Aarul Motiani

Mrs. Sakthikumar

IB Computer Science, Period 6

25 March 2025

Appendix

Appendix A: MLA Citations

- **Firebase Fundamentals**. *Google Firebase*, https://firebase.google.com/docs/guides.
- **HTML Guide**. *W3Schools*, https://www.w3schools.com/html/.
- **CSS Guide**. *W3Schools*, https://www.w3schools.com/css/default.asp.
- **JavaScript Guide**. *W3Schools*, https://www.w3schools.com/js/default.asp.
- **Firestore Databases**. *Google Firebase*, https://firebase.google.com/docs/firestore/quickstart.
- **Firestore Authentication**. *Google Firebase*, https://firebase.google.com/docs/auth.
- **Troubleshooting and Debugging**. *Stack Overflow*, https://stackoverflow.com/questions.
- **Referencing**. *W3Schools*, https://www.w3schools.com/.
- **Surveys**. *YouTube*, uploaded by Sarah J. Masci, 18 Apr. 2022, https://www.youtube.com/watch?v=YPayl8pkOU8.
- **Firebase**. *YouTube*, uploaded by Academind, 3 Feb. 2021, https://www.youtube.com/watch?v=9kRgVxULbag.
- **Firebase Intro**. *YouTube*, uploaded by Traversy Media, 7 May 2019, https://www.youtube.com/watch?v=p9pgI3Mg-So&t=1125s.
- **UI Development**. *YouTube*, uploaded by Dev Ed, 12 Nov. 2020, https://www.youtube.com/watch?v=HkNNyDtm7mg.
- **Google Maps API Key Creation**. *YouTube*, uploaded by Google Maps Platform, 20 Jan. 2021, https://www.youtube.com/watch?v=hsNlz7-abd0.
- **Map Embedding**. *YouTube*, uploaded by Traversy Media, 10 Mar. 2020, https://www.youtube.com/watch?v=s3g04pbAJBA.

Appendix B: *Primary Consultations with advisor and client*

2/15/2025 - First consultation with Advisor

Location: In-Person meeting at my house

Rajeev: “Hi Aarul, what are you planning to create and how can I assist you in creating this project?”

Aarul: “Hi Rajeev, I’m planning on creating a website called Bridgepoint. It will be a webpage which will allow users to create an account and login with that account to find help based on their needs. The website will focus on helping the needy find essential resources such as food assistance, housing support, healthcare, employment, and additional assistance based on their needs.”

Rajeev: “That’s super cool. I’m glad you are trying to help society achieve their ideal community. How are you planning to create this project to aid society? Will you create an app, a website, a game, blog posts? How will you connect them with support?”

Aarul: “Well, I am planning to create an app that can be easily accessible for these individuals through either the google play store or the app store.”

Rajeev: “I would not suggest creating an app. Although an app makes 100% sense to create for this project, it would not be easily accessible for the public. First of all, it is challenging to upload an app through the Google Play store or App store because you would need to go through legal documentation and signups in order to request companies to deploy your app on their platform. Additionally, an app is not easily accessible to all homeless people because they would not be able to afford a mobile device.”

Aarul: “Ok, well in that case, how do you expect these homeless people to afford laptops and have a connection to Wi-Fi?”

Rajeev: “Our government supports public services that are easily accessible for anyone without having to pay a single penny! These homeless people can access the web and public computers through public locations and services like library desktops, community centers, job centers, churches, religious locations, etc.

Aarul: “You are 100% correct! Thank you so much for helping me realize that it makes much more sense to create a web application rather than an app that would not be successful.”

2/17/2025 - First consultation with Client

Location: Phone call

Aarul: “Hi Kunal, I hope you’re doing great. I wanted to talk about the website that I will be creating to help the homeless people get connected with support organizations.”

Kunal: “Lovely Aarul, let’s talk about it. So, can you please tell me a bit about how the website will support these homeless people and what features/services does it offer?”

