



rebound

Team



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*Computational
Mathematics*



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Business



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Psychology



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Computer Science



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Statistics



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Cognitive Science



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Data Theory and Economics



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USC, Mentor

The Problem

1.5M > 616K

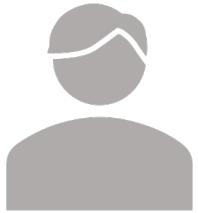
Job Losses in LA County as of
July 2020

Low-Income Job Losses in LA County
since March 2020



While websites like LinkedIn exist for those who wish to find high-earning jobs such as technology, there is **no existing solution focused on those who work lower earning jobs**, such as retail. These workers are just as valued in our society and deserve to have a solution to address their specific needs. COVID-19 has impacted job losses disproportionately, with the **largest impact on low-income individuals who generally work lower-earning jobs**.

The Problem



Greg, 20

Student and Retail Employee

“Losing my job because of the coronavirus pandemic was really hard. I count on that money to help pay for my expenses in college. I was really stressed out looking for a new job because I felt like there wasn’t really a resource out there that made it easy for me to find one.”

“I’m a preschool teacher, so when the pandemic hit and our school closed down, I got really scared. I wanted to find a temporary job that would help me make money until schools opened up again but didn’t know where to start. I honestly don’t know what job I could do either.”



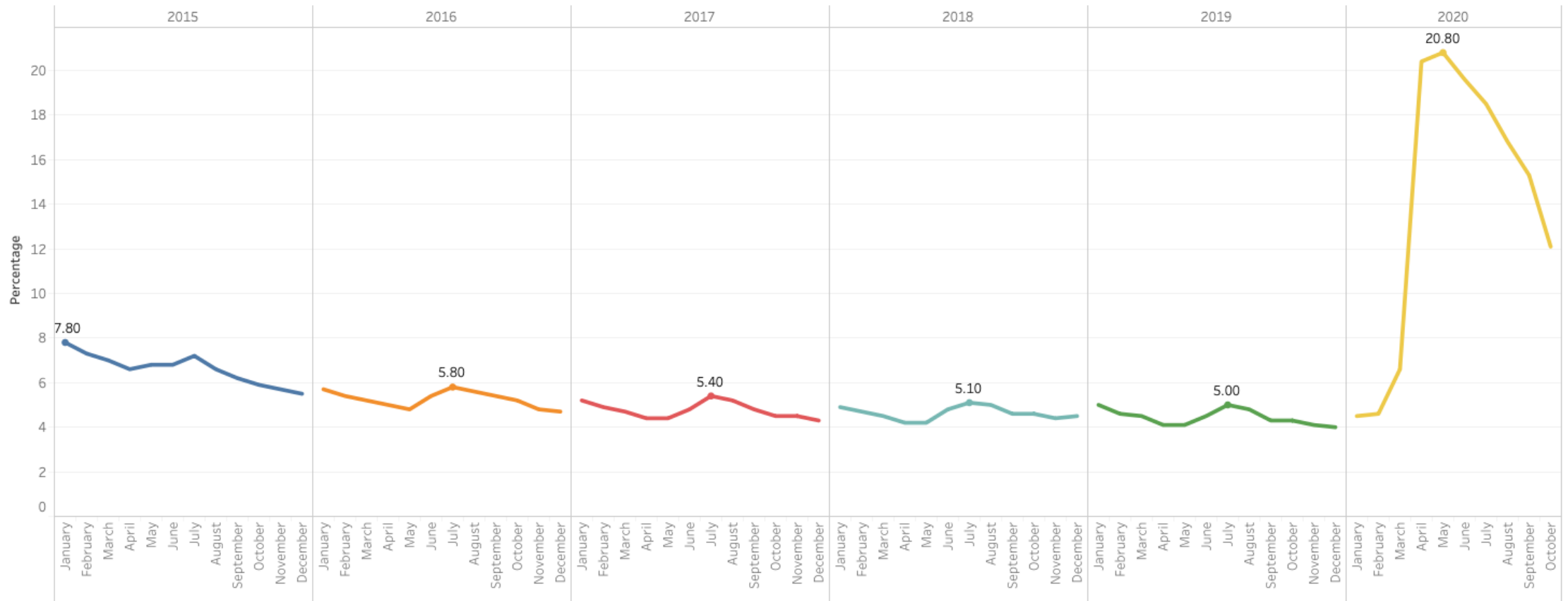
Madeline, 36

Preschool Teacher

The Problem

The unemployment rate in LA County has greatly increased due to the pandemic. The maximum unemployment rate in 2020 is over 4x greater than in 2019.

