

Reducing the Stigmatization of LGBT+ Refugees

Supplementary Materials

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Sponsor: Organization of Refuge, Asylum and Migration

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Authorship

	Daniel Alvarado	Alexandra DeHeer	Bryan Gass	Veronica Gurnawan
Team Role	Technical Lead and Task Manager	Data Analyst	Scribe/Note-Taker	Team/Project Manager
Prototype	Primary Prototype Developer and UI/UX Designer	Reviewer	Reviewer	Secondary Prototype UI/UX Designer
Database Tool/Field Work	Secondary Database Tool Developer	Primary Research Lead	Database Tool Developer	Secondary Research Lead
Research	Researcher	Lead Researcher		Researcher
Introduction		Secondary Author for Introduction Writing		Primary Author/Editor for Introduction Writing
Background		Author for “An Overview of the Asylum Process” in Background Writing		Primary Author/Editor for Background Writing
Methods	Primary Author/Secondary Editor for Methods Writing			Primary Editor for Methods Writing
Results	Secondary Editor for Results Writing	Primary Author for Results Writing	Author for Database Tool Paragraphs in Methods/Results Objective 3	Primary Editor for Results Writing
Other Booklet Writing	Secondary Editor			Primary Author/Editor for Conclusions/Preface/Abstract Writing
Task Management (Using Jira)	Jira (Tasks) Scrum Master (Facilitator of Daily Meetings and Weekly Sprints)	Jira User	Jira User	Secondary Facilitator of Daily Meetings and Weekly Sprints (Jira)
Supplemental Materials	Primary Supplemental	Infographic Designer	Author for “How To Navigate” Database	Secondary Supplemental Materials Author/Editor

	Materials Author/Editor		Tool Section/Development Process in Supplemental Materials	
Interviews	Primary Interviewer/Interview Transcriber	Secondary Interviewer	Interview Transcriber	Primary Interviewer
Interview Questions	Primary Interview Questions Writer	Primary Interview Questions Writer		Primary Interview Questions Writer
Humanitarian Survey	Primary Humanitarian Survey Writer	Secondary Humanitarian Survey Writer		Primary Humanitarian Survey Writer
Refugee Survey	Primary Translator for Refugee Survey	Secondary Refugee Survey Writer		Primary Refugee Survey Writer
Survey Design	Primary Survey Designer in Qualtrics	Secondary Survey Designer in Qualtrics		Secondary Survey Designer in Qualtrics
Communication and Note-Taking	Primary Note-Taker for Advisor/Sponsor Meetings		Weekly A3 Report and Agendas	Primary Note-Taker for Advisor/Sponsor Meetings
Project Management Resources	Attendance Log Keeper		Daily 2-Sentence Update	Creator of Internal Resources (Timeline, Starter Guide, etc.)
Booklet Design	Booklet Design Editor			Primary Booklet Designer
Booklet Graphics	Editor			Primary Booklet Graphic Designer
Presentation Design	Secondary Presentation Designer	Graphic Designer for Result Findings		Primary Presentation Designer/Editor
Presentation Content	Secondary Slides Creator/Editor		Tertiary Slides Creator/Editor	Primary Slides Creator/Editor
IRB	Primary IRB			Secondary IRB

Project Details

Our Project

Project Objective: “We want to design a web app prototype that helps LGBT+ refugees with targeted asylum information along with well-researched documentation to help in future iterations of the project.”

What this means for D-Term: We’re accomplishing this objective in two ways:

- 1) Redesigning and automating the **Help Account** feature by linking a web interface to a database that stores the relevant information and does dynamic actions to help simplify the **Help Account** experience. We’re just developing a tool for them!
- 2) Surveying people who have relevant experience on what they’d like out of the application, what sort of features would be helpful for them when asking for resources, etc., conducting design-related interviews with people to see how they feel about the app, and researching the **other features** ORAM originally wanted us to develop. We’re creating a body of documentation for future groups interested in developing this app for ORAM.

Project Roles

- **Project Manager (Communications):** Veronica Gurnawan
Maintains extended communication with sponsor and advisors; organize and manage communication with research participants with Data Analyst, design/editing. Is in charge of all design and editing for the team, which includes the user interface design of the application.
- **Project Manager (Tasks):** DJ Alvarado
Maintain task/tech schedule; hold team members accountable by documenting action items in the meeting minutes; managing disagreements by documenting decisions in the meeting minutes; keeping team meetings on task by preparing meeting agendas; send courtesy reminders for deadlines; notifying advisor about problems; producing documents that aid with the direction of the project.
- **Data Analyst:** Alexandra DeHeer
Organizes, processes and interprets project data; the point person for research, this role works closely with the project manager (PMC) to find, schedule and facilitate interviews. In charge of adapting the interview/survey questions already listed in the methods section of the proposal, creating new ones and submitting them to the whole team for review.

- **Scribe:** Bryan Gass

Is expected to maintain good, comprehensive meeting notes of every single meeting, do the daily 2-sentence status update on the team's slack channel and work closely with the PMT to figure out agendas and updates. Is responsible for the A3 and meeting agendas that are due weekly. These meeting notes may involve using recording audio of the meeting in order to playback later and transcribe into succinct and comprehensive notes. These do not have to be in sentence form but must hit all the points of discussion.

Schedule

Mon:

- **11 AM: (Everyone)** Sprint "Finish Line". The first half of this meeting will be to go through Jira and review every single task assigned in the previous sprint (work week). After this comprehensive review and discussion process, the second half of this meeting will be reviewing what needs to be accomplished with the new sprint and assigning tasks once more. **(DJ)** Facilitate meeting.

Tues-Fri (Daily):

- **11 AM: (Everyone)** Scrum (Stand Up)
- **By 5 PM: (Bryan)** 2-sentence daily update on what the team is working on/accomplishing for the day. To be sent out in the ORAM slack group chat with Professors Foo and Stanlick.

