

Meeting minute

Date: 4/5/2022

Time: 9am- 9:45am

Attendees: Daniel, Suyi, Tom, Yacho, Zhiyuan

Activities during the meeting:

1. A brief review of the research paper that was conducting research on a very similar field compare to our research. In the study we had a rundown on how they have filtered their dataset and their ways of addressing how to describe variability. Eg aggregate nodes that happened simultaneously, filter edges (relationships) that is infrequent, select only the top x clusters of nodes so give graphs a higher interoperability.
2. Using the research paper as inspiration. We clarified with the client on how to filter lab event and prescription table in the MIMIC dataset. Some suggestion might be using unsupervised machine learning algorithms to prune less relevant tests/drugs and cluster similar test together and form meaningful categories. Another way to describe variation is to use expert knowledge. Examples shown in this meeting are CSIRO and RxNav API. Both of which categorises drugs and tests in a tree structure and we can use it as a clinical reference to aggregate and filter our dataset.
3. If possible, the ultimate goal for this project is to find some other algorithms from other field such as manufacture industries and adapt their method/algorithms so that we can discovery new ways of explaining variability in the clinical field.
4. Clarified with the client that the end goal still has to do with patient's outcome, even though the method we are going to use are most likely unsupervised learning. The client still would like us to construct associations between the variability score and some measurement of patient outcome (mortality score, ICU stay time etc)

Outcome for this meeting:

Have a much better understanding on how to filter/categorise the MIMIC dataset

Continue on researching other ways of describing variability and construct original ways of measuring variability.

Split the team into 2 groups where Zhiyuan and Yacho is doing research and rest of the team is conducting data analysis section.