# Fieldlab8 - Analytics of COVID trends data

Members: Milou Schamhart, Hielke Muizelaar, Christie Bavelaar, Danielle Rachman, Kenneth Fargose

Supervisor: Meriam Ghardallou

The team had two scheduled meetings for the first week of the FieldLab. In the first meeting, we aimed to learn more about each other, focusing on the various skills within the groups, and establishing expectations and roles within the group. In the second meeting, we met with our supervisor, Meriam Ghardallou, to gain a better understanding of the FieldLab.

**Skills of members**

Based on the first meeting with our group, we learned that we all have some data science background and interest. Christie and Milou both did the computer science and economics bachelor so will have some economics and business knowledge to apply. Milou has additional knowledge in statistics while Christie enjoys creating data visualisation. Kenneth has a background in engineering and has experience with social media analytics. Hielke has the most significant programming background and is passionate about programming. He also has a keen interest in health related applications of computer science. Danielle comes from a healthcare focussed study. She will be able to provide the group with domain knowledge on healthcare in developing countries. Danielle enjoys presenting and Kenneth is using this as an opportunity to improve his presentation skills. In addition, we all have experience with academic writing from previous studies. Lastly, we all enjoy a challenge and trying to find creative solutions for complex problems together with a group. This team has members with a diverse background that allows us to cover the wide range of skills previously mentioned. This will most certainly help us during this project.

**Meeting with supervisor**

Before our first meeting, we curated a list of questions that we wanted to ask Meriam Ghardallou. Firstly, we wanted to understand the aim and goal of the project. We also wanted to know more about the input information we would get, the skills and techniques we would use and the results we would have to deliver at the end of the project. During the meeting Meriam Ghardallou first told us about her background, as a medical doctor, which is quite different from our more computer science related backgrounds. She assured us we would not need to have any prior health related experience as we would first be conducting a literature study. Here, we would have to define a vulnerable community. We discussed this possible definition more in depth, as there are different possible factors making a group vulnerable and thus, impacting the group’s access to healthcare. Possible barriers are the language spoken in medical facilities, location of health care facilities and lack of transport opportunities and finances. In our project, we will focus on the social determinants of health and the risk associated with the identified social factors, such as employment and education. Meriam Ghardallou also told us in more depth about different factors involved with disease risk such as age, genetic disposition, habits and lifestyle. We had quite a few questions about the work that would be expected from us. It was unclear to us at first whether data had already been collected and needed to be analysed, or if we had to work on the data collection itself. We now know that we will not be working with any physical data sets, but rather will be creating a framework for future researchers to be able to collect, store and analyse data from these populations more easily. A few questions that we composed that we will try to answer during the project are:

* How can we collect data about these groups?
* What are existing data sources that we can use?
* How to gather all the data from different sources together?
* How can we govern this data to be able to draw conclusions from it?

We discussed the end output goal, which is to make a framework to deal with this issue of COVID 19 data availability for social-economically vulnerable populations. We discussed the timeline for this project. In September, we will review the literature on the social determinants of health (SDOH) ,vulnerable populations and COVID data as well as possible existing solutions. Then, in October we will interview researchers who have worked with similar data and report on possible solutions. Thereafter, in November we will create the framework to deal with covid-19 data availability for vulnerable populations. In the final month, December, we will create our final report and presentation.

During this meeting, we received a lot of important information about the goals of this FieldLab and the expectations for us. We agreed with Meriam Ghardallou that we will give her regular updates on our progress. She will contact two researchers for us that will be able to give us interesting insights for this project.

**Conclusion**

Our FieldLab concerns constructing a plan to manage COVID-related data among vulnerable groups of people. Currently, vulnerable communities are often not included in data analysis as they may not be interacting with the healthcare system. Another point is that the knowledge on how to conduct data analysis on these groups is severely limited. Within this FieldLab, we aim to take an initial course of action in tackling this problem. We firstly conduct a literature study on which specific social characteristics make a group vulnerable. Furthermore, we plan to assess the data collection methods from these groups, how to govern these data and how conclusions should be drawn. Our goal is to provide a practical, feasible framework that can be utilised by health data experts to grasp data analysis regarding vulnerable groups. We aim to compile a framework that is suitable for analysis of the ongoing COVID pandemic and is easily translatable to other types of analyses as well. This framework should support in providing data about these groups so that actions can be taken to address health challenges in vulnerable groups.