Aarul: “For sure. The website firstly will have a sign-up and sign-in page the provide a more personal touch to the website and user. Then I am planning on creating a home page with their profile information, an about page that provides the user with information regarding what the organization is about and what it does. Then, I will create 2 more tabs that requests the user to complete a survey, which I will program to be used in a way that it provides accurate employment opportunities based on how they answer the questions in the survey.”

Kunal: “That’s pretty cool, but I think that your objective for this as you’ve stated is not to only provide them employment opportunities, but you also stated that you want to help connect them with support organizations. How will you do that?”

Aarul: “Well, in that case, I will create another tab in order for the user to find help based on their needs. I will provide the user with a list of organizations that they can view on a map, view its address, services, and how it personally can help them fulfill their needs.”

Kunal: “That’s amazing. That is exactly what I was looking for in need for this website to be created. I think it’s amazing how you have considered every aspect of creating a website. From sign in/sign up to UI to forms and surveys, and finally the solution of providing assistance in job opportunities and support organizations. Keep it up, I’ll see you next time.”

2/25/2025 - Product Development draft demo with Advisor

Location: In-Person meeting at my house

Aarul: “Hi Rajeev, I have partially completed the creation of my website. I started reviewing how to code in HTML, CSS, and JavaScript, and I have now created my sign up and sign in page. I had to learn how to use the new software Firebase in order to create a dynamic database.”

Rajeev: After Demo “This is great. What guidance do you need from me?”

Aarul: “Should I create a recover password, or would that be unnecessary?”

Rajeev: “I think that you should not. Not that it is unnecessary, rather, it would be very challenging and time consuming to do so.”

2/27/2025 - Product Development draft demo with Client

Location: Phone call

Aarul: “Hi Kunal, I have partially completed the creation of my website. I started reviewing how to code in HTML, CSS, and JavaScript, and I have now created my sign up and sign in page. I had to learn how to use the new software Firebase in order to create a dynamic database.”

Kunal: “That’s great. Keep going, I reccomend that when you start creating the homepage, make it so that the user profile shows up with their name, email address, and phone number to make it feel more personalized.”

3/5/2025 - Creation of other key pages (homepage and find help) and discussion with Advisor

Location: In-Person meeting at my house

Aarul: “Hi Rajeev. Since our last meeting, I’ve created a google API key to be able to access google maps and display map locations for support organizations on my website. With this key, I’ve had the ability to create another whole page called Find Help. This page includes information regarding support organizations like their location, address, services, and how specifically the organization can help the homeless. Additionally, I created my about page with information about what BridgePoint is.”

Rajeev: “That’s amazing, I think it’s great that you’ve added a map to make the program feel more personal and convenient/user-friendly. I advise you now that since we are getting close to the deadline, focus on creating the survey so you can provide employment opportunities. This will take you time as there is going to be a lot of javaScript that you need to code.”

3/5/2025 - Creation of other key pages (homepage and find help) and discussion with Client

Location: Phone call

Aarul: “Hi Kunal. Since our last meeting, I’ve created a google API key to be able to access google maps and display map locations for support organizations on my website. With this

key, I've had the ability to create another whole page called Find Help. This page includes information regarding support organizations like their location, address, services, and how specifically the organization can help the homeless. Additionally, I created my about page with information about what BridgePoint is."

Kunal: "That's great Aarul. I would also like for you to add a marker on the map so that I can see exactly where the location is relative to the surroundings rather than a map that shows nearby streets which I may not recognize"

Aarul: "That makes sense. Will get that done."

3/15/2025

Location: In-Person meeting at my house

Aarul: "Hi Rajeev. I began working on the survey and so far have completed most of it. The survey has 15 questions that I will use to help them find employment opportunities."

