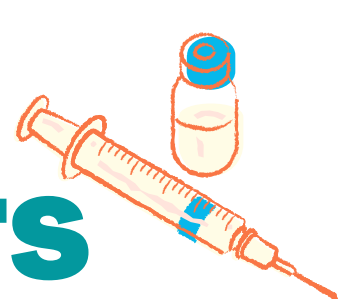


# FACTORS CONCERNING THE HEALTH OF DEMENTIA PATIENTS



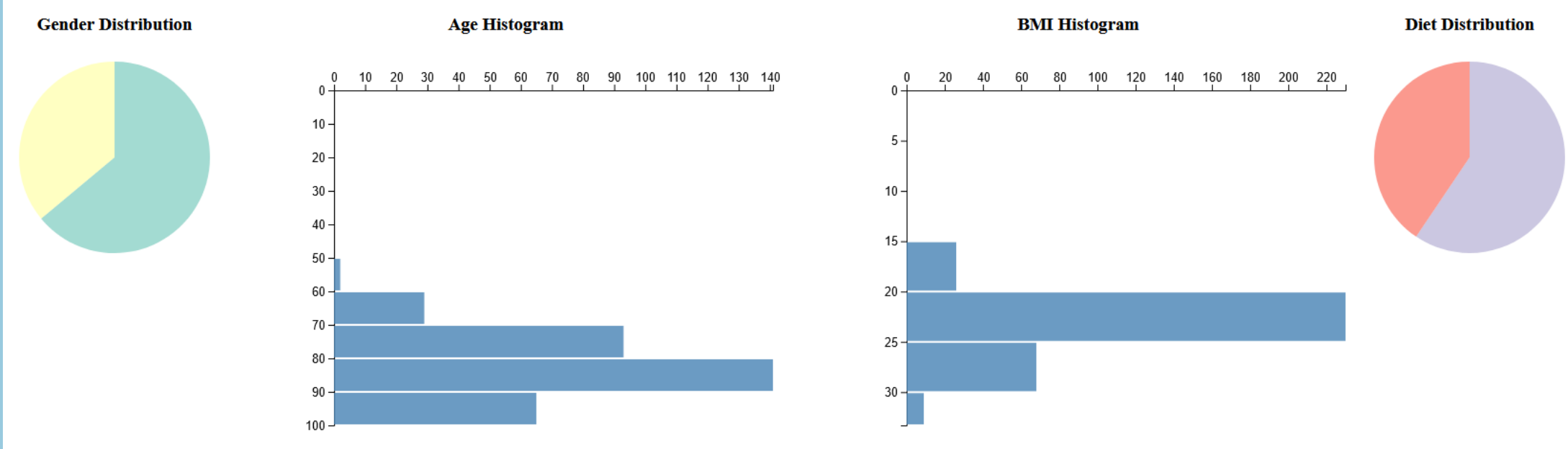
## DATASET & TASK

Dementia is a general term covering a wide range of symptoms related to impaired ability to think and remember, which can lead to an inability to handle daily activities. We used dementia patients' data to explore the correlations between negative incidents and the patients' living habits and statuses.



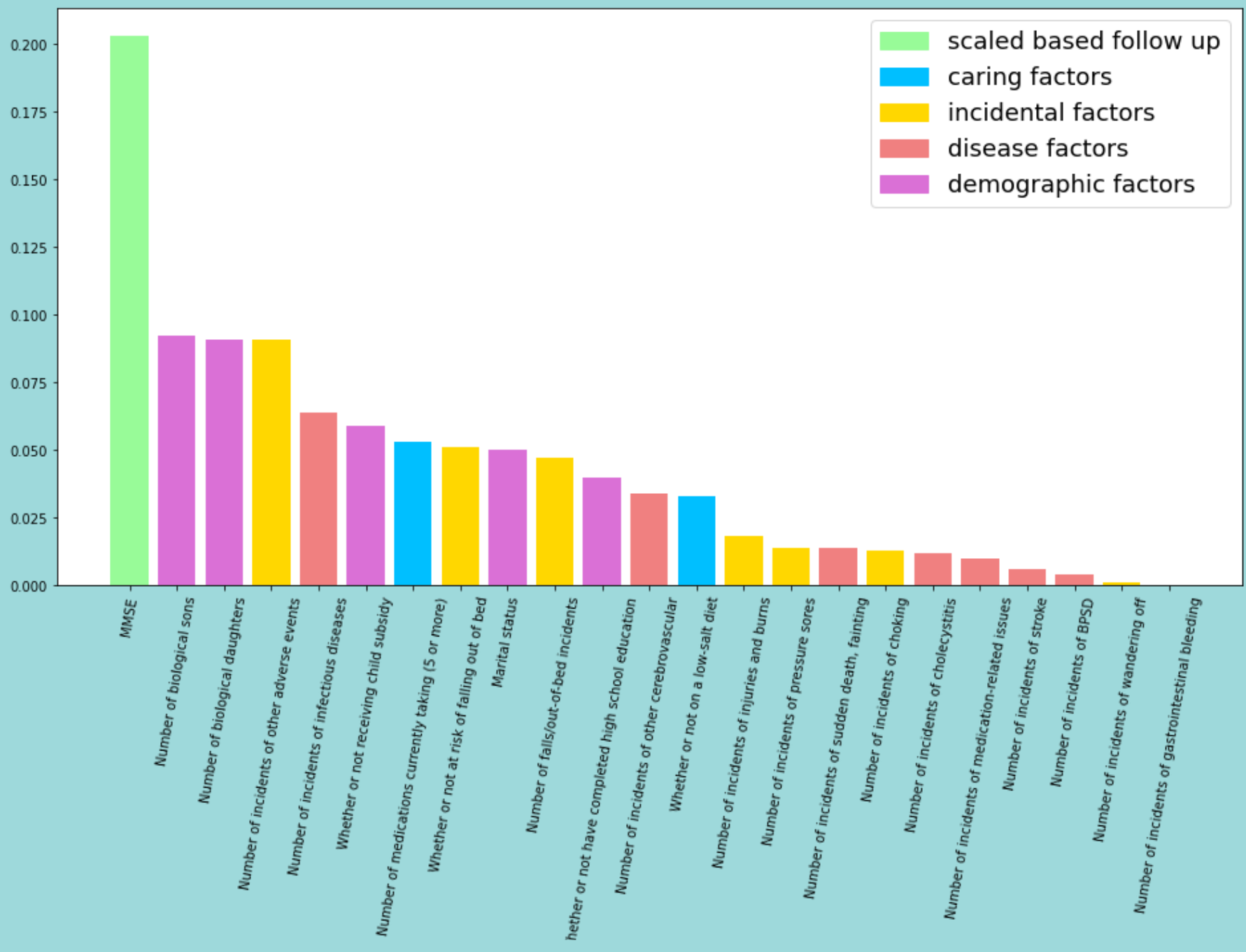
### Data Distribution

Female Male High Salt Low Salt Patient Status: All Status Selected Gender: All Selected Diet: All



