See it now make it

Home page:
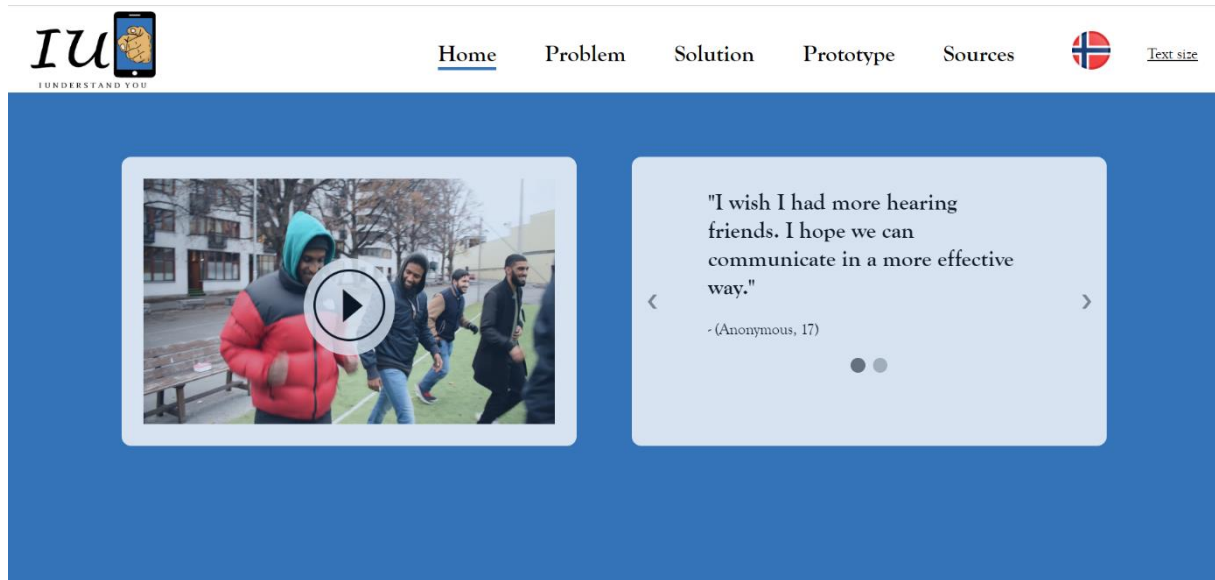
Problem page:

The navigation bar is fixed

"I hope the communication wall between the deaf and the non-deaf will disappear"
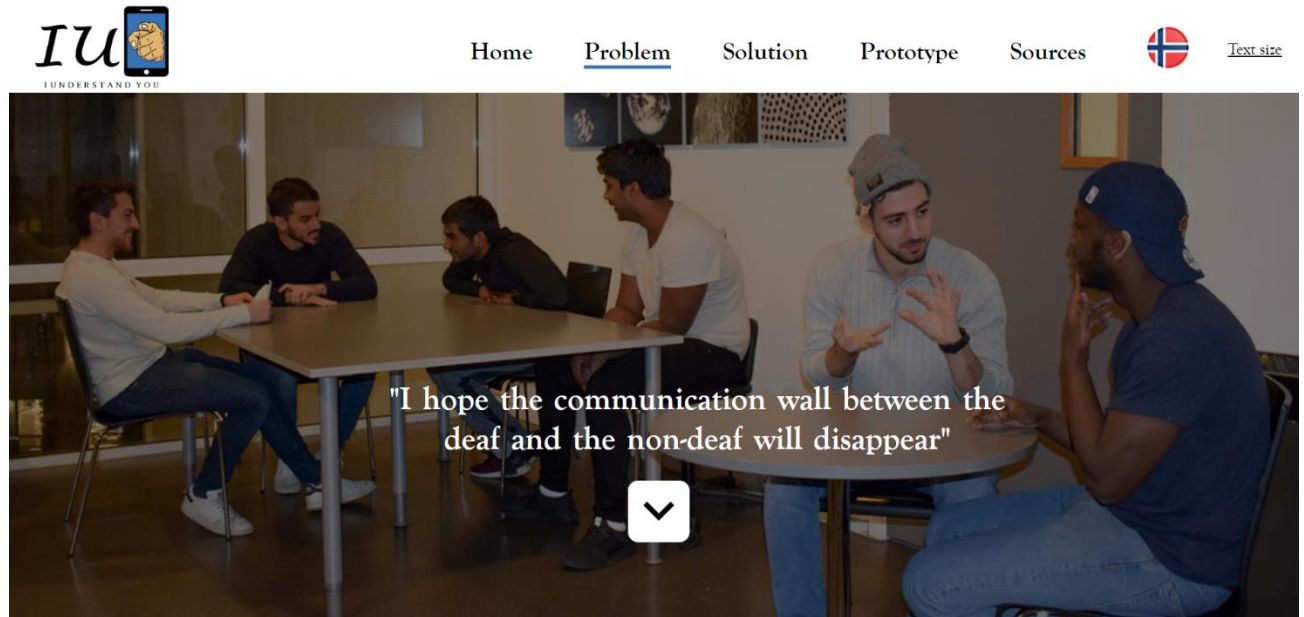
PROBLEM

