A PROJECT REPORT

ON

"JOBVERZ - A SKILL ANALYTICS PLATFORM"

FOR

"MULTIVERZ"

BY

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Abstract

Jobverz is an online platform where the user can find the relevant skills to get recruited into his dream job within the time span. It also maps the user skill proficiency with demand. If the user is unclear about the path, then he can explore the trending job titles based on his skill set. The user authentication is carried out with the help of AWS amplify and Cognito. The user details are stored in AWS S3 with the help of Amplify.

Keywords: Jobs, Skills, AWS - Amplify, Cognito, S3

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Introduction

Problem Statement.

Develop an online platform where the user can find the relevant skills to get recruited into his dream job within the time span. If the user is unclear about the path, then he should be able to explore the trending job titles based on his skill set.

Project Objective.

The main objective of this platform is to create a jobverz portal for the users who are more focused for a skill-based job. This feature is mainly helpful for the Individuals, Employees/Company and Governments.

Technologies

Frontend : React JS

Tools : HTML, CSS, Bootstrap 5.0, Javascript

Backend : AWS Amplify, Cognito, S3, Lambda

Code Versioning Systems: Git and GitHub

UI Design : Adobe Xd

AWS Amplify is a set of tools and services that can be used together or on their own, to help front-end web and mobile developers build scalable full stack applications, powered by AWS. With Amplify, you can configure app backends and connect your app in minutes, deploy static web apps in a few clicks, and easily manage app content outside the AWS console.
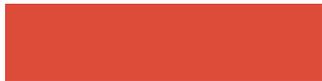
Design Language System

1. CSS Framework:

   ● Bootstrap 5.0

2. Social buttons colors

   ● Facebook - #3b5998

   ● Google -   #dd4b39

   ● LinkedIn - #0077b5

3. Fonts

Century Gothic	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890.,:;"!?"@%*&'$
Gotham HTF Book	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890.,:;"!?"@%*&'$
Open Sans	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz 1234567890.,:;"!?"@%*&'$

4. Headers and Sizing

Heading 1	44px / 48px
Heading 2	36px / 45px
Heading 3	28px / 35px
Heading 4	20px / 25px
Body	16px / 24px
Button & Meta	14px / 24px

5. Paragraphs
   ● The default body text is 16px.

Project Description

Sprint 1

Developed the Landing page where the user has to choose between Individual/ Government/ Company, so that the user can use those particular credentials to Sign up/Sign in pages. Developed the Sign In page where the user can enter his email address and password to login to Jobverz website. The user can also login with his social accounts like Facebook and Google. User can also reset his password by clicking the forget password link which redirects him to the Reset Password page where he has to enter his registered email id. Developed the Sign Up page with input validation where the user will input first name, last name, password, email address, and phone number. Alternatively the user can also create an account with Facebook or Google accounts. Developed dashboard where the user can see the insights about relevant skills for his chosen job title.

Sprint 2

The user now receives a code to reset his password in his email when he clicks on send email in the Reset password page. Creating a new page called Forget password. The user enters the code that is sent to his mail, along with his login credentials to reset his password. Documented cost plan for AWS Amplify and Cognito. AWS Amplify handles user registration, authentication, account recovery & other related operations, User private data storage into AWS S3. Implemented authentication for Google (social login). Implemented authentication for Facebook (social login)..

Sprint 3

Created a Developer app and got the access token. Successfully extract details such as First name, Last name and photo. Used two node libraries namely pdf parser and word parser to extract text from pdf and word file that is stored locally. Used pdf reader to convert the data in a pdf file to text format which is uploaded in the website. Using the file reader module to get the information in the pdf file to display in text format. Developed   aspiration UI where user will select his preferred job title from the autocomplete field and can select time span from dropdown field. We were able to update the job titles with the given JSON file. Now it is made possible to access data regarding job titles from skills taxonomy API to load it in the autocomplete field. Developed a Qualification/Work Experience page where the user can enter his educational details and work experience.