Tues:

- **By 5 PM: (Bryan)** Discuss with the team about that week's advisor and sponsor meetings. Using that information along with the "Finish Line" discussion from the previous day, create an agenda for both the sponsor and advisor meetings. **(Everyone)** By this day, make sure to review the announcement they (Professors Foo and Stanlick) send about what they hope to talk about in the advisor meetings and make sure you are able to accomplish these tasks by Friday's meeting.
- **By 5 PM: (Bryan)** Send the A3 report to the ORAM slack chat.

Fri:

- **10 AM: (Everyone)** Sponsor call with ORAM. These will be in the form of design reviews. Have *everything* done by this point.
- **11 AM: (Everyone)** Advisor call with Professors Foo and Stanlick.

Sun:

- **5 PM: (Everyone)** The deadline for any assignments assigned by Professors Foo and Stanlick. Distinct from the deadline we as a team set (Friday) for deliverables we're giving ORAM.

Interviews

Interview with a WPI Computer Science Professor

Guide

Introduction

We are a project team from WPI designing an application that would provide resources to LGBT+ identifying people seeking refuge from their current locations. These resources include providing information on the asylum process, directing people to nearby aid facilities and displaying location data on “safe” versus “unsafe” establishments they may encounter during their asylum process. We are conducting interviews in order to gain a better understanding of the application features we’re designing as well as the diverse perspectives of these affected people.

Before we proceed with this interview, we would like to inform you that this interview will be recorded, however all information will strictly be used for research purposes and in the context of our paper and other project deliverables. Your responses will not be edited, misrepresented or recharacterized in any way and will only be used as a definitive perspective for our research.

Questions

Visualization of Data for Socially Conscious Applications

This interview focuses on the technical considerations of our project. We are interested in seeking your expertise on this subject, as well as your perspective on the issues and concerns behind the project.

- To start with, what is your technical background and role here at WPI? What sort of research are you most interested in?
- As an expert in data visualization, how do you conduct surveys that are as useful as possible to your study? Are there data collection methods that we as researchers should know of?
- How can we maximize the reach of our application? Are there any techniques or strategies we could take advantage of or know about in order to ensure that the most amount of people have access?
- Our application will likely be used by people who do not speak much English or regularly use the internet. What are some design considerations we should take in order to maximize their

perception? How can we best convey the necessary features or information? Example: color, placement, etc.

- What can you say about the security of a web application, and do you have any advice concerning security?
- Our sponsor is interested in some way of visualizing the data collected from our project and the application. Do you have any ideas on how we could design this? Dashboard, powerpoint, etc. / In your opinion, what's a good way of presenting statistics to people with no technical background?
- Our time in Germany is limited to seven weeks, so ideally we would like to design a product that can be passed down with the smallest learning curve. Do you have any thoughts on how we could structure our experiment and take advantage of the design that would support this? / Can you speak to the difference between long-term maintenance of a web application versus a mobile application?
- What language or service would you suggest to use for a web application that is supposed to connect refugees to information? How about presenting information?

Closing text

Thank you for your time! We appreciate the insight you were able to provide us. If you have any questions or concerns, feel free to contact us.

Interview with an App Developer

Guide

Introduction

We are a project team from WPI designing an application that would provide resources to LGBT+ identifying people seeking refuge from their current locations. These resources include providing information on the asylum process, directing people to nearby aid facilities and displaying location data on “safe” versus “unsafe” establishments they may encounter during their asylum process. We are conducting interviews in order to gain a better understanding of the application features we're designing as well as the diverse perspectives of these affected people.

Before we proceed with this interview, we would like to inform you that this interview will be recorded, however all information will strictly be used for research purposes and in the context of our paper and other project deliverables. Your responses will not be edited,

misrepresented or recharacterized in any way and will only be used as a definitive perspective for our research.

Questions

A Perspective On Applications

This interview focuses on the technical considerations of our project. We are interested in seeking your expertise on this subject as well as your perspective on the issues and concerns behind the project.

- What kind of software projects have you worked on in the past?
- Can you describe what is it like to maintain a completed web application? How about a completed mobile/desktop application?
- What can you say about the security of a web application, and do you have any advice concerning security?
- What languages or services would you suggest for a functional prototype?
- Why would web applications be the preferred method for an app than something else?

Closing text

Thank you for your time! We appreciate the insight you were able to provide us. If you have any questions or concerns, feel free to contact us.

Interview on Conducting Proper Interviews with a Journalist

Guide

Introduction

We are a project team from WPI developing an application that would provide resources to LGBT+ identifying people seeking refuge from their current locations. These resources include providing information on the asylum process, directing people to nearby aid facilities and displaying location data on “safe” versus “unsafe” establishments they may encounter during their asylum process. We are conducting interviews in order to gain a better understanding of the application features we’re designing as well as the diverse perspectives of these affected people.

Before we proceed with this interview, we would like to inform you that this interview will be recorded, however all information will strictly be used for research purposes and in the context of our

paper and other project deliverables. Your responses will not be edited, misrepresented or recharacterized in any way and will only be used as a definitive perspective for our research.

Questions

- Hey Jamey, what do you do for work?
- Would you say that your line of work puts you in a position to give us advice on our project?
- When it comes to interviewing someone what are simple ground rules to follow?
- Given those ground rules what do you think some pro-tips would be when it comes to interviewing
- What are strategies you used for getting an out of touch reference? How would you recommend we try getting in touch with more refugees?
- When it comes to field notes, what are your strategies at getting everything down?

Interview with an Official Working in Resettlement

Guide

Introduction

These questions will pertain to the meaningfulness of the application and the importance of communication to humanitarian workers. Similar to the survey, these questions will relate to the humanitarian worker's expertise, especially with communicating with vulnerable communities. Questions should follow this flow: 1) Who are they and what is their experience (introduction) → 2) The importance of communication to them and how it translates into their work → 3) What obstacles they face in trying to connect with this vulnerable community → 4) Any last insights

Hi, thanks for taking the time to sit down with us and answer some questions for our student research project. I'm Veronica and I'll be the one interviewing you today, this is Alex and she'll be taking down notes as well as handling the recording. Before we start, I just wanted to ask you if it's alright if we record this interview; we can just record the audio if that's better for you! Otherwise, Alex will transcribe the interview.