Unemployment Rate in Los Angeles County since 2015

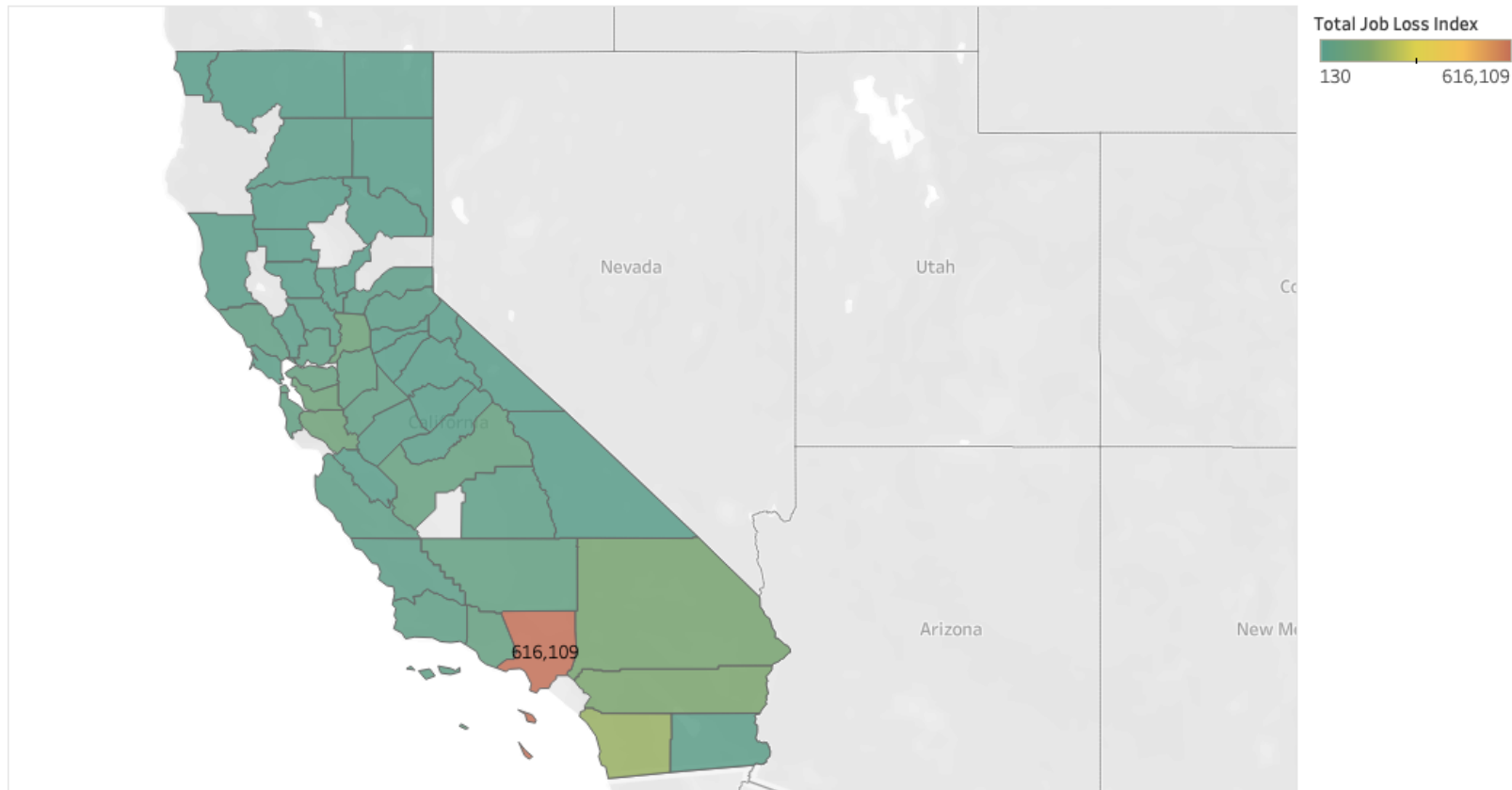


Source: Federal Reserve Bank

The Problem

Within California, **low-income job losses estimates are highest in LA County**, with a total of 616,109 . Unemployment rates for LA as of Oct. 2020 were at around 12%, a significant difference from Oct. 2019 when the unemployment rate was 4.3%.

COVID-19 Low Income (<\$40,000 salary) Job Loss Estimates

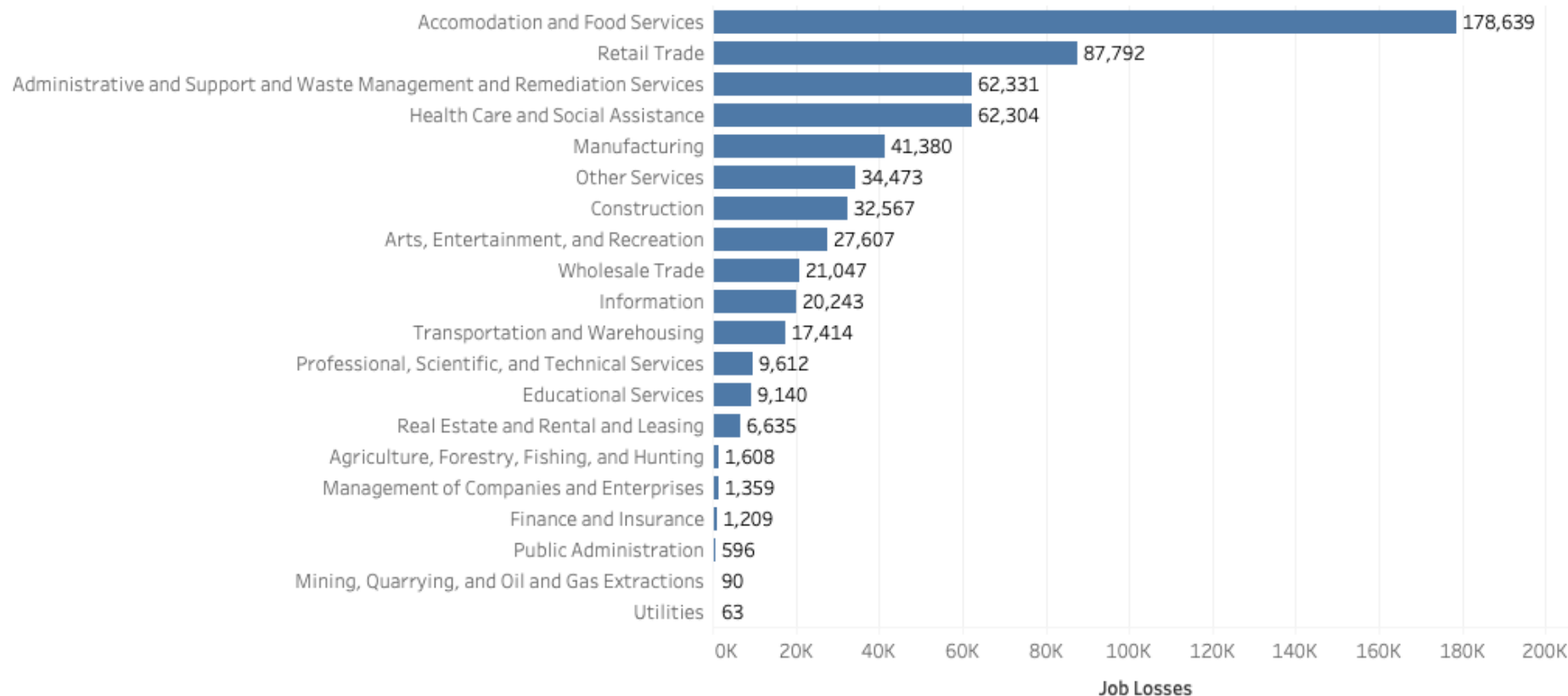


Source: OpenData

The Problem

The industries that have been hardest hit by the pandemic are those that have high numbers of **low-wage workers**, such as retail trade.

COVID-19 Low Income (<\$40,000 salary) Job Loss Estimates for LA County by Industry



Source: OpenData

Our Solution

1

Upload their resume, and using our ML algorithm our website generates a score that matches them to the top three overall jobs we think are best suited for them.

2

Explore their top three industries if they are looking to change career paths, and give them job matches within those specific industries.