Sprint 4

Created a bucket in AWS S3 and able to upload any format Resume/CV into the AWS S3 bucket. Completely redesigning the UI of the Jobverz website in Adobe XD. Undergone research on how NLP(natural language processing) and Fuzzywuzzy algorithms can be used for processing the data and extracting them from a pdf file. Also used third-party libraries like resume-parser and pyreparser. Able to make a good try using NLP for skills extraction with 70-80% of accuracy.

Sprint 5

Made a research to understand Digital Credentials through a paper published by MIT on Digital credentials. As part of the research we studied Interoperable learner records. Later on we gathered information about issuing, sharing, storage, and verification of digital credentials from a white paper on I.L.R published in September 2019 by American workforce. In addition to that we also researched Learning and Employment Records from the T3 Innovation Hub, and Velocity website.

Sprint 6

In this sprint we developed a Skill graph page UI where the user can drag the skill chips into graph according to user proficiency, so that the skill chips will automatically get adjusted according to skill demand.Then we used npm Typeahead module to implement autocomplete search bar and also added functionality of directly adding skill buttons when selected from dropdown. At the same time our team researched the feasibility of the digital wallets by velocity for storing the digital credentials and verification. We were able to find Microsoft Azure has approached the concept of storing digital credentials but yet to build a full fledged service provider. We also found AyanWorks has come up with an idea for decentralised digital identity. At the same time we conducted a parallel study on LERHub and various resources in IMS Global standards to implement digital credentials in jobverz. Then based on resources and information we made the conclusion that digital IMS global is not reliable since they are still not providing a reliable resource to store and verify digital credentials.

Sprint 7

Gathering data about certifying, sharing, and verifying digital credentials by Digitary. Research on how to store user details in a private AWS S3 bucket using Amplify storage.At the same time developed Steps to Goal UI and the user profile UI where the user can fill in their personal details which includes about/bio, education, work experience, skills, and hobbies.In addition to that the user can also add social accounts like Github, LinkedIN, Google.

Future Enhancements

Show visualization about trending job titles when the user clicks on the Explore button. The user must be able to search for highly desired job skills in a particular company. Resume parsing of data with all the skills , education, work experience.

Conclusion

The purpose and objective of the Jobverz project is achieved. By providing extremely rich
graphical user interface, the user can navigate through the website with ease. Able to display required skills for the selected job title thus giving a guideline for users on which skills to pick up in future.