So a quick note about our project: We are a team of students trying to design an application that would help relief agencies better communicate with and support LGBT+ refugee/asylee populations. Our

research goal is to find out what sort of obstacles humanitarian workers face in trying to support this community, as well as what resources and features we can add to our design.

Questions

Introduction/Icebreaker Questions

- Tell us a bit about yourself and your background.
- What inspired you to take on advocacy work?
- Do you have any particular cases or stories that have been particularly meaningful to you? Anything that you are especially proud of?

Communication Questions

- How important is communication for your advocacy work?
- What is your primary mode of communication with communities with which you work?
- Has COVID-19 impacted your communication with the communities you serve?
- How has COVID-19 affected your organization's or your own operations?
- What softwares or technology do you currently use to contact those who need support?
 - Are there any challenges to that communication?
 - Do you have any "wish list" items for communication that you would have if it existed?

Lasting Insights and Conclusion

- Are there any applications, software, or communication platforms that you know your communities use?
- Barring issues with communication, what resources do you think would best support the communities you work with?
- Can you elaborate on your answers in the survey we sent out and talk about why you believe _____ and _____ are obstacles? ***Can be a very involved answer; depending on their survey responses this could count as multiple questions**
- If you had to give society a call to action on how to support refugees and asylum-seekers, what would you advise?
- Is there anything we haven't asked you that you think is important for us to know?

Surveys

Survey to refugees in Tijuana Mexico and Kenya

Start of Block: ORAM Web Application Survey

We are working on a project to help develop a web application for refugees and asylum seekers, specifically those who identify with the LGBT+ community. This application would serve to connect refugees/asylum seekers with resources on how to apply for asylum, what aid services are near them and more. Whether you are or are not a member of the LGBT+ community, please complete the following survey. Answer only what you are comfortable in disclosing. None of the questions are mandatory and the answers cannot be traced back to any specific person. Your identity and answers will not be disclosed

This is a basic example of what the application would look like.

ORAM: Help Account Asylum Information Seek Help Referral Map Support and Contact

Seeking Help?

Fill out this form to get filtered resources for your situation.

LGBT+ Status
Are you interested in resources for LGBT+ people?
Choose...

Country
Please input the country you are located in.
Choose...

Seeking Asylum and/or Refuge
Please select 'Yes' if you are interested in these resources.
Choose...

Additional Comments
Please input any additional comments you may have.

Submit

End of Block: ORAM Web Application Survey

Start of Block: Questions about yourself

The following questions are questions about you. This is helpful for us to gain a better understanding of the people interested in this application. If you feel comfortable enough to answer them please do, otherwise choose the "prefer not to say" when applicable. The information you put down will not be used for anything outside of the project.

Q1 What's your age?

- Younger than 18 (1)
 - 18 and older (2)
 - Prefer not to say (3)
-

Q2 What gender(s) do you identify closely with?

- Male (1)
 - Female (2)
 - Non-Binary (3)
 - Prefer not to say (4)
 - Other (5) _____
-

Q3 Do you consider yourself a part of the LGBT+ (Lesbian, Gay, Bisexual, Transgender and more) community?

- Yes (1)
- No (2)

End of Block: Questions about yourself

Start of Block: Application Features Questions (for LGBT+)

These questions will be about specific features of the web application.

Display This Question:

If Q3 = Yes

Q4 On a scale of 1-5, how useful would a list that refers you to local relief agencies and LGBT+ services (with contact information) be?

- Not at all useful (1) (1)
 - Slightly useful (2) (2)
 - Moderately useful (3) (3)
 - Very useful (4) (4)
 - Extremely useful (5) (5)
-

Q5 On a scale of 1-5, how useful would a guide of resources explaining the asylum and refugee process be for you?

- Not at all useful (1) (1)
 - Slightly useful (2) (2)
 - Moderately useful (3) (3)
 - Very useful (4) (4)
 - Extremely useful (5) (5)
-

Display This Question:

If Q3 = Yes

Q6 On a scale of 1-5, how useful would a map showing "Friendly (for LGBT+)" vs. "Not Friendly (for LGBT+)" locations (i.e. restaurants, malls, parks, etc.) be for you?

- Not at all useful (1) (1)
 - Slightly useful (2) (2)
 - Moderately useful (3) (3)
 - Very useful (4) (4)
 - Extremely useful (5) (5)
-

Display This Question:

If Q3 = Yes

Q7 Please rank the following features by priority. Please do not use repeat answers for the features; for instance, if you give one feature "1st Priority", do not give any other feature "1st Priority".

	1st Priority (1)	2nd Priority (2)	3rd Priority (3)
List of relief agencies (along with contact information) closest to your area (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guide of resources explaining the asylum and refugee process (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Map that shows friendly vs. not-friendly locations around you (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 [Optional] Are there any specific features you would like to see added?

Q9 [Optional] Do you have any concerns or suggestions about this application so far?

End of Block: Application Features Questions (for LGBT+)

Start of Block: Security and Usage Questions

Q10 These are questions to help us gain a better picture of your access to internet-ready devices.

Q11 Do you have reliable access to the internet?

- Yes (1)
- No (2)
- Sometimes (3)

Q12 Do you own the device you're using to take this survey right now?

- Yes (1)
- No (2)
- Other (3) _____

Q13 If you picked "other" in the question above, can you tell us how you are taking this survey?
(Examples: "Borrowing a family member's device", "I'm at the public library", etc.)

Q14 What kind of device do you normally use to access the internet?

- Laptop (1)
- Smart Phone (2)
- Desktop PC (3)
- Other (4)

Q15 Do you speak any languages other than English and if so please write which ones.

- No (1)
- Yes (2) _____

Q16 [Optional] Do you have any concerns or suggestions about the security of this app that you would like to share?

End of Block: Security and Usage Questions

Start of Block: Thank you for taking our survey!

We will not be storing any personal data besides what was asked on the form. Your input is strongly appreciated as we continue to develop our application.

Q17 Would you be interested in being interviewed by us (the developer team) to share more about your experience?