3

Look at their compatibility score index to see what skills they could use to make them more appealing candidates.

4

Find a job in an be an easy and efficient way, those affected by COVID-19 will be able to find jobs in a stress-free and relaxing manner.

Relieve some of the stress that surrounds job hunting, especially with the pandemic

Find a job that best suits their skills and provides comfort in the long-term

Our Solution



About

Employers

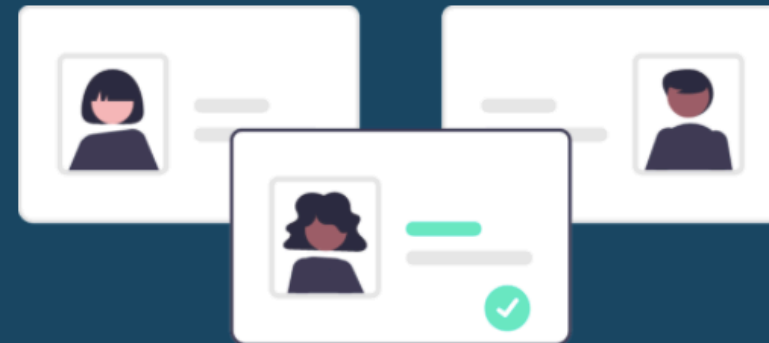
Login

Find the best job match to your skills

With our machine learning algorithm, we match your resume with job openings most similar to your skillset.

Upload Resume

For Employers



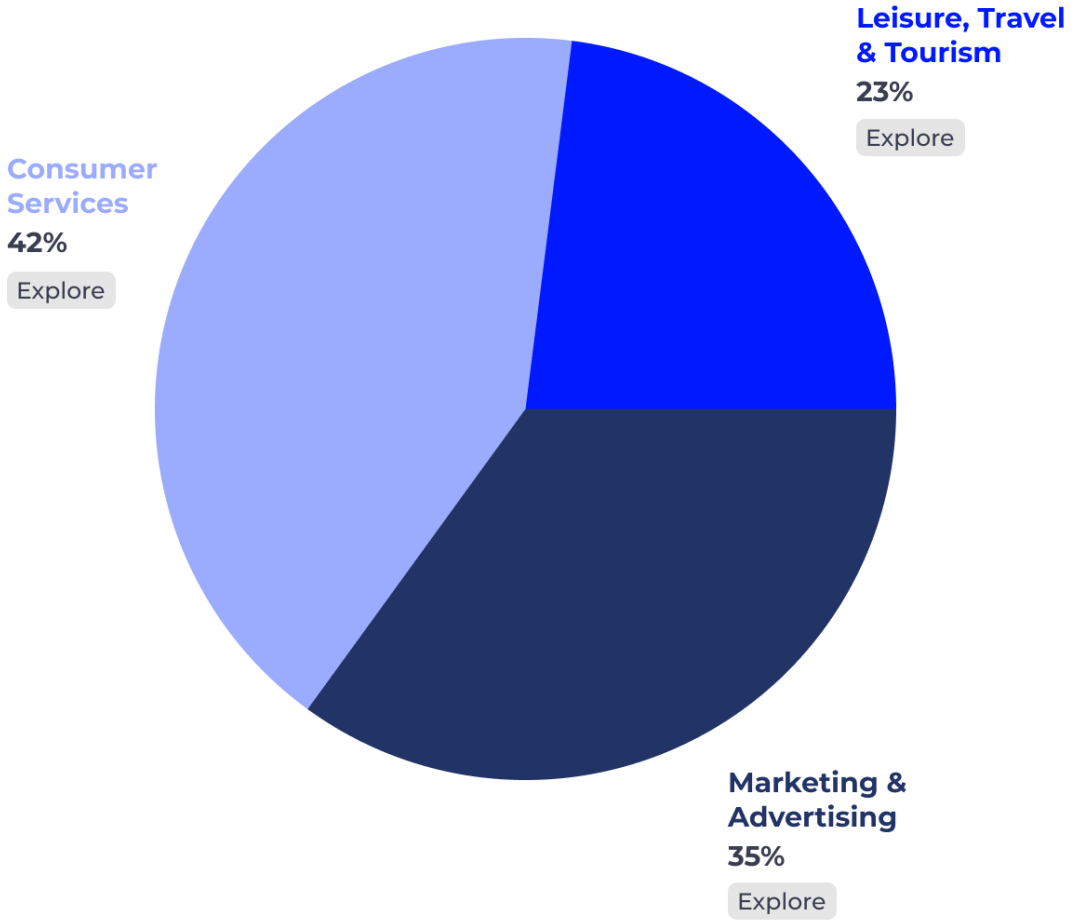
Multiple Industries

98% Accuracy

100% Satisfaction

<https://reboundjobs.github.io/>

Our Solution



Our Solution



[About](#)

[Employers](#)

[Login](#)