This is the preview of the Landing page
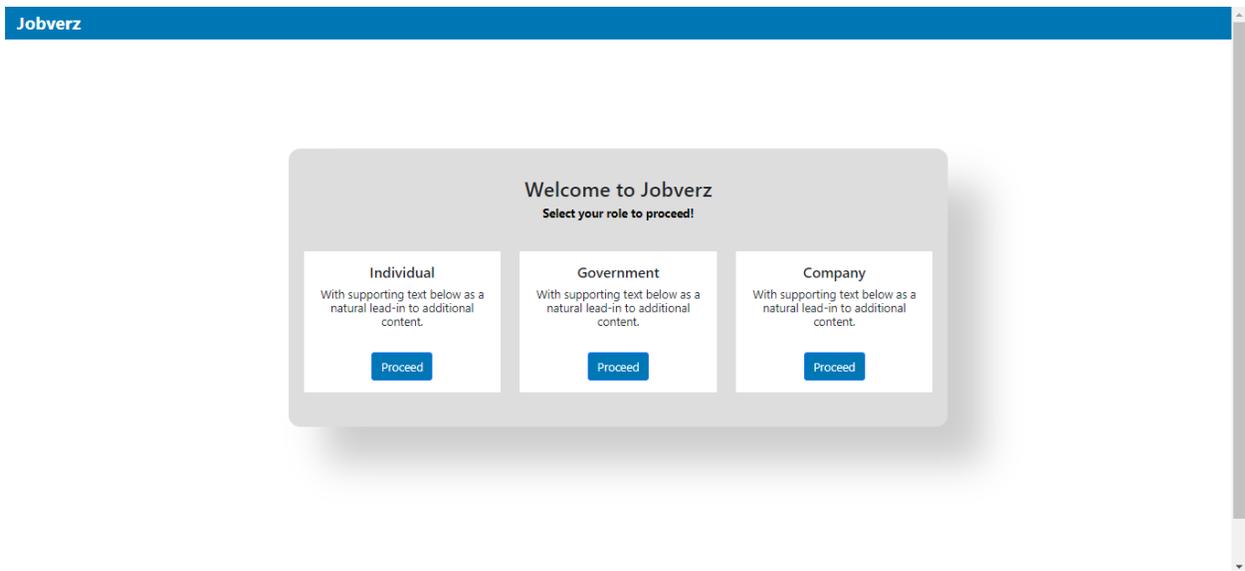
This is the preview of the Sign Up page
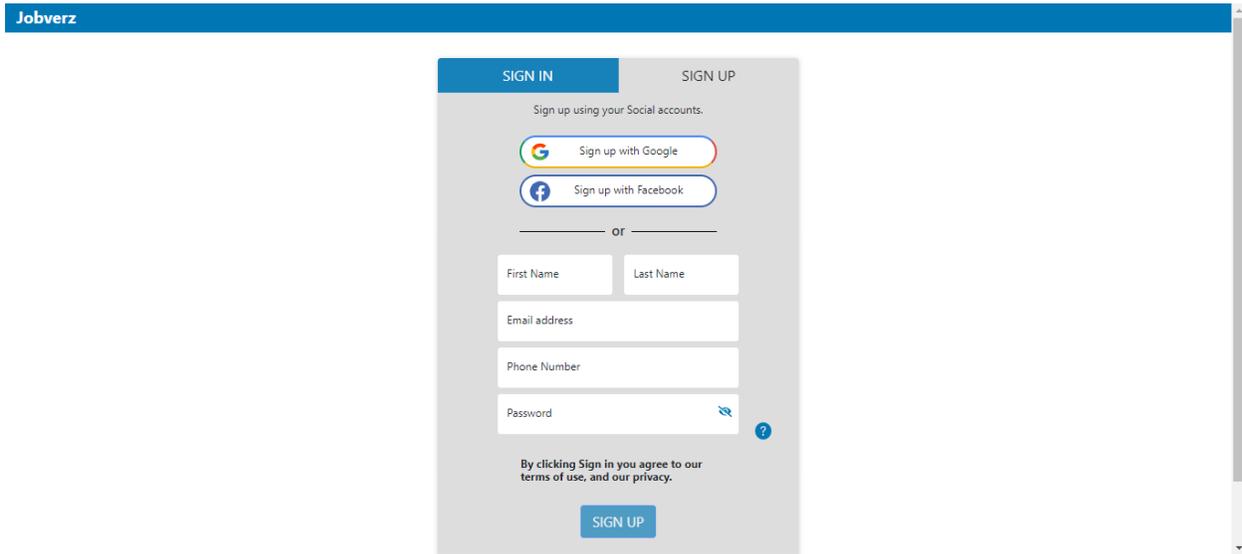
This is the preview of the Sign In page
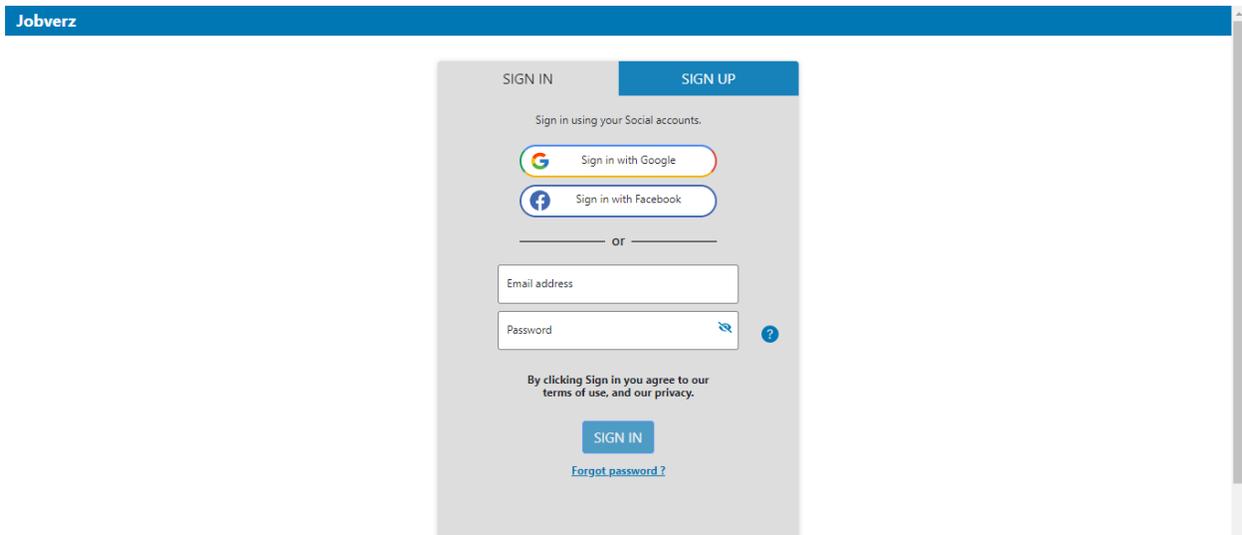