- Yes, I'm interested (1)
 - No, I am not interested (2)
-

Q18 If you picked "Yes, I'm interested" or would like to know more before committing, can you provide us with a way of contacting you to set up an interview? Examples include: an email address, phone number, etc.

End of Block: Thank you for taking our survey!

Survey to Humanitarian Workers

Start of Block: ORAM Web Application Survey

We are working on a project to help develop a web application for refugees and asylum seekers, specifically those who identify with the LGBT+ community. This application would serve to connect refugees/asylum seekers with resources on how to apply for asylum, what aid services are near them and more. We are interested in your expertise as humanitarian aid workers and professionals that work with this impacted community. The information taken from this survey will be used to inform our application design as well as gain valuable insight into the experts' experience advocating for this population.

This is a basic example of what the application would look like.

The screenshot shows a web application interface for ORAM. At the top, there is a dark blue navigation bar with the ORAM logo and the text 'ORAM: Help Account'. To the right of this are several menu items: 'Asylum Information', 'Seek Help', 'Referral Map', and 'Support and Contact', each with a small downward arrow indicating a dropdown menu.

Below the navigation bar is a white section titled 'Seeking Help?' in bold black text. Underneath the title is a subtitle: 'Fill out this form to get filtered resources for your situation.'.

The form itself is a light gray box with a white background. It contains four main input fields arranged in a 2x2 grid:

- LGBT+ Status:** The label is 'LGBT+ Status' and the question is 'Are you interested in resources for LGBT+ people?'. Below this is a dropdown menu with 'Choose...' and a downward arrow.
- Country:** The label is 'Country' and the question is 'Please input the country you are located in.'. Below this is a dropdown menu with 'Choose...' and a downward arrow.
- Seeking Asylum and/or Refuge:** The label is 'Seeking Asylum and/or Refuge' and the instruction is 'Please select 'Yes' if you are interested in these resources.'. Below this is a dropdown menu with 'Choose...' and a downward arrow.
- Additional Comments:** The label is 'Additional Comments' and the instruction is 'Please input any additional comments you may have.'. Below this is a text input field.

At the bottom center of the form is a blue button with the white text 'Submit'.

End of Block: ORAM Web Application Survey

Start of Block: Questions about yourself

The following questions are questions about you. This is helpful for us to gain a better understanding of the people interested in this application. If you feel comfortable enough to answer them please do, otherwise choose the "prefer not to say" when applicable. The information you put down will not be used for anything outside of the project.

Q1 What is your area of expertise in regards to this topic?

- LGBT+ Advocacy (1)
 - Refuge/Asylum Services (2)
 - Humanitarian Aid (3)
 - Mental Health Support (4)
 - Other (Please Specify) (5)
-

Q2 What is your role, if any, in regards to working with LGBT+ populations seeking asylum/refuge? (i.e. relief agency coordinator, social worker for refugees, etc.)

Q3 What gender(s) do you identify closely with?

- Male (1)
- Female (2)
- Non-Binary (3)
- Prefer not to say (4)
- Other (5) _____
-

Q4 Do you consider yourself a part of the LGBT+ (Lesbian, Gay, Bisexual, Transgender and more) community?

- Yes (1)
- No (2)

End of Block: Questions about yourself

Start of Block: Block 5

We are concerned by communication issues that may prevent relief agencies and refugees/asylum-seekers from accessing each other.

This section will be about your experience working with a humanitarian organization/social initiative, if any, as well as any communications-related concerns you may have. We will use these insights to inform our application design process as well as any considerations or

knowledge unique to your experience.

Q5 What resources provided by you/your organization do you find particularly popular by the impacted communities you work with? (i.e. a website, specialized help services, etc.) Feel free to answer in list form.

Q6 Does your organization (if you are affiliated with one) communicate with people seeking resources?

- Yes (1)
 - No (2)
-

Q7 If you selected 'Yes' in the previous question, how does your organization communicate with people seeking resources? Please select all answers that apply.

- Emailing (1)
 - Phone calls (2)
 - Text messaging (SMS) (3)
 - A proprietary application/method (9)
 - Social media platform (i.e. Facebook, Whatsapp, etc.) (6)
 - Word of mouth (through marketing) (7)
 - Mail correspondence (4)
 - Other (please identify) (8)
-

Q8 What communication channel worked best for you, and why?

Q9 Have you experienced any of these difficulties when trying to reach members of the impacted communities you are trying to help? Please select all answers that apply.

- Trouble reaching people through available channels (1)
 - Language or other communication barriers (2)
 - Accessibility issues with existing channels (3)
 - Need for more efficient communication channels (4)
 - Too many communication channels that are under-utilized or hard to streamline (5)
 - Other (please identify) (6)
-
- None of the above (7)

Q10 If you've selected any of the answers from the previous question, can you elaborate on these difficult(ies)? If you experienced none of these difficulties, can you explain why?

Q11 In a world profoundly affected by COVID-19 and widespread quarantine, how have your advocacy efforts been impacted (especially in regards to communication)?

End of Block: Block 5

Start of Block: Application Features Questions

Q12 These are the features currently planned for the web application:

01. A list that refers users to local relief agencies and LGBT+ services (with contact information)
02. A guide of resources explaining the asylum and refugee process
03. A map that updates in real time showing "Friendly (for LGBT+)" vs. "Not Friendly (for LGBT+)" locations (i.e. restaurants, malls, parks, etc.)

As a reminder, this application would be targeted towards LGBT+ identifying individuals who are seeking resources and specialized help in order to safely go through the refuge/asylum process.

Q13 Please rank the features by priority. Please do not use repeat answers for the features; for instance, if you give one feature "1st Priority", do not give any other feature "1st Priority".

	Rate each feature by priority.		
	1st (Top) Priority (1)	2nd Priority (2)	3rd (Last) Priority (3)
A list that refers users to local relief agencies and LGBT+ services (with contact information) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A guide of resources explaining the asylum and refugee process (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A map that updates in real time showing "Friendly (for LGBT+)" vs. "Not Friendly (for LGBT+)" locations (i.e. restaurants, malls, parks, etc.) (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q14 [Optional] Are there any specific features you would like to see added?