Rajeev: "Hi Aarul. I advise that you keep the survey short. This is because if you have too many questions, it will be very challenging and time consuming as you'd need to have good organization in your code to be able to write JavaScript and conditional statements to figure out which job is the best fit for the user. Keep the survey short and it will make it much more efficient and better for the user as they won't have to answer too many questions."

Aarul: "That makes sense. I will keep the survey short and finish off the rest of the program by next week."

3/15/2025

Location: Phone call

Aarul: "Hi Kunal, I've been working on that survey that the users will answer so that the program can use that information to generate employment opportunities."

Kunal: "Hi Aarul, I think that's great. Make sure to keep the survey short as a user like me trying to do a long survey would be painful. Stick to multiple choice questions, select all that apply, etc."

Aarul: "Ok Kunal. Thanks for helping me set the requirements for how your website should look. This will be done by next week."

3/23/2025

Location: In-Person meeting at my house

Aarul: “Hi Rajeev. I’ve finished my entire program and it functions properly and meets all the success criteria. I’m satisfied and ready for submission!”

Rajeev: “First of all, Congrats. But make sure you take some time to review all your documentation and look at the rubric as you need to make sure you meet all the requirements and don’t miss anything. When you’re ready, you may submit!

3/23/2025

Location: Phone call

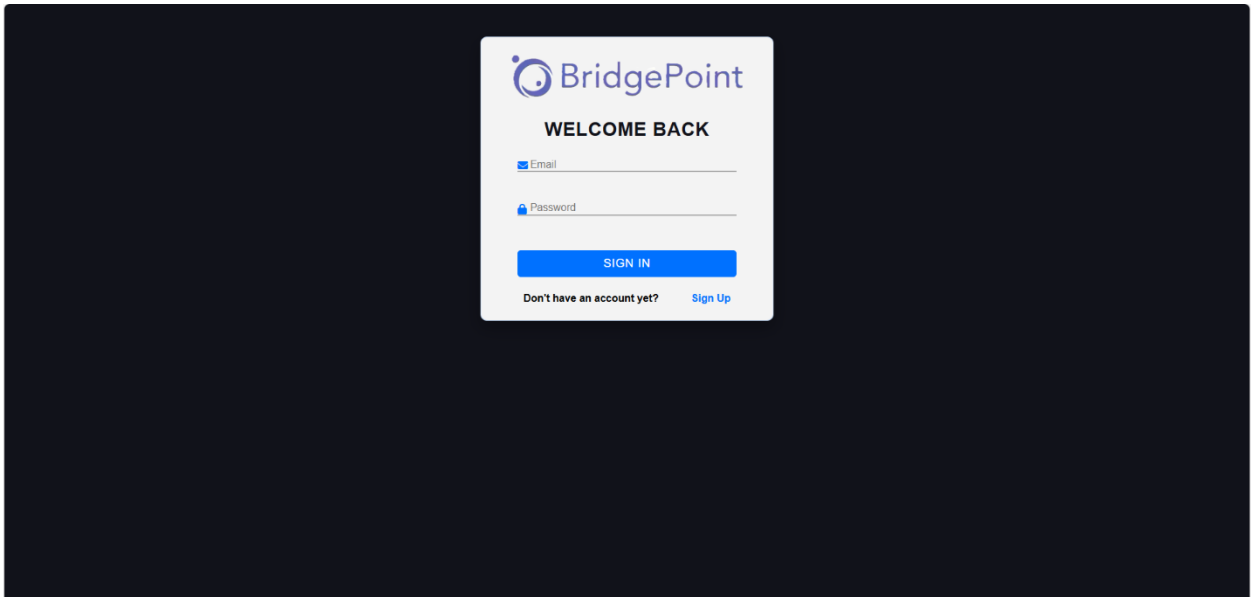
Aarul: “Hi Kunal. I’ve finished my program. Let me do my final demonstration so I can receive your feedback!”