Welcome, Employers

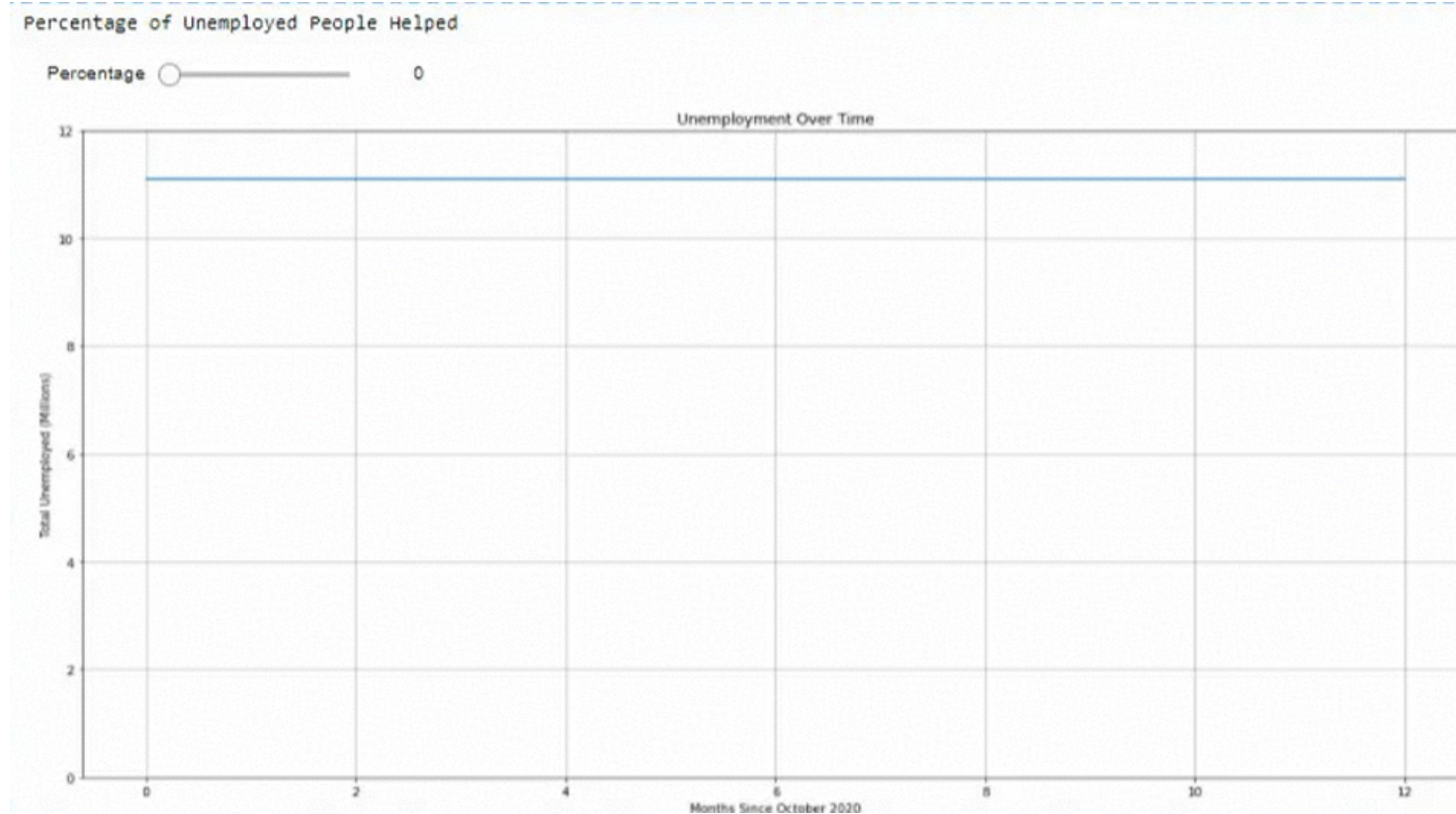
We're sure you'll find the best candidate for your company!

[Upload Job Posting](#)

[Submit](#)

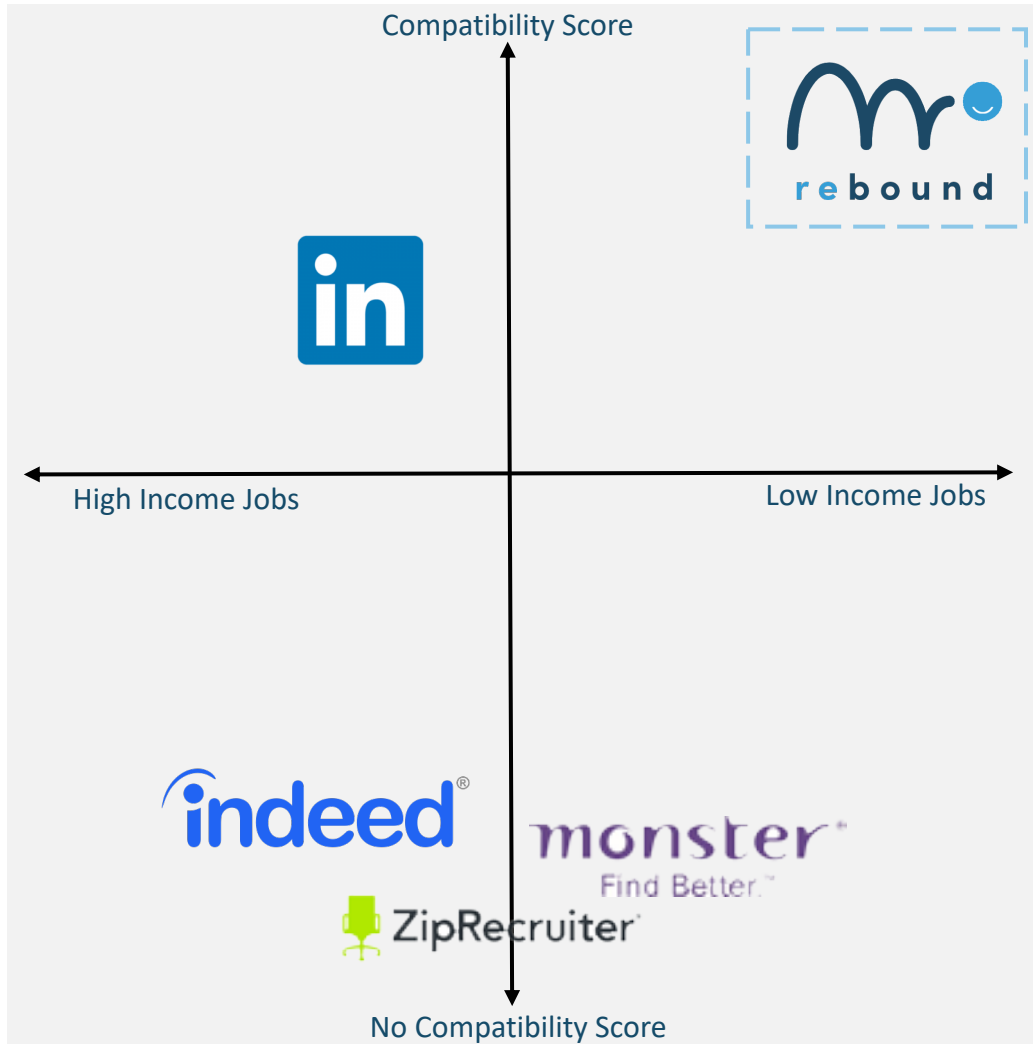


Our Social Impact



Our solution will help low-income individuals find jobs, helping **decrease the overall unemployment rate** over time.

Competition



Strength

With a **niche focus on low-income earning sectors**, we are better able to serve this target market's needs, especially with the use of our AI/ML software to help low-income individuals grow professionally.

Weakness

Since we are less established than our competitors, we will **have fewer job postings** initially as well as **lower brand recognition**.

Opportunities

Expanding our **AI/ML software** to help people with their **career pivots** beyond just a few industries and jobs. We can also leverage AI/ML to provide **recommendations to up-skill**.