Q15 [Optional] Do you have any concerns or suggestions about this application so far?

End of Block: Application Features Questions

Start of Block: Thank you for taking our survey!

Q16 We will not be storing any personal data besides what was asked on the form. Your input is strongly appreciated as we continue to develop our application.

Q17 Would you be interested in being interviewed by us (the developer team) to share more about your experience?

- Yes, I'm interested (1)
- No, I am not interested (2)

Q18 If you picked "Yes, I'm interested" or would like to know more before committing, can you provide us with a way of contacting you to set up an interview? Examples include: an email address, phone number, etc. We will contact you shortly (within the next two weeks).

End of Block: Thank you for taking our survey!

Web Application Prototype

Development Process

The ORAM Helpline web application was created using HTML, JavaScript, and Firebase. Development on the application took place across all 7 weeks of the IQP term from March 25th to May 13th.

The development of the web application took an iterative approach. Every Monday to Thursday was used for development of the application. On Fridays we had a design review meeting with our sponsor organization ORAM. These design reviews were used so that ORAM could give us constant feedback on their thoughts and opinions on the app. The feedback included things like what features should be included and opinions on the design. Because of these reviews and the insight, we gained from our surveys and interviews to refugees, we added general asylum information page, an FAQ page and the ability to change between English, French, and Spanish. On top of the extra parts we added we also were given feedback on the overall design. We were given feedback on font colors, text justification, wording of things, and whole look of the application.

Recommendations

For future development on this web application I would recommend changing the host of the website. It is currently hosted on Firebase which is a google product. We selected it for our project because it was free, simple to implement, and offered a lot of features. I think for future development Firebase should be upgraded to a paid account for access to more features or switched to a new hosting service.

The Database Tool

Timeline and Summary Of Development:

The database tool is a program that was written in python 3.7. The development of the tool took 7 weeks which encompassed a multitude of language changes, bug fixes and eventually libraries.

Beginning weeks of development began with deciding on a language to choose and how to approach the overarching problem. Advice from advisors and fellow classmates pointed me toward python, however my knowledge in python was limited. Problems arose due to this ignorance, specifically in accessing the excel cells and string parsing. Due to the high-level nature and my lack of understanding of python I made very small progress and opted to switch to my preferred language. The switch to C was in the hope of having more control of both libraries known and specifically string parsing. Upon further research and many hours of frustration of tackling such a massive endeavor in such a low-level language I found the switch back was inevitable for the completion of the tool.

I was able to get a basic understanding of python and soon after researching examples like mine I found a library called pandas. This library is perfectly designed for data manipulation, an area that I was desperate to make headway on, which allowed me to tackle more concerning issues within the development. The issues being accessing the contents of a cell that are not numeric, parsing through the string and then sending the parsed string to the database. Pandas was eventually replaced by a library referred to as xlrd, an excel based library designed for almost all my specific needs in accessing, iterating through and manipulating cells.

Libraries aside, progress was made by iterating through the cells, given the example excel spreadsheet ORAM provided, and eventually accessing the strings within them came soon after. However, an issue arose in the formatting of ORAM's spreadsheet. Labelling of "Countries" would be attached to the first of a segment of cells and it was assumed that everything after was of that country's information. This required me to not just read through cells but also set up a memory system to remember the counties that had been associated with the data connected to them.

Once the memory issue was completed a similar issue had to be tackled but within the cell. Within the cell the information containing the contact information was separated by a new line and each new bit of information distinguished by a format of "Information: xxxxxxxx". This resulted in parsing

through the multi-line string and extracting the relevant information. Which then provided all the relevant information ready to be put into the database.

The input of information into the database should have been simple enough but problems were met when it was found that the database prevented data being sent to it in the code style that I had it in, a process that would iterate to the next cell, parse the cell and send to the database and repeat. This needed again another memory solution where instead all the information that was extracted had to be stored into and later accessed. This ended up working with the help of Firebase's API and database structure.

Future Recommendations:

In the future I would recommend transitioning this tool to an online format that excludes the use of excel spreadsheets. My only regret was not allowing for data input straight from the web application. Additionally, I believe more information will be needed to be stored within each respective area, this will require more generalized string manipulation or perhaps a more tailored string input. Either way I believe that the system that is in place is only a temporary solution.

Acknowledgements:

Thank you DJ for your help. Your late night editing, helpful comments and occasional frustration is the reason I was able to complete this tool.

Thank you Professor Foo and Professor Stanlick for keeping an optimism in my work. In the moments where I doubted myself you were able to keep me going

Thank you to my team for working with me and pushing me, you all have been wonderful.

Handbook for ORAM

Web Application Guide

Link: <https://oramapp-1550b.web.app/>

Navigation Bar.

At the top of every page is the navigation bar (Fig 1.), from here you can travel to every other page or change the language.

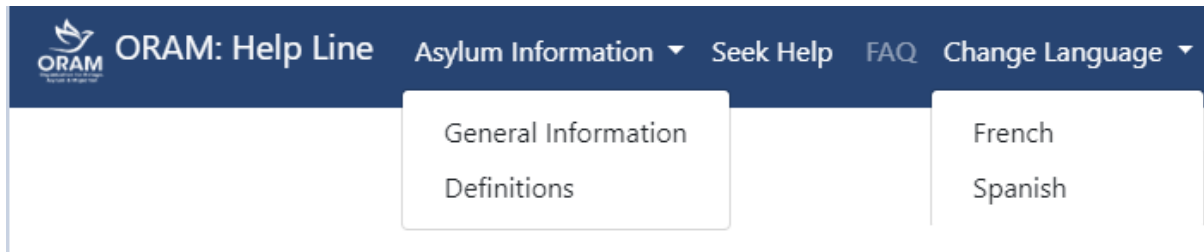


Fig. 1: The navigation bar with drop down menus open

Seek Help Page

The main page of the website in the seek help page. Here you can use the drop-down menus to fill out the form. It is required that you fill out each field with a drop-down menu to submit the form. The additional comments field is optional and can be left blank. Once you have submitted the form the page will update and display the list of filtered resources (Fig. 3).

