

#opentowork

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Background

- **Problem:** Bob wants a job! But not sure where to start.
- **Goal:** Improve the job searching experience and opportunity of getting hired based on individual-tailored resume
- **Solution:**
 - A tool to calculate how well a resume matches a job listing and the number of matching skills
 - A web app that demonstrates match scores with job information and includes a dashboard for job application tracking

Data Used

- **Data Sources:** uploaded resumes & scraped job listings
 - Scraped data-related jobs from LinkedIn & Indeed
 - Extracted skills from resumes and job descriptions
 - Used resumes and job descriptions to calculate match score
- **Limitations:**
 - Scraping can be unstable and time-consuming
 - Currently only supports one resume at a time

Use Cases – Bob



Bob is our job seeker!

How will Bob use #opentowork?

Apply to Matching Jobs

1. Bob: uploads his resume
2. *System*: displays jobs, skills, the match scores, and skill match details
3. Bob: checks that his dream job matches well with his resume
4. Bob: clicks "Apply" to apply on LinkedIn/Indeed

Analyze & Update Skills

1. Bob: uploads his resume
2. *System*: displays extracted skills
3. Bob: adds or deletes skills
4. *System*: updates skill match details for job listings




Design

Web Scraper

- Scrapes job listings from LinkedIn and Indeed
- Saves listing data in a csv file
- Runs upon user request using a button on the web app

Resume/Job Description Skill Analyzer

- Extracts skill keywords from resumes/job descriptions using Spacy and json file of data-related skills
 - Shown on web app for each resume
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Design

Match Score Generator

- Computes resume and job description vector embeddings with SentenceTransformer
- Calculates a cosine similarity score between resume and job description embeddings
- Shows score as a rounded percentage on web app

Web App Interface

- Allows for resume upload and adding skill in the extracted skill set
- Displays job listings, match percentages, and skill matches
- Users can trigger web scraper to update job listings using button
- Users can click the link for external applications and track them by clicking "I applied!" button

Lessons Learned & Future Work

- **Lessons Learned:**

- Collaborative development requires effective communication (resolve merge conflicts)
- Prioritizing tasks is essential (especially with hard deadlines)

- **Future Work:**

- Adding profiles to allow for comparison of resumes and saving dashboards
- User dashboards with resume analysis
- Allow for filtering on employer sponsorship policy
- Allow users to input links for specific jobs of interest

Demo

Open To Work

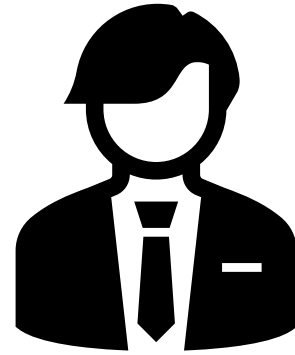
Upload your resume



Drag and drop file here

Limit 200MB per file • PDF

Browse files



Thank you!