Threats

There are many competitors in the market with high brand recognition and trust/reputation. These **established competitors** have the resources to launch a product focused on low-income sectors.

Competition

Features	Rebound	LinkedIn	Indeed	ZipRecruiter	Monster.com
Low-Income Focused	<p>5</p> <p>Targets low-income job sectors and helps people find jobs within these industries</p>	<p>2</p> <p>Has opportunities in low-income jobs but does not focus on that</p>	<p>3</p> <p>Has opportunities for low-income jobs but does not focus on them</p>	<p>3</p> <p>Has opportunities for low-income jobs but does not focus on them</p>	<p>3</p> <p>Has opportunities for low-income jobs but does not focus on them</p>
Job Compatibility Score	<p>5</p> <p>Matches resume skills with job description and gives a score on how fit you are for the job</p>	<p>4</p> <p>Tells you if you are a good fit for the role based on LI profile and not based on resume</p>	<p>0</p>	<p>0</p>	<p>0</p>
Predictive	<p>5</p> <p>Uses AI/ML technology to parse through resume and help in navigating career</p>	<p>5</p> <p>Compares your skills with others who have applied and tells you where you stand</p>	<p>0</p>	<p>0</p>	<p>0</p>
Career Change Recommendations	<p>5</p> <p>Advises what other industries you can pivot to, based on your skills</p>	<p>4</p> <p>Allows networking with various industry professionals if you are looking to change careers</p>	<p>1</p> <p>You can find other industry job descriptions and what skills they are looking for</p>	<p>1</p> <p>You can find other industry job descriptions and what skills they are looking for</p>	<p>1</p> <p>You can find other industry job descriptions and what skills they are looking for</p>

Business Model



Grants

Relevant federal and non-federal (e.g. foundations) that support employment and workforce training initiatives



Charitable Contributions

Private donations from individuals through online donation tools such as Fundly and Facebook, using social media to raise awareness



Corporate Philanthropy and Partnerships

Investments from corporate partners with aligned missions through philanthropic contributions and partnerships

Marketing & Growth



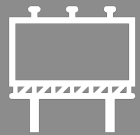
1 >

Partnerships

Partner with corporation(s) to post new jobs on Rebound, requiring individuals to submit their applications through us. Partner with workforce development programs to recommend Rebound.



**DRESS FOR
SUCCESS**

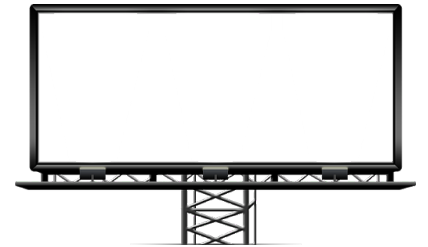


2 >

Advertising

To reach wide audiences, use advertising across various channels, such as digital, billboards, and TV/streaming.

hulu



3 >

Social Media

Leverage social networks to spread awareness, including both social media and strong communities.



Timeline

Goals	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
1. Post Product Launch						
15 views of product						
10% increase in website views						
20 users using our product to apply for jobs						
15% increase in engagement with our product						
2. Company Partnership						
Reach out to 10 potential partners						
Pitch solution to potential partners						
Partner with a potential client such as Indeed						

Data Sources



1

In the beginning...

We used utilized example resumes and job listings from online resources to train and build our models. Sources include Kaggle, Bureau of Labor Statistics, OpenData, Federal Reserve Bank.



2

As our website grows...

As users enter their resume and job listing data into our website to receive their compatibility scores, we can securely anonymize their information and use the data to continuously improve our model.



3

In the end...

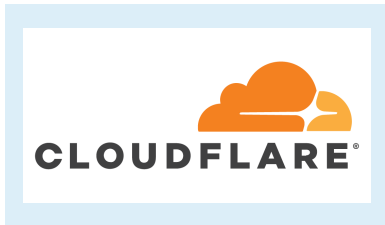
We hope to form partnerships (e.g. Indeed) to access job listing data or post native job listings on our site. We will continue to improve our Machine Learning models as we have access to job listings from more and more industries.

Cyber Security



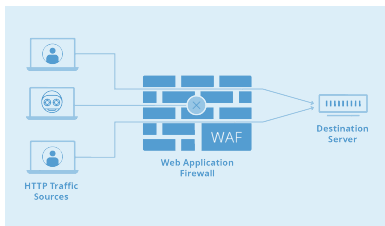
Anonymous Processing

- Regex is currently removing phone numbers and emails before we upload to database
- Avoids sensitive information data leaks



Cloudflare Security Product

- \$200 a month, Cloudflare Business Plan
- Handles Rebound's security and performance