The image shows the "Seeking Help?" form on the ORAM: Help Line website. At the top is a dark blue navigation bar with the ORAM logo and the text "ORAM: Help Line". Below the navigation bar is a light gray banner that says "Welcome to the Help Line." Below that is the heading "Seeking Help?" and the instruction "Fill out this form to get filtered resources for your situation." The form consists of two main sections. The left section is titled "LGBT+ Status" and contains the question "Are you interested in resources for LGBT+ people?" followed by a "Choose..." dropdown menu. Below that is the section "Kind of Help" with the question "Please select what kind of assistance you are interested." followed by another "Choose..." dropdown menu. The right section is titled "Location" and contains the question "Please input the country or area you are located in or near." followed by a "Choose..." dropdown menu. Below that is the section "Additional Comments" with the question "Please input any additional comments you may have." followed by a text input field. At the bottom center of the form is a blue "Submit" button.

Fig. 2: The main page of the web application

LGBTI Advocating Resources

Resource #1

Name: Alliance Against LGBT Discrimination
Website: <http://www.aleancaigbt.org>
Email: info@aleancaigbt.org
Address: undefined
Phone: 335 (0) 696403576
Description: Astreas is a public foundation, which raises and distributes funds to programs and initiatives led by and for diverse constituencies, prioritizing groups, led by lesbians and queer women, trans and gender non-conforming people, intersex people, and people of color.

Resource #2

Name: Pink Embassy Albania
Website: <http://www.pinkembassy.al/en/contact>
Email: pinkembassy@crca.al
Address: Tirana
Phone: 355 4 2265741
Description: PINK Embassy / LGBT Pro Albania is a non-profit organization which works for the protection and advancement of the rights of lesbians, gays, bisexuals, transgender, intersex and queer people in Albania.

Fig. 3: The list of resources after filling out the form and submitting

Asylum Information Pages & FAQ

The general information and definitions page are under the asylum information drop down menu. These 2 pages and the FAQ pages are all static pages just to display information.

ORAM: Help Line Asylum Information Seek Help FAQ Change Language

General Information About Refugee Process

In case it is helpful for you, here is some general information about the refugee process:

- You should apply for asylum as soon as you flee your country and enter a safe new country. Some countries allow individuals to apply for asylum directly through their national systems. In other countries, individuals must register at the Office of the United Nations High Commissioner for Refugees (UNHCR) to apply for Refugee Status. Please consult: <https://www.unhcr.org/> for more information.
- When you apply for asylum/refugee Status, the application is made to the country in which you are located. You may eventually be resettled in, or relocated to a different country, however you will, in general, have to stay in the country where you first apply for asylum while the decision is being made, and cannot apply for asylum in a specific third country (e.g. once you have left your home country and arrived in country A, you cannot demand asylum for country B).
- When seeking protection within the European Union, you should apply for asylum in the first country of arrival. If you do ask asylum in a third country of your choice, you might be refused protection there and you might be sent back to the first country of arrival.
- The asylum process can take months or years to complete, especially if an appeal is needed. Asylum may be processed more quickly in urgent cases, such as if applicants can show that persecutors are likely to follow them and attack them in the country where they are seeking refugee status.
- A positive asylum case will lead to refugee status**, which is a prerequisite to resettlement in a third country. Resettlement places are extremely limited, and available for only about one in ten persons in need of resettlement. Less than 0.6 % of refugees in the world are resettled to a third country.

REMEMBER:

In order to apply for refugee status:

- You need to be outside the country of your nationality;
- You should contact a local UNHCR office or another authorised body (if you are outside your country of nationality) to apply for refugee status / asylum, and
- You have to be able to prove fear of being persecuted.