Imagine being deaf and taking a tour at your local Hospital in your city. You're being taken care of by a newly trained nurse. This nurse cannot use sign language. What will you do? Find paper and pen? Or would you base the communication on notebook on your mobile? This will take much time and is not very effective either.

Hearing people are often afraid to say something wrong which will upset deaf people while communicating. In other words, there are communication difficulties between those who can hear, and those who cannot. What if the communication wall between them disappears? What if communication between then, could be digitized?

We all meet different challenges in our everyday lives, whether you are alone, or among people. One who faces several challenges, is a group of deaf people. Challenges are because there are insufficient funds that can safeguard the interest/safety to deaf people to feel comfortable enough to communicate with people who are not hearing impaired. In other words, the problem is the communication between deaf and non-deaf people.

Target group

The members of society affected by this problem, are hearing impaired people. It is first and foremost those who need to communicate with each other and that will be influenced by a possible solution. Families with deaf members, are also a part of our target group.

Others who encounter the problem, are hospitals that may have hearing impaired patients. Communicating with hearing impaired patients can be difficult. Our vison is that the current and future generation will gain easier growth through this technology. We have been informed by teachers at Nydalen school (school for deaf and hearing people) that sign language is not an international sign language. Therefore, we will only focus on Norwegian sign language for now. But we will think of further developing the solution to several countries.

Where do we meet the problems?

We have done a survey at a local high school in Oslo, Nydalen vgs. The survey was taken by students who study there, and some member of Hørselshemmedes Landsforbund. They were asked questions about where they face the communication problems

- Travel (Public transport, air travel)
- Social gathering
- In store
- At the doctor / with nurses
- In schools

Technological or social problem?

The problem we have presented is a social problem. When we say social, we think that there are difficulties in the relationship between individuals and society.

In other words, there is difficulty when it comes to communication between the hearing and deaf people.

Why is the problem relevant?

In some situations where we seek help/assistance when needed, can deaf people feel that they are left to themselves. To indicate what a deaf person is trying to say, can be challenging to most of us. For that reason, they are bound to interpret themselves in most situations where they are in contact with "hearing people."

Hiring an interpreter can be an efficient way to form a communication with a deaf person but might not be an accurate way to hold the quality assurance. since majority of us that don't know any sign language, we would prefer to form a communication based on note – writing. It might not be the most efficient strategy, but it will lead us closer to our goal which is to understand and accommodate our patient.

Based on the survey we have done, we found that those who can hear, might be afraid to talk to a deaf person. The reason behind this is that they are afraid to say something wrong or do something that can offend the deaf person. The hearing impaired were asked how relevant they think this problem is, and 75% thinks that it is very relevant.
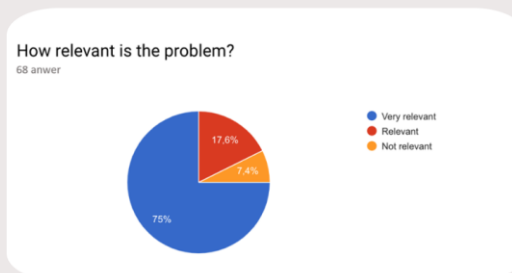
Another reason for why this is a relevant problem, is the social differences between deaf and hearing people. Both often sit by themselves at schools, meeting etc. They are not very socialized with each other. According to the survey, the deaf do not have many friends who can hear, and hearing people don't have many deaf friends.