Web Application Firewall

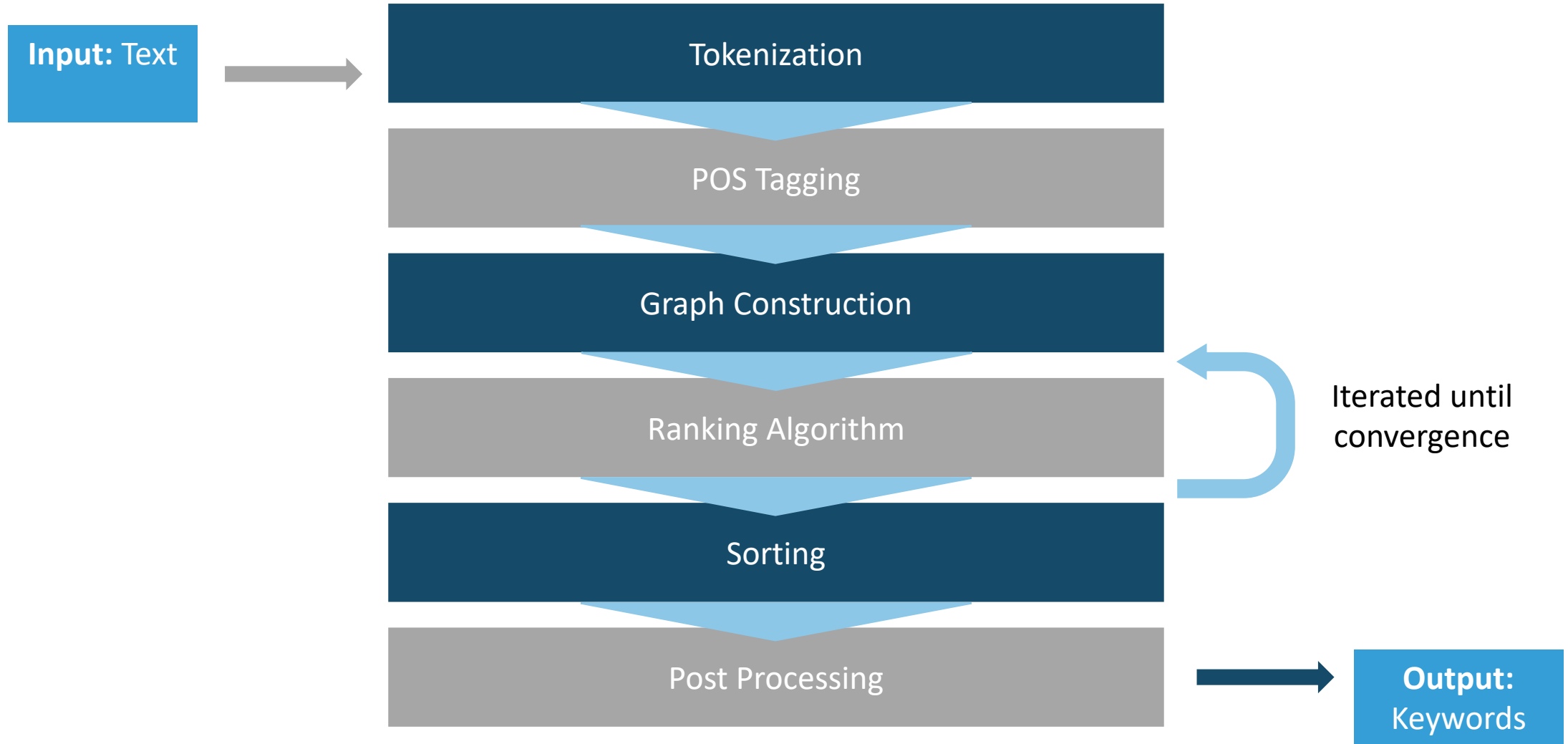
- Cloudflare's WAF acts as a shield between the internet and Rebound
- Clients pass through the WAF before they can access the server
- Protection against cross-site forgery, cross-site scripting, file inclusion, and SQL injection



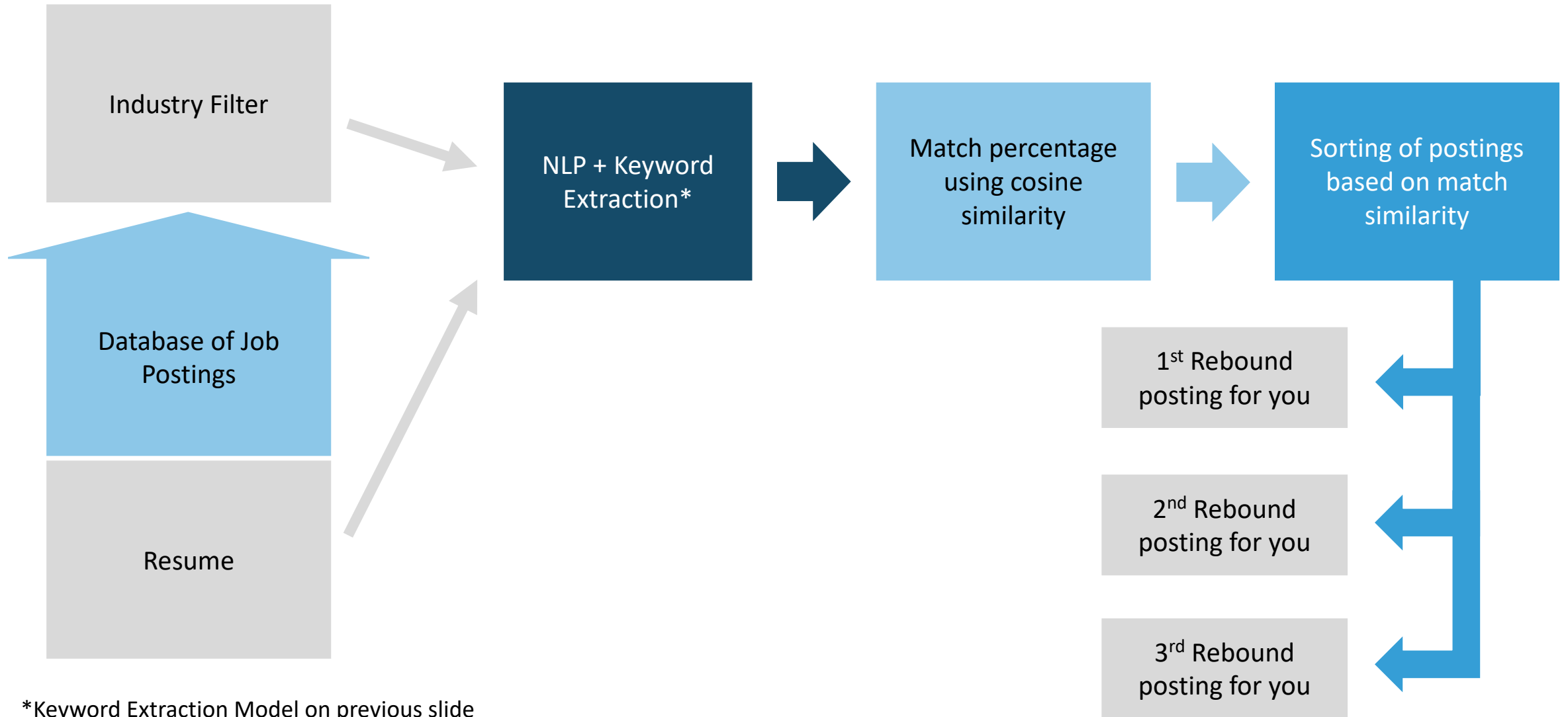
Free SSL Certificate and Custom Uploading

- Cloudflare provides free SSL certificates and protection
- Establishes an encrypted link between servers and user's browser
- Ensures all data transferred remains private

Keyword Extraction Model (TextRank)