This is the preview of the Forget Password page
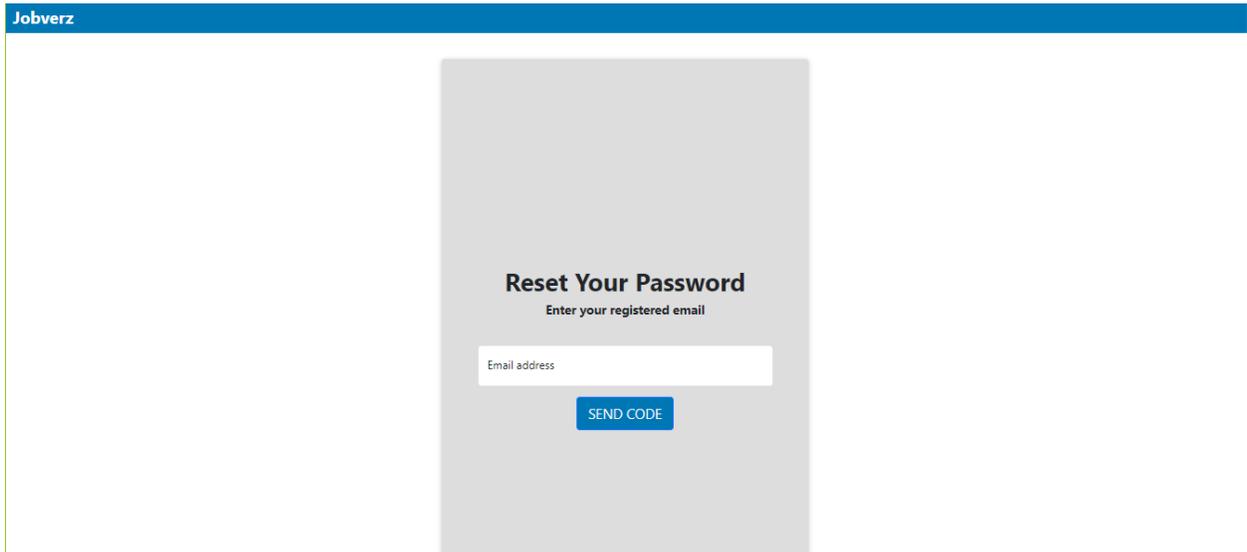
This is the preview of the Reset Password page
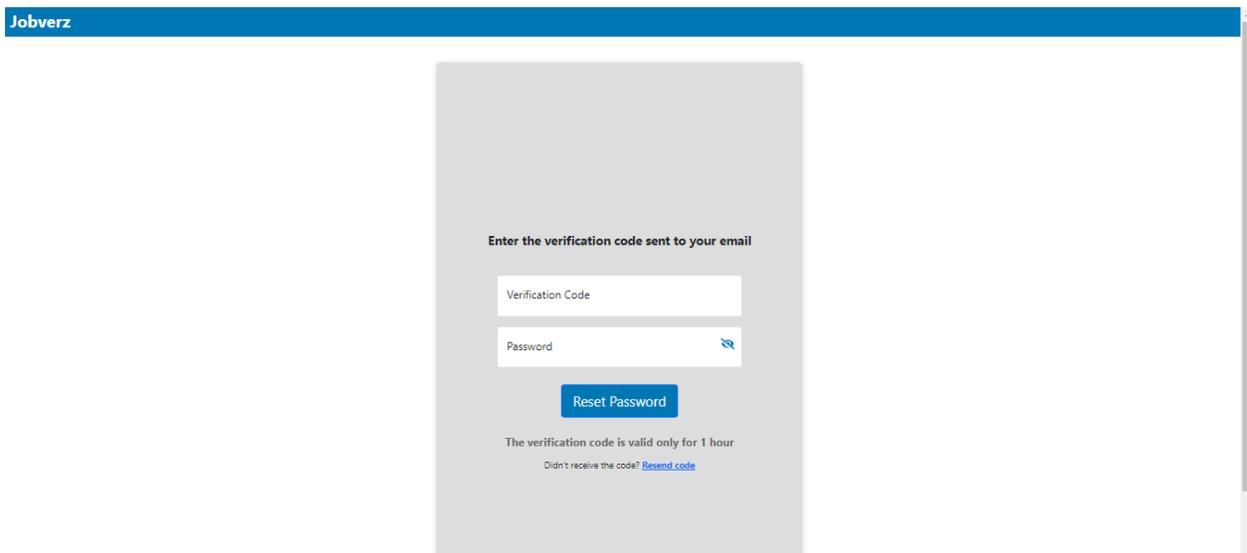
This is the preview of the Aspiration page
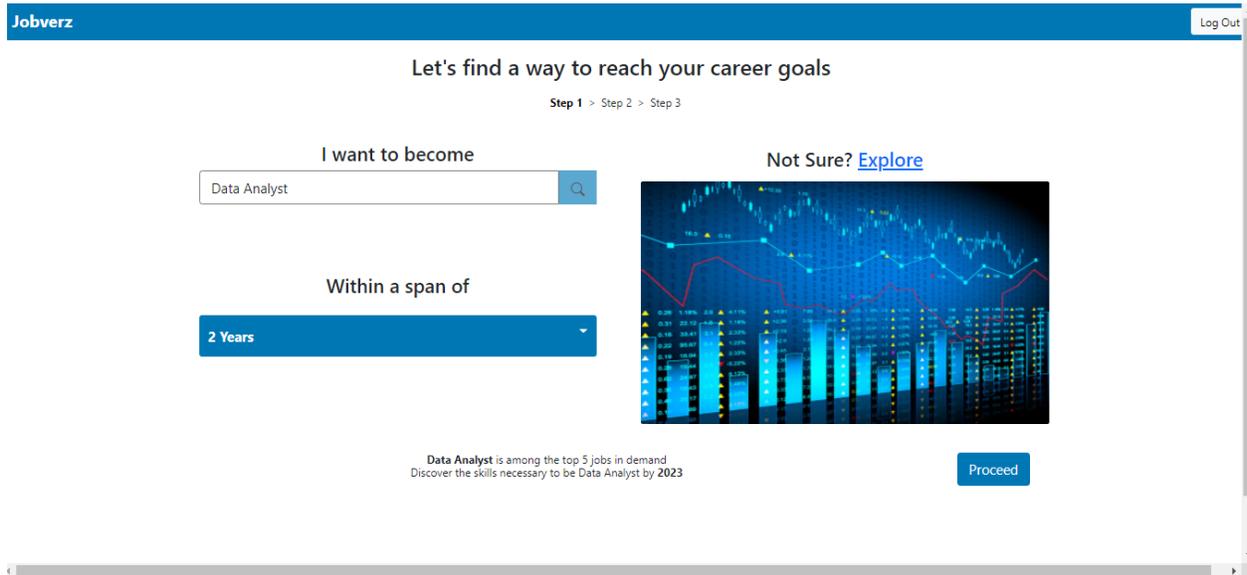