Kunal: After demonstration. “Hi Aarul, I think that your overall website had a lot of strengths and believes that the website is a good business idea/ non-profit that could strive if you conduct more research and expand the website to include more support organizations and use of data. Some strengths include your use of new data structures compared to last time. I believe that you have advanced rigorously since your previous IA. I remember that you previously used Eclipse, SQL queries, and static databases. However, now, you are using dynamic databases with authentication and have improved your styling and organization through the development of your navigation bar. Apart from your CSS and complexity regarding data structures, the overall program looks very appealing. Some suggestions for improvement could be making the webapge look more vibrant, allow the user to recover their password, allow the user to search for jobs manually, allow the user to contact organizations within the app rather than redirecting, include the organization phone number and have an employee maybe be able to pick up phone calls, and finally, deploying the website online! Overall, I think you’ve done a great job. These are just some things to consider for the future. Take care, and I’ll see you next time.

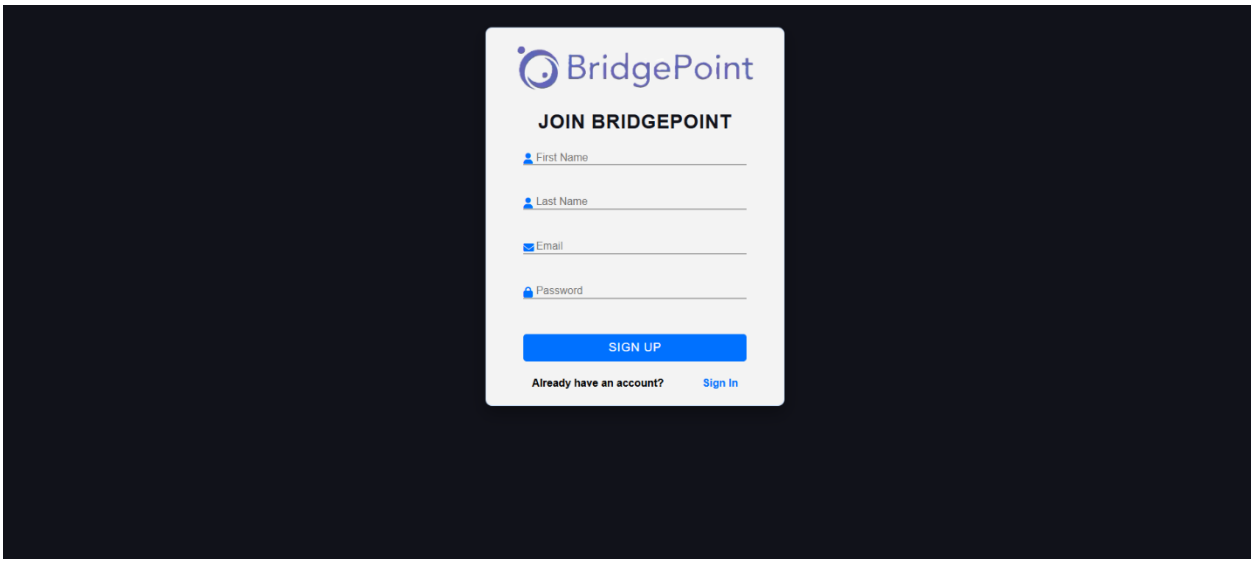
Aarul: “Thank you for this constructive feedback. I will look into this and will try to implement it in the future. See you next time.”

Website pages:

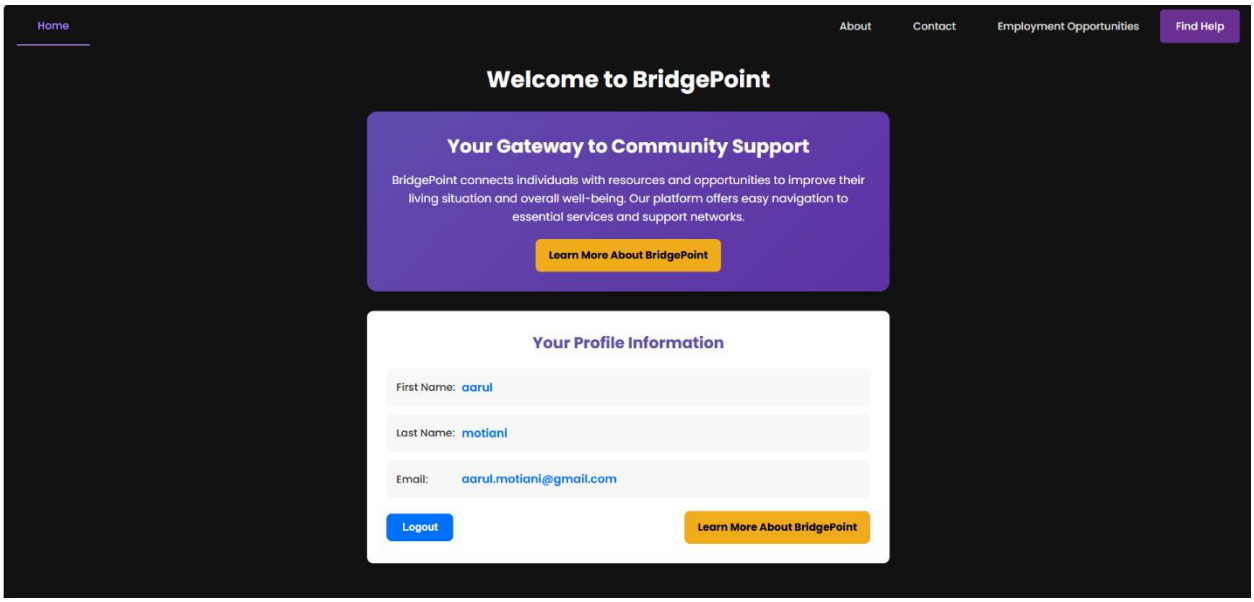
Login:



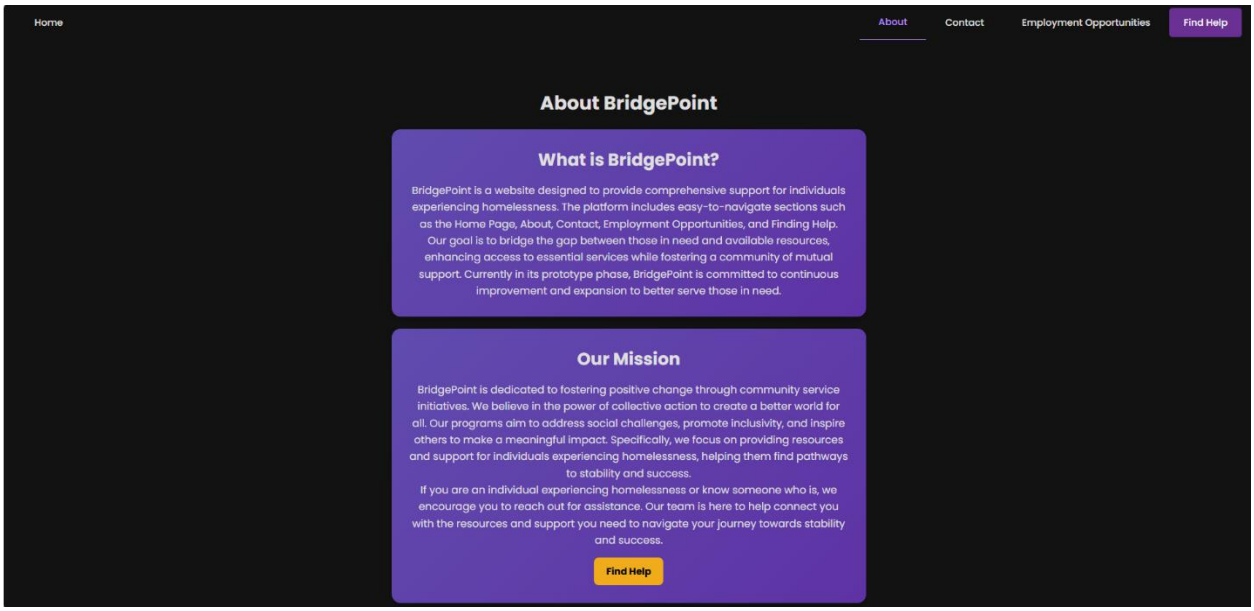
Sign-up:



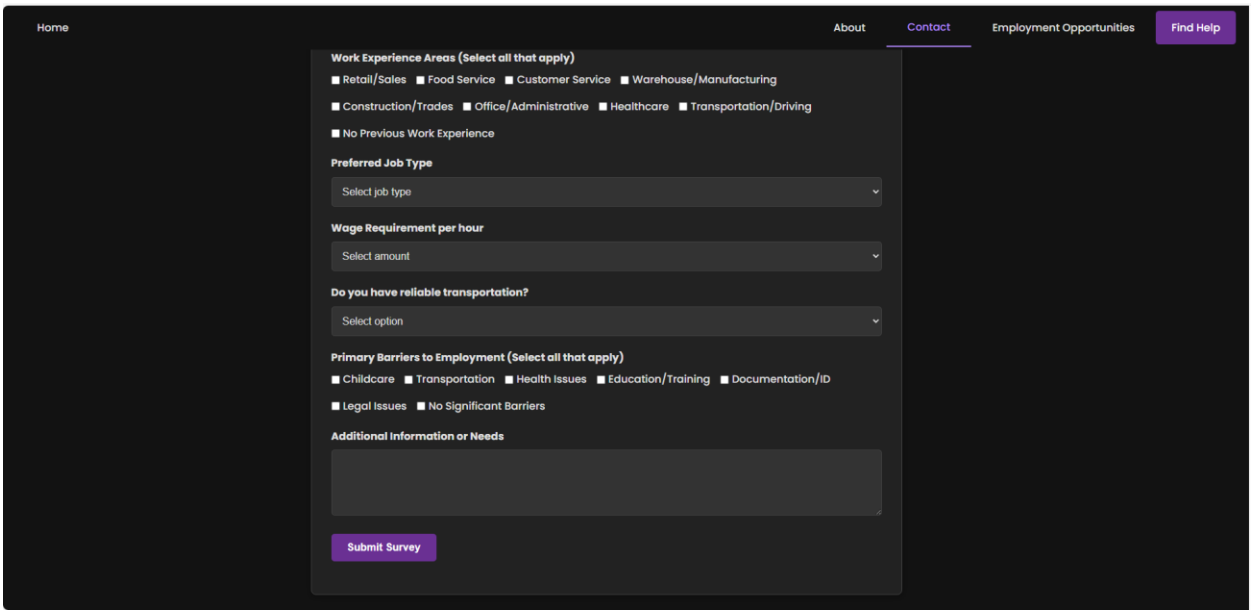
Homepage:

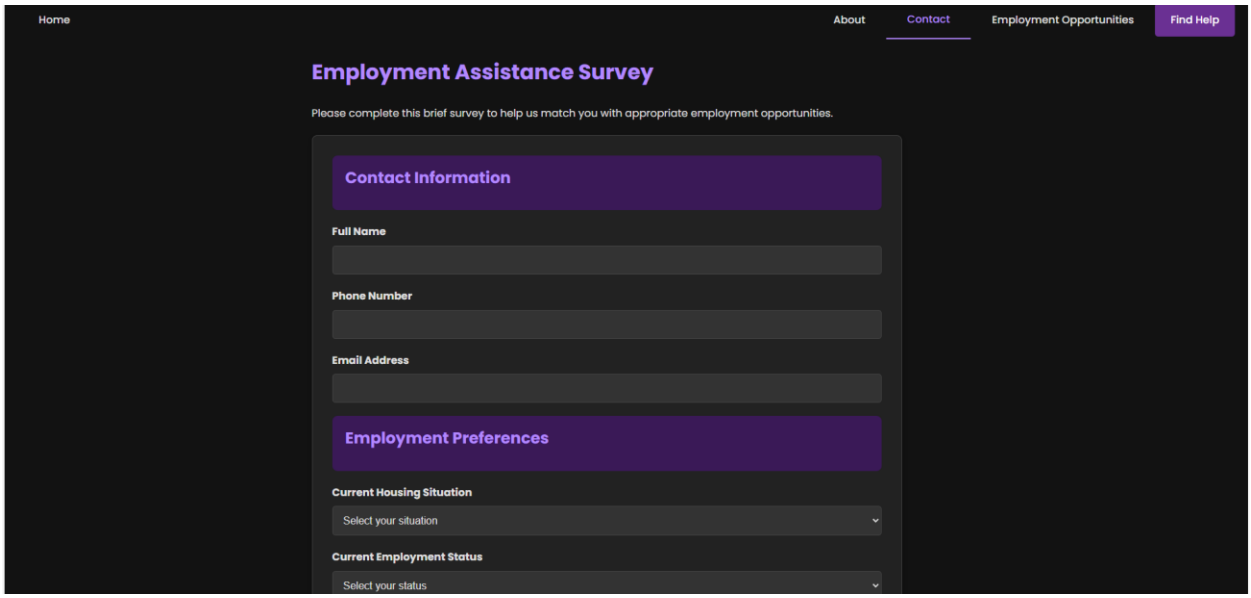


About:

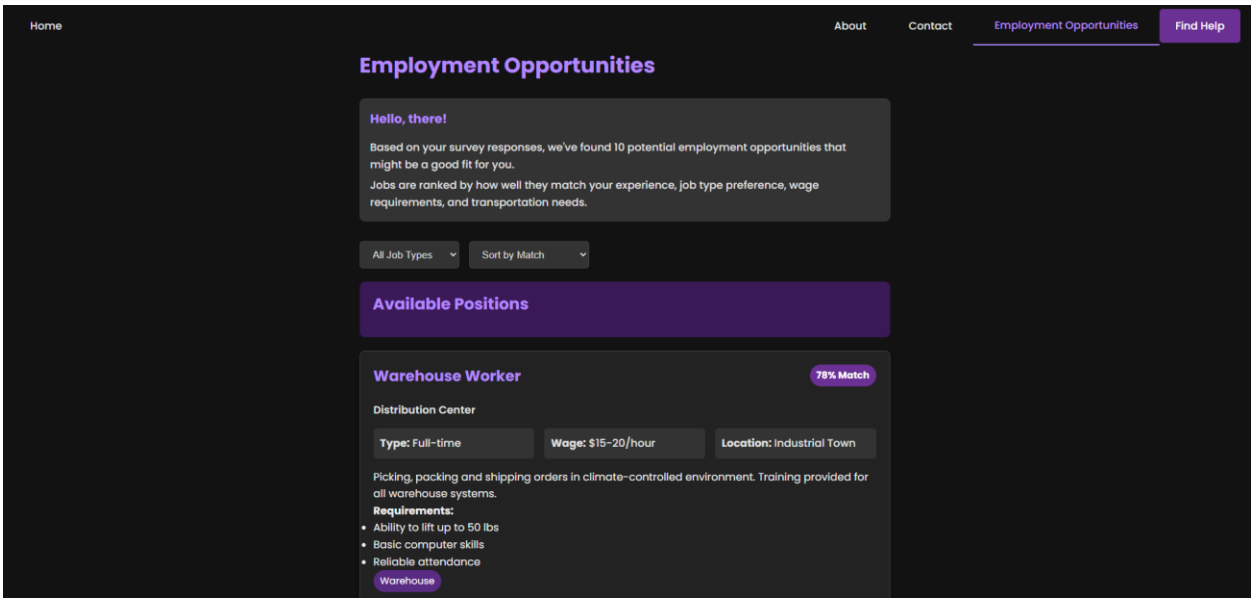


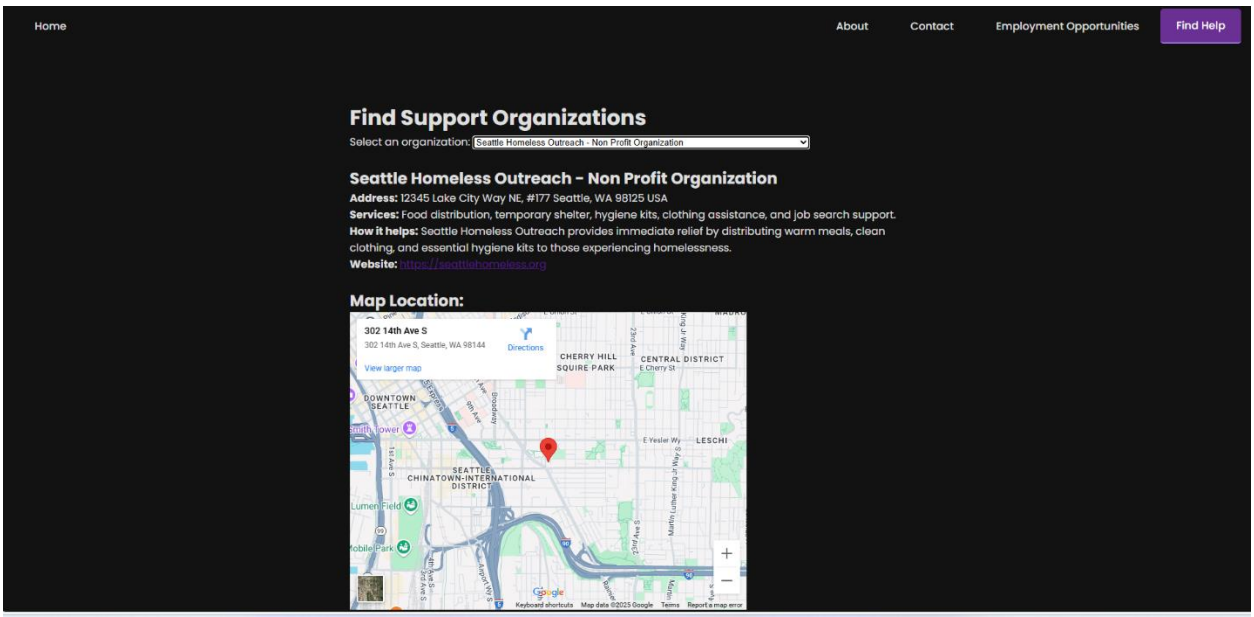
Contact:


Home
About
Contact
Employment Opportunities
Find Help
Work Experience Areas (Select all that apply)
Retail/Sales
Food Service
Customer Service
Warehouse/Manufacturing
Construction/Trades
Office/Administrative
Healthcare
Transportation/Driving
No Previous Work Experience
Preferred Job Type
Select job type
Wage Requirement per hour
Select amount
Do you have reliable transportation?
Select option
Primary Barriers to Employment (Select all that apply)
Childcare
Transportation
Health Issues
Education/Training
Documentation/ID
Legal Issues
No Significant Barriers
Additional Information or Needs
Submit Survey


Home
About
Contact
Employment Opportunities
Find Help
Employment Assistance Survey
Please complete this brief survey to help us match you with appropriate employment opportunities.
Contact Information
Full Name
Phone Number
Email Address
Employment Preferences
Current Housing Situation
Select your situation
Current Employment Status
Select your status

Employment Opportunities:



10 additional similar cards below

Find Help (looks same for all organizations except different information and map location.