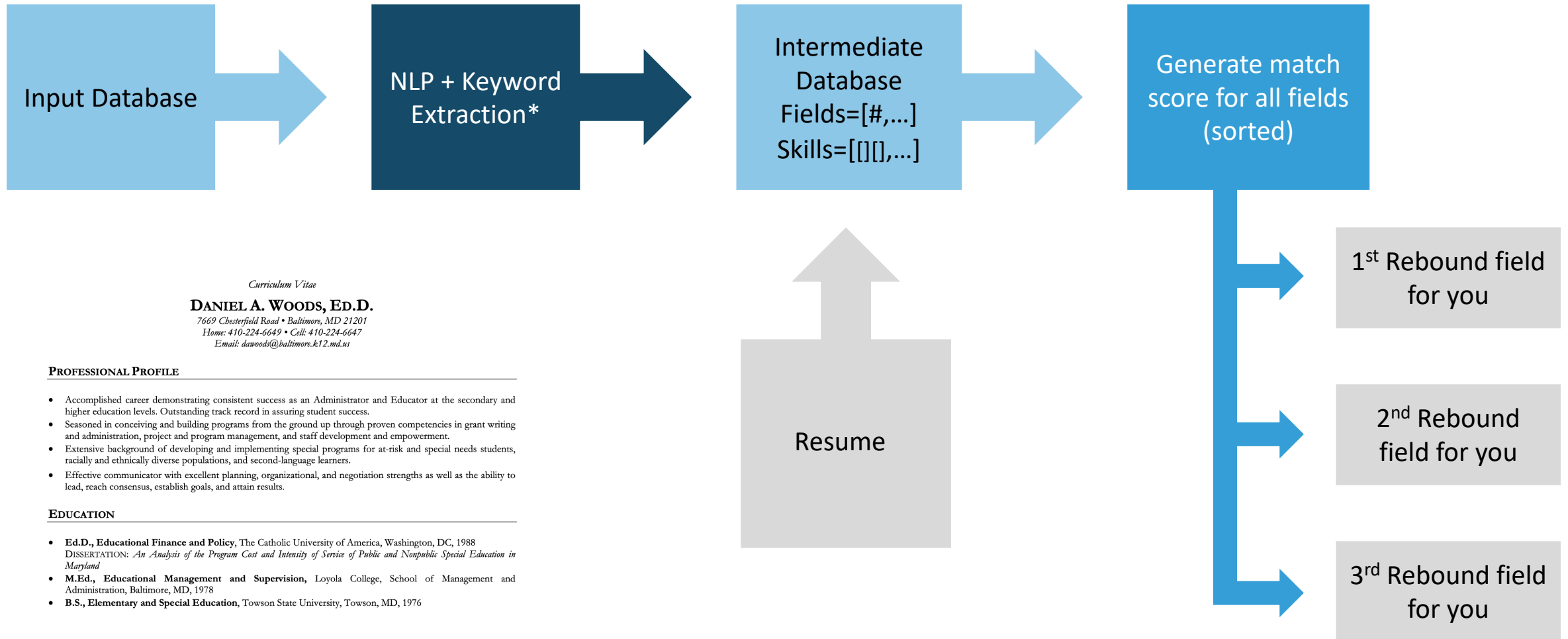


Job Matching High-Level Architecture



*Keyword Extraction Model on previous slide

Industry Suggestions High-Level Architecture



Curriculum Vitae

DANIEL A. WOODS, ED.D.

7669 Chesterfield Road • Baltimore, MD 21201
Home: 410-224-6649 • Cell: 410-224-6647
Email: dawoods@baltimore.k12.md.us

PROFESSIONAL PROFILE

- Accomplished career demonstrating consistent success as an Administrator and Educator at the secondary and higher education levels. Outstanding track record in assuring student success.
- Seasoned in conceiving and building programs from the ground up through proven competencies in grant writing and administration, project and program management, and staff development and empowerment.
- Extensive background of developing and implementing special programs for at-risk and special needs students, racially and ethnically diverse populations, and second-language learners.
- Effective communicator with excellent planning, organizational, and negotiation strengths as well as the ability to lead, reach consensus, establish goals, and attain results.

EDUCATION

- **Ed.D., Educational Finance and Policy**, The Catholic University of America, Washington, DC, 1988
DISSERTATION: *An Analysis of the Program Cost and Intensity of Service of Public and Nonpublic Special Education in Maryland*
- **M.Ed., Educational Management and Supervision**, Loyola College, School of Management and Administration, Baltimore, MD, 1978
- **B.S., Elementary and Special Education**, Towson State University, Towson, MD, 1976

