json
```

def similarity\_match(job\_keywords, resume\_keywords):

Match percentage based on Keywords: 71.07% 🗸

resume\_keywords\_lower = set([word.lower() for word in resume\_keywords])

results = []
results\_weighted = []
total\_weights = 0



### • References:

[1] Miroslava Peicheva. "Data analysis from the applicant tracking system". In: Choveshki Resur. Tehnol.HR Technol. Creat. Space Assoc 2 (2022), pp. 6–15.



Thank you;>