This is the preview of the Education/Work experience page
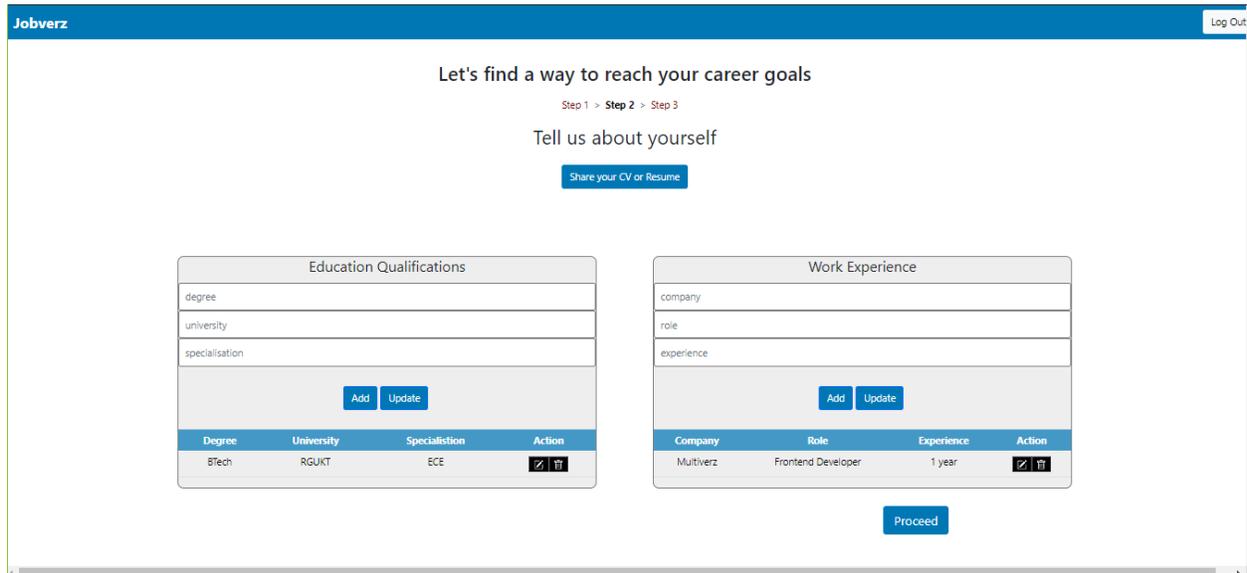
This is the preview of the Dashboard page

The Jobverz website is deployed using AWS Amplify. Please go through the below link to see the demo

JobVerz - Job Analytics Platform

References

[Checkout the IMS Global CLR Standards](#)

[Checkout the LER HB](#)

[Checkout the Digitary website](#)

[Checkout the white paper on Velocity](#)

[Checkout the white paper on LERs](#)