Fig. 5: General Information about refugee process page

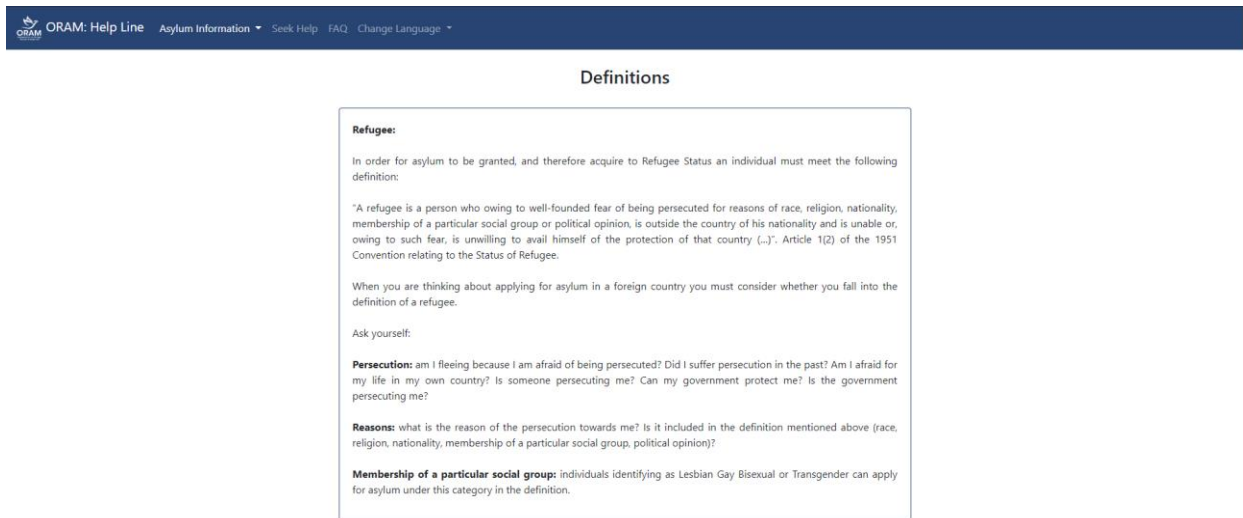


Fig. 6: Definitions about the refugee process page

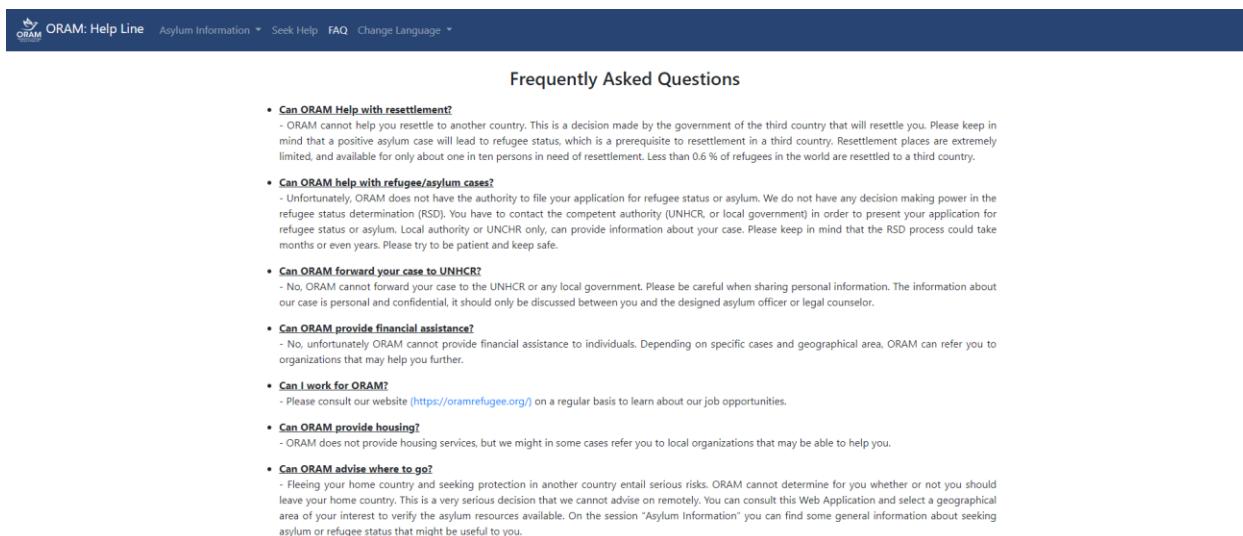


Fig. 7: FAQ Page

Changing Language

While on any page of the web application you can select 1 of three languages. English is selected by default, but you also have the options to select French or Spanish. When you click on one of the language options the page you are currently on will be translated to that language. All other parts of the site will be in that language unless you change the language again.

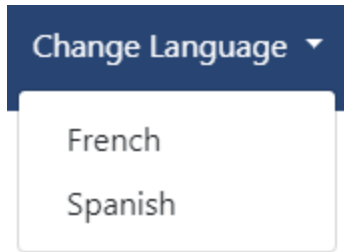


Fig. 8: The change language options on the navigation bar

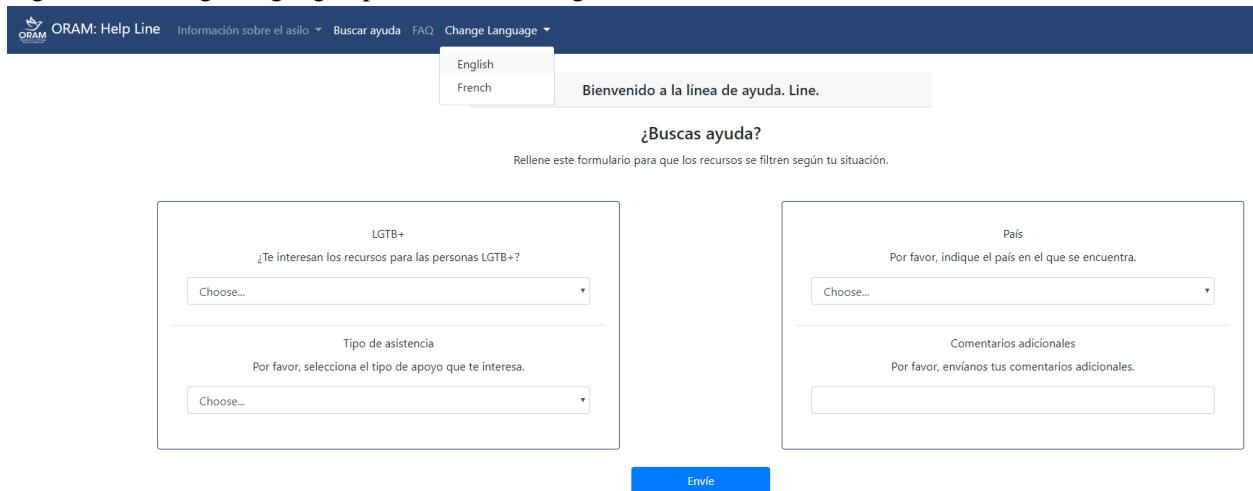


Fig. 9: The seek help page translated to Spanish and updated navigation bar with English option

Database Tool Guide

How To Access and Use The Database Tool

Preliminary Steps

- Please make sure that before you run that database tool that there aren't any cells empty and if they need to be empty to mark it with a "N/A"
- Additionally please make sure that formatting for the contacts goes in this way
 - Address:
 - Country:
 - Description:
 - Email:
 - Name:
 - Phone:
 - Website:
 - LGBT Friendly:
- Please Label LGBT Friendly as "True" or "False" not "T" or "F"

- If it is unclear to label the organization as either please put nothing, not even a space
-

Running The Database Tool:

- Open up the executable file that will have been sent to you.
- The executable file should run once opened
- While it is running it should output messages to you that will tell you if any errors have occurred, where they occur and why
- You will know that the program completed when you receive a message saying “Successful Upload to Database”
- When this has been completed you may now exit out of the database tool unless you wish to update the website again
 - If you wish to update again simply save your excel file and run the file again

Notes to Know:

- If you wish to remove information, simply remove it on the excel spreadsheet and fill in other information in its place. Run the executable file when you wish to send to the website
- You must keep to the format; any new information or new formatting will prevent the program from running properly
- Errors generally occur from a lack of information inputted.