Solution page

The navigation bar is fixed
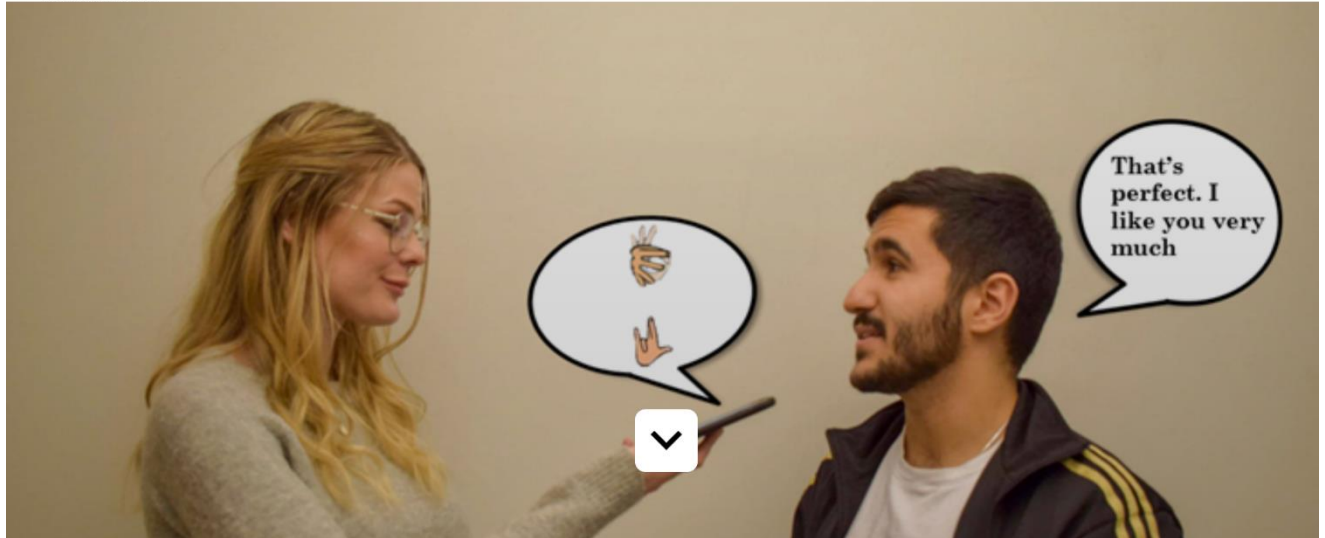
SOLUTION

We live in a world that is digitized, where communication has been much discussed. Communication between hearing and deaf has always been an important topic in the digitized world. Phone calls have been replaced by text messages, emails and video calls, but the problem is still there. How can deaf people communicate face to face with those who are able to hear?

That's exactly what our app will solve. Our app "IUY – I understand you" will prevent the communication wall from coming between the hearing and the hearing impaired. IUY will be a two-way communication app that translates signs to text and speech, and text and speech to signs.

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How does the app work?

To start using this app, you'll have to download it on your mobile or tablet. It can be downloaded on every kind of mobile, Iphone, Ipad, tablet devices. IUY will scan signs then translate it into text or speech.

IUY has a unique technique that connects to the camera on your device and scans your hand gestures into text and speech using special detection software. When someone speaks, IUY will convert the speech into text or signs, this will appear on the screen.

Our app is also connected to gloves that allow you to communicate via the app without having to open the camera on the app. This allows the hearing impaired to use both hands to communicate. The glove has special sensors that responds to the movements, and pass them on to the app. The app will be able to translate characters into correct grammatical full sentences.

You can also add words to the template on the app. This is an easier way for you who do not always want to scan characters. You can thus use words from the template too highlight your message. You can read more about the app here: prototype
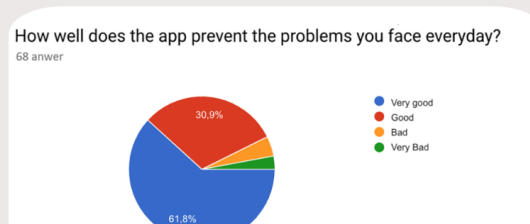
Cover photo of our app IUY

Why use IUY??

"I wish there was a way I could communicate with hearing people in an effective way" - nobody said anymore. Our app has a lot of benefits attached to it. The biggest benefit is that IUY eliminates the communication wall between the deaf - and hearing people. This makes the deaf people more included in schools and workplaces, which is desirable for the deaf people.