*Keyword Extraction Model two slides prior

Database Input

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1		job_id	title	location	department	salary_range	company_pr	description	requirement	benefits	telecommuti	has_compan	has_questio	employment	required_exp	required_edu	industry
2		7636	7637	Scrum Master/Web Development Proj	US, ,		Project Management	352 Inc. is a	We are not a	Qualification	What Youll C	0	1	1	Full-time		Bachelor's Degree
3		16262	16263	SAS Tech Lead	US, CT, Hartford			e-Solutions I	->TITLE:SAS	Requirements: Candidate must be experienced working in projects involving SAS Other ideal qualifications include							
4		10188	10189	Manufacturing Technician	NZ, N, Auckl	45000-60000	Engineering	PowerbyProx	PowerbyProx	experiences in: SAS (Base SAS /SAS EG) Teradata Understands where to obtain information needed to make the							
5		17017	17018	Escrow Processor	US, FL, Orlando			Network Clo	Seeking a top	appropriate decisions Demonstrates ability to break down a problem to manageable pieces and implement effective,							
6		17660	17661	Data Entry Admin/Clerical Positions -	US, LA, Kenner				ACCEPTING (timely solutions Identifies the problem versus the symptom Manages problems that require involvement of others to							
7		1384	1385	Dry Dock Forklift Operator - Full Time	US, CA, Mod	26000-30000	Dry Dock	With over 30	Job Title: Dry	solve Reaches sound decisions quickly Carefully evaluates alternative risks and solutions before taking action->t							
8		10394	10395	General Clerk 1 - Call Center Agent	US, DC, Washington			Novitex Ente	We are curre	Optimizes the use of all available resources Develops solutions to meet business needs that reflect a clear							
9		4177	4178	Team & Executive Assistant	DE, BE, Berli		Engineering	Babbel enab	We are looki	understanding of the objectives, practices and procedures of the corporation, department and business unitSkills: The							
10		6104	6105	SharePoint Developer / System Admin	GR, I, Athens			ALBA Gradu	Candidates f	Candidate must have 7-9 yrs of experience in SAS especially in the DW/BI area. Must have 4-5 years total experience							
11		15141	15142	Marketing / Journalist Intern	NZ, N, Auckland			Blender Desi	We are seek	on Base SAS 9.3/SAS EG 5.1 Experience in design, development and deployment of BI solutions using SAS/BASE,							
12		11030	11031	Studio Sr. Visual Designer	US, CA, Manhattan Beach			The Boston C	BACKGROUND	SAS/MACRO, SAS/GRAPH, SAS/DI STUDIO Design, develop and execute SAS/BASE, SAS/MACRO programs 5.Must							
13		5464	5465	Inbound Marketer/Growth Hacker	CA, BC, Vanc		Marketing	Pardon Servi	Pardon Servi	have experience on role based security set up Good Knowledge in data management and transformation of data using							
14		12349	12350	Frontend Web Developer	FI, , Helsinki			Seamless so	A growing er	data Step, SAS procedures and Proc SQL Candidate must have Excellent data analysis and co-ordination skills. 4-year							
15		738	739	Human Resources (HR) Manager	US, IA, Des Moines	55000-75000		Executive se	We are recru	degree in a related field (or equivalent experience) Experience working within a highly-matrixed organization Strong							
16		9677	9678	Receptionist - 10 hours a week	GB, CMD, Lo		Facilities	Forward3D is	Role: Recept	communication and presentation skills							
17		13244	13245	Senior Account Executive - Embedded	US, CA, Sant		Sales	Neusoft Ame	This high per	Duties and R Neusoft emp	0	1	0	Full-time	Mid-Senior le	Bachelor's D	Computer Sc
18		14555	14556	Java/J2EE Developer (Weblogic, Web	BE, , Brussels			EUROPEAN I	We currently	Your skills:M Our offer: If	0	1	0	Full-time	Associate	Bachelor's D	Computer Sc
19		8225	8226	Junior Python Developer	GB, , London		Line-Up	Playfair Capi	Who were lo	Skills and ex About UsLine	0	1	0	Full-time	Associate	Bachelor's D	Internet
20		11390	11391	Registered Nurse	GB, DND, Du		Nursing Staff	Priority Care	Meigle Coun	You will be e Priority Rewa	0	1	1	Full-time	Not Applicab	Unspecified	Hospital & H
21		1027	1028	Financial Controller	PK, IS, Islam		abad		Position: ->F	Experience of ->Large->ta	0	0	1				
22		9752	9753	Finance & Admin Coordinator	CA, ON, Toro		Finance	Vend is looki	Just in case t	To kick ass a What can yo	0	1	1	Full-time	Associate		Computer Sc

Future Growth and Opportunities

1

Use **Amazon Web Services** to improve the maintenance and distribution of our data and model

2

Customize the experience of employers and job seekers so that inputs into the model will be in line with our model

3

Partner with job site(s) such as Indeed to maximize job listings and employers found within our database

4

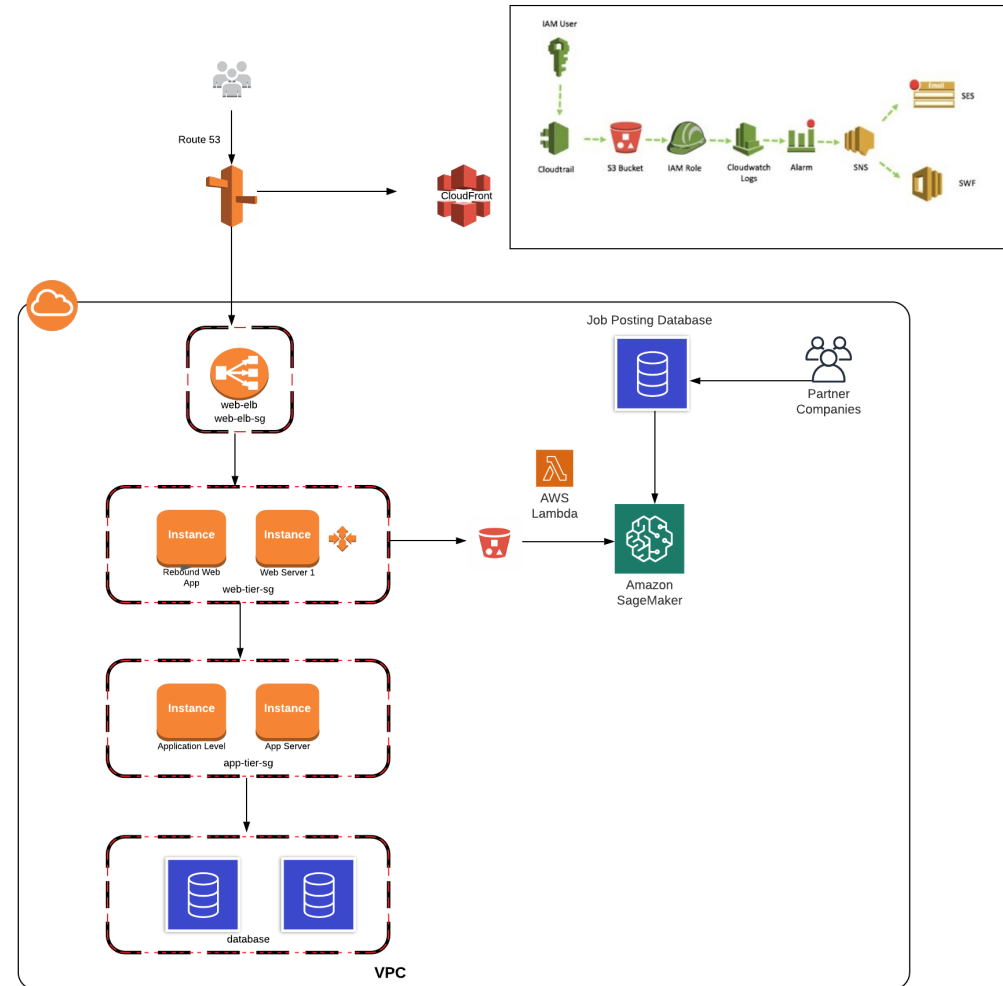
Analytics for success rates based on hired clients for jobs from the site, taking their scores to determine what a "good score" is

5

Enhancing the model to **extract thematic and contextual information** from the resumes to improve industry suggestions

Future State Architecture

Future State Model



Q&A

Appendix

Data Sources:

-<https://www.kaggle.com/shivamb/real-or-fake-fake-jobposting-prediction/version/1>

-<https://www.bls.gov/ces/>

-<https://opendata.imspx.org/dataset/estimated-low-income-jobs-lost-to-covid-19>

-<https://fred.stlouisfed.org/series/CALOSA7URN>