

In our project, our goal was to make an application that takes in a CSV file and translates the necessary data from it into an XML string with the HL7 format. We would then submit that to the BayesMendel risk calculator and receive back an XML string with the appended risk data. We would then search that XML string for the necessary Risk Assessment data, and append a new column onto the original CSV file with this new risk information for each patient that was read in.

Our program currently takes in a CSV, parses it in the necessary places and translates it into an XML file with appropriate HL7 formatting, ready to be inputted into the `getRiskHL7()` method provided by the BayesMendel risk calculator. There is also another part that will allow for easy integration into a program that will append new values onto the end of the CSV file, allowing for additions such as risk calculations and other data. This program allows for smooth transition once there is access to the BayesMendel calculator, for there are only a few modifications to be made.

We have an executable file that will convert the given CSV file into an XML string formatted to HL7. This HL7-formatted string is what is ready to be passed into the BayesMendel Risk Assessment Calculator, which one can then use to calculate the risk. We also have another file that appends an extra column to a CSV file and fills it with values. When we have full access to the `getRiskHL7()` calculator from BayesMendel, these values will actually be filled with Risk Assessment Scores. With that information, we can parse the necessary data from the outputted XML file (from BayesMendel) and convert it—along with the Risk Assessment scores—to a new CSV file.

In essence, we succeeded with being able to convert a CSV file generated from HR4E's questionnaire into an HL7-formatted XML file. That file can be used in the BayesMendel Risk Assessment calculator. We also have a solid framework for being able to parse through more information so that actual integrated risk-assessment support can be easily added once we have full access and time to the `getRiskHL7()` method.

Our documentation is also contained in our GitHub repository.