The app will be able to replace interpreters to some extent. The interpreter may be tired of interpreting sign language for a long period. The interpreter can sometime exclude words or phrases which will not give the same message to the deaf people. In some contexts, the explanation may disappear or be unclear. In large gatherings or discussions between the deaf people, the interpreter cannot follow through on all at once. Our app will fix that problem by scanning your hand gestures and translates it to full text to the user.

IUY will give the deaf people more freedom and independence. They don't need not be dependent on pen and paper, or by an interpreter who will translate everything to them. The sense of self-esteem is something everyone is entitled to and IUY will give this to the deaf people.

IUY will save you both time and resources. By avoiding having to look for your pen or avoiding having to find a note pad on your smart phone to write on. It also saves money in the form that an interpreter will be replaced as mentioned above.

The statistics of our survey show that 61.8% believe our app will solve their problems in a very good way. It shows that our solution is very relevant for the deaf people.

How well does the app prevent the problems you face everyday?
68 anwer

- Very good
- Good
- Bad
- Very Bad

30,9%

61,8%

As mentioned in the problem the deaf people do not have a lot of hearing friends and the opposite. Our app will resolve this problem. The benefit of the app here is that it will enable you to communicate face to face with both hearing and deaf people. The app will allow the deaf people to be more included in the community.

Other benefits are that the app can be further developed so that it can be used in several places. Further development may be to associate the app during lectures, so the deaf people can be included in the daily lectures with hearing students, and they do not have to go to special lectures for people using sign language. The app can be connected to the lecturer's microphone and the presentation will be converted to text / signs on the smartphone or screen next to the lecturer.

The deaf people were asked during the survey if they would like to use our app, and the score was shocking. It was 92.6% who would use our app, according to statistics.

Would you use our app?
68 anwer

Yes
63 (92,6%)

92.6%

7,4%

Yes
No
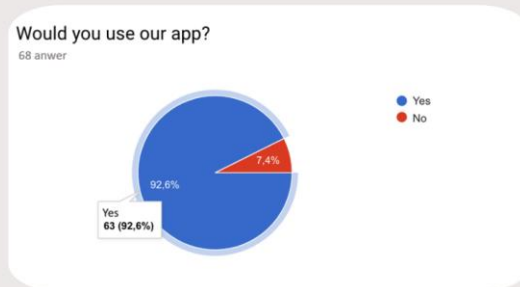
Our app will translate signs, not sign language. The reason behind this is that, according to SignLab, sign language is not 100% signs, but 30% facial expression. SignLang is a company that we've been in contact with. They're working on creating an app that will teach parents sign language, so that they can communicate with their deaf children.

Another reason for not translating the language, but only signs is, that sign language is not universal. The language is different from country to country and from person to person. Some use fast hand gestures, and other use slow hand movements. According to the Norwegian Deaf Federation, no sign language contains full sentences. Sign Language is an abbreviation of sentences.

Prototype page

Welcome to our prototype!

Below, you'll find the slideshow for our prototype and thought around how the app wil work.

The prototype is designed to fit both hearing and deaf people.

The idea behind the desing and functionality of the app, is that it can be used by adult and children.

Each slideshow shows the functionality of all the buttons on the app and is therefor divided into four slideshows. If the user want to navigate back to the home screen, he/she can click on the back button which is on every screen

Short about the app:
By going through the pictures below, we'll nagvigate you throug the app's functionality.

The user will come across a home screen with three buttons:

1) Translate
2) Connect device
3) Support

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1 / 6

On the main page, the user will come across this image. The user will have three choices to choose from.

The user will here click on the "Translate" button.

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1 / 4

Now, we are back to the main page, and the user will have three choices to chose between.

The user will here click on the "Translate" button

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1 / 2

Here will the user click on the "Connect to device" button.

Here you can use Bluetooth or local WiFi networks to connect.

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1 / 2

Here the user can press the "Support" button for information about the app.

Here you can read about us and be able to contact us.

Sources page:

Sources
- Been in touch with HLF - Hørselshemmede's landsforbund.
- HHBO - Hørselshemmede barns organisasjon.
- Been in touch with the Signlab company for information on sign language.
- Used this website to find color the colorblind people can see

Sources for images
- Source of icons used on the different webpages
- Image on the problem page is taken from wikihow
- Source to edit the prototype in mobile
- Proto.io has been used to create prototype of the app
- Source of icons used on prototype
- Source to edit the size of the images.
- In order to retrieve flag icons, we have used is countryflags.com

Sources for video
- The song that has been used in our commercial
- iMovie has been used to make/edit the video of our idea

Research
- Link to our survey