29-05-2018
Future Session: The Future with Chatbots at HumanityX, The Hague

What is a chatbot and how can it be used?

Wikipedia:
A **chatbot** is a computer program or an artificial intelligence which conducts a conversation via auditory or textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner. Chatbots are typically used in dialog systems for various practical purposes including target group service or information acquisition. Some chatbots use sophisticated natural language processing systems, but many simpler systems scan for keywords within the input, then pull a reply with the most matching keywords, or the most similar wording pattern, from a database.

Report
This somewhat elusive technology is everywhere around us. Chatbots carry the promise of enabling organizations to engage more efficiently in direct contact with target groups. As more and more people have access to mobile devices chatbots might be more and more used. The promise of chatbots makes one wonder what this cutting-edge technology can mean for the humanitarian sector. How can we use chatbots to strengthen the position of vulnerable groups, for instance? The latest Future Session shed light on this essential question.

Examples given where a chatbot might be used:

- informing/ communicating
- crowdsource information by sending surveys (you start the conversation)
- crowdsource information by sent information (people start the conversation)
- filter through qualitative data streams (text recognition)
- user guidance (f.e. set up of a system)
- answer (simple) questions
- training/learning
- check status (f.e. patient after hospital visit)
- targeted feedback to communities

Chatbots in refugee camps

Thomas Baar, Tech Lead at HumanityX, opened the session by sharing the latest report of his research on investigating the possibilities for peripheral communities to get access to mobile devices. The researchers figured that a humanitarian chatbot could have helped them in getting access to information. Refugees could for example notify the chatbot when a hygienic facility in the refugee camp needs reparation.

This would f.e. allow local NGOs in hygiene to act more efficient and accurately.

Making Syrian refugees visible

An example of chatbots for the humanitarian sector is being explored by Upinion. This is a survey platform that builds communities through social messaging to collect insights to provide services. Recently, they started the endeavour to apply their skills and instruments on the humanitarian sector. Upinion believes that people too often suffer from inefficient support due to a lack of data. The execution of needs assessment is time consuming, complex and expensive. Upinion asked: why not collect data from affected individuals and populations themselves through social media, by means of a Facebook survey?

Upinion walked the talk, as they just completed a successful pilot research targeted on Syrian refugees in three areas in Turkey. They sent out a survey asking these people to answer a couple of questions. Within 48 hours, they received 83 respondents. On top of that, 99% of the respondents allowed them to keep asking questions in the future. This means that Upinion has found a way to engage these people to be part of a research panel to gather more data. And often it goes viral. The gathered data can be selected in different ways: gender, scheme's & figures, wordcloud, etc. A reward system (f.e. air time) can be included. The bot used in the system gave a large cost reduction.

Gathering trustworthy news

Free Press Unlimited showed that chatbots can also be very useful for gathering local news. Radio Dabanga is a Dutch website that reports independent news for the citizens from Darfur and Sudan. Much of their local sources are people from the community that started to send texts via WhatsApp. These were too many to process. So, how can an intelligent chatbot help? On the basis of specific keywords, the chatbot can ask a specific question to further gather information for event reporting. Free Press Unlimited experienced an increase in efficiency and effectiveness in the process of gathering information and staying in contact with the local communities. The chatbots also allowed Free Press Unlimited to collect data from vulnerable populations. This application clearly shows that chatbots can play a crucial role in ensuring access to trustworthy information for communities in peripheral regions.

Breakout session

The facilitator triggered the participants to work with chatbots-inspired exercises themselves. Pairs re-enacted conversations diverse development cooperation organizations could expect from their target group. This taught the participants what the process of identifying key words and enabling a chatbot to react in a correct/ automated way looks like.

Important lessons:

- . use generic questions
- . chose text based, emoji based, image based content
- . why, what, where, who, when: to classify and order information
- . see access to data (learning)
- . how will you code (hard code – structured like tree decision)
- . language support (dialect)
- . transparency (why which answer is given)
- . look for trends
- . text recognition
- . meta data
- . inform the user you are a bot and not a human
- . bots are not smart! Artificial Intelligence is accelerating but not yet very usable
- . if you get often the same kind of answers a bot might be used
- . think this way IF …. IF NOT; THEN, give options
- . If it becomes complex a human operator is needed
- . learn the lessons of the automotive industry (self-driving cars, and the ethical choices)
- . see words as : just, now….. time related. And but, however…. = doubt
- . culture plays a role in interpretation!
- . a bot can use /repeat the same words and ask 'tell me more', see ELIZA
- . a bot can never be perfect, just like a human ☺
- . humour is important in a conversation, but does a bot can understand
- . for needs assessments a bot can easily be used
- . there is a need for open data sets and repositories

The participants will hopefully come up with many more potential applications of chatbots. HumanityX offers help in developing!

Next session: the future with data literacy!

In the next Future Session on June 26 you will get the chance to learn more about data literacy / leadership and its relevance for future development cooperation. Sign up here!