Bugs or Issues

If you run into any technical issues or something needs to be updated you can email the developers for further assistance.

Technical Lead: Daniel Alvarado djalvarado@wpi.edu

UI Lead: Veronica Gurnawan vegurnawan@wpi.edu

Database Tool Dev: Bryan Gass bagass@wpi.edu

Sponsor Description

Introduction

The Organization for Refuge, Asylum and Migration, otherwise known as ORAM, is a nonprofit organization whose main goals are to provide aid, resources, and protection services to “exceptionally vulnerable” refugees and asylum seekers, especially LGBTQIA+ identifying refugees. Their projects include developing avenues for refugees to navigate the myriad of obstacles (legal, geographic, physical, etc.) present in the refugee system, conducting research into the increasingly imperiled situations of refugees, working to effect change to the system through said research and starting initiatives to support refugees and asylum seekers throughout their journey (ORAM, n.d.). ORAM identifies LGBTQIA+ refugees as amongst the most vulnerable of refugee minorities due to a whole host of cultural, legal, economic, and societal obstacles borne of their gender identities and sexualities.

ORAM collaborates with host governments, the United Nations, international NGOs (non-governmental organizations) and academic institutions in order to help influence and safeguard changes built to support the most vulnerable of asylum seekers, folks fleeing violence and political instability and refugees of all backgrounds (ORAM, n.d.).

Company Background and Size

ORAM is a small company whose headquarters are in Minneapolis, Minnesota. In February 2018, ORAM officially registered in Germany, opening their European office in Berlin. They are a subsidiary partner of the Alight family, an organization that provides health care and clean water, shelter and protection to displaced communities across the world. This partnership allows ORAM to provide critical services through Alight’s network and further reach displaced LGBTQIA+ asylum seekers. Their presence in Germany allows for direct access to the refugee communities in Europe, which is where a lot of displaced communities in the surrounding regions navigate to.

ORAM is based mostly on volunteers but has four main personnel: three are located at the Berlin office, with the fourth located at the Minnesota headquarters. The fourth, Steve Roth,

is the executive director with extensive experience in both the private and non-profit sectors. Anja Limon is the program manager in Berlin, along with Bella Stevens who is communications and development coordinator and Anna Fontanini, the program officer.

Overarching Goals

A large goal of ORAM's is to help protect exceptionally vulnerable refugees seeking asylum. Every year a great number of refugees without having applied for refugee status, travel to another country seeking asylum. ORAM helps these refugees primarily with legal assistance but also with guidance and information. They provide legal counsel and make sure that refugees know their rights and provide guidance so that refugees can find safety as soon as possible. There is also information online for vulnerable refugees that direct them to helpful resources. ORAM does not only help its refugees directly but also indirectly by spreading their knowledge and beliefs.

Another one of ORAM's primary goals are the Education, Outreach, and Advocacy of the needs of vulnerable refugees and the risks that they face. They believe that these goals are extremely important to the refugee protection strategy. They have taken a lot of steps towards this goal with many different approaches. ORAM has assisted in the training the employees of governments and organizations about the needs and risks of vulnerable refugees. They have worked with the United Nations High Commissioner for Refugees (UNHCR) and many other government agencies (ORAM, n.d.). ORAM does not just focus on governments and organizations but also on students and communities. They collaborate with universities around the world educating students with lectures, volunteering, and internships. There are guides and outreach programs for communities to learn more about helping vulnerable refugees. Perhaps the biggest form of education and advocacy comes from ORAM's vast amount of publications.

Publications

As one of ORAM's leading goals is to conduct intensive research that would be used to educate stakeholders and providing support services to refugees, they've amassed a significant body of published work dealing with risk assessment surveys, tools to aid professionals,

humanitarians and governments in better supporting LGBTQIA+ identifying refugees, profiles on particularly at-risk or problematic nations and more. For example, ORAM has established a code of conduct providing for modern aid organizations in assessing and accommodating the “needs and sensitivities” of sexual and gender minorities. This code of conduct is based on a similar code of conduct produced by the United Nations and reviews organizational practices, provides commentaries, and outlines proper procedures towards supporting these minorities (Grungras, n.d.). They’ve also produced presentation slides for refugee professionals to better equip themselves for the realities and situations of these vulnerable refugees (*Sexual and Gender Minorities*, n.d.), risk assessment profiles of specific countries such as Uganda and a variety of similar guides and checklists for refugees seeking support and humanitarians alike.

ORAM’s perspective on project problems is analytically finding solutions for refugees with an emphasis on refugees who identify under the LGBTQI+ umbrella. They carefully map out what could be of concern in various companies and what to expect for refugees. If the paper is being written for a country that is more accepting, then they lay out ways to undergo a positive change for assimilating their own identity into that accepting culture.

Conclusion

Beyond the name they have proven to be one of the authorities that can help minorities specifically within the refugee class. This is their concern because they truly care about the wellbeing and education of LGBTQI+ individuals and hope to see them thrive in an accepting environment or at the very least safely live within less accepting environments. This fits well given the mission statement of ORAM. Educating, advocating, and ultimately changing the lives of LGBTQI+ individuals is at the heart of what ORAM has shown they strive to accomplish.

What is the Asylum Process?

An Asylum seeker is an individual who is in a foreign country and seeking international protection.

29.4 Million People are Seeking Asylum

57% came from 3 countries



Syria



Afghanistan



South Sudan

The 3 Steps to seeking Asylum



Application



Interview



Decision

The general Asylum Process follows these three steps but it can vary from country to country

- **Applying for asylum means filing the application that the country provides.**
- **The interview is where you meet with asylum officials and state your case.**
- **After about 6 months (or longer) you will receive your decision.**

1,134,200 Decisions made in 2018 56% were denied any Form of Protection 3.5 Million pending decisions at the end of 2018

Common Challenges Faced

- The interview is where you have to prove you are in need of asylum
- Your application could be pending and prolong when you will receive a decision
- Language barriers can arise when the native language of the country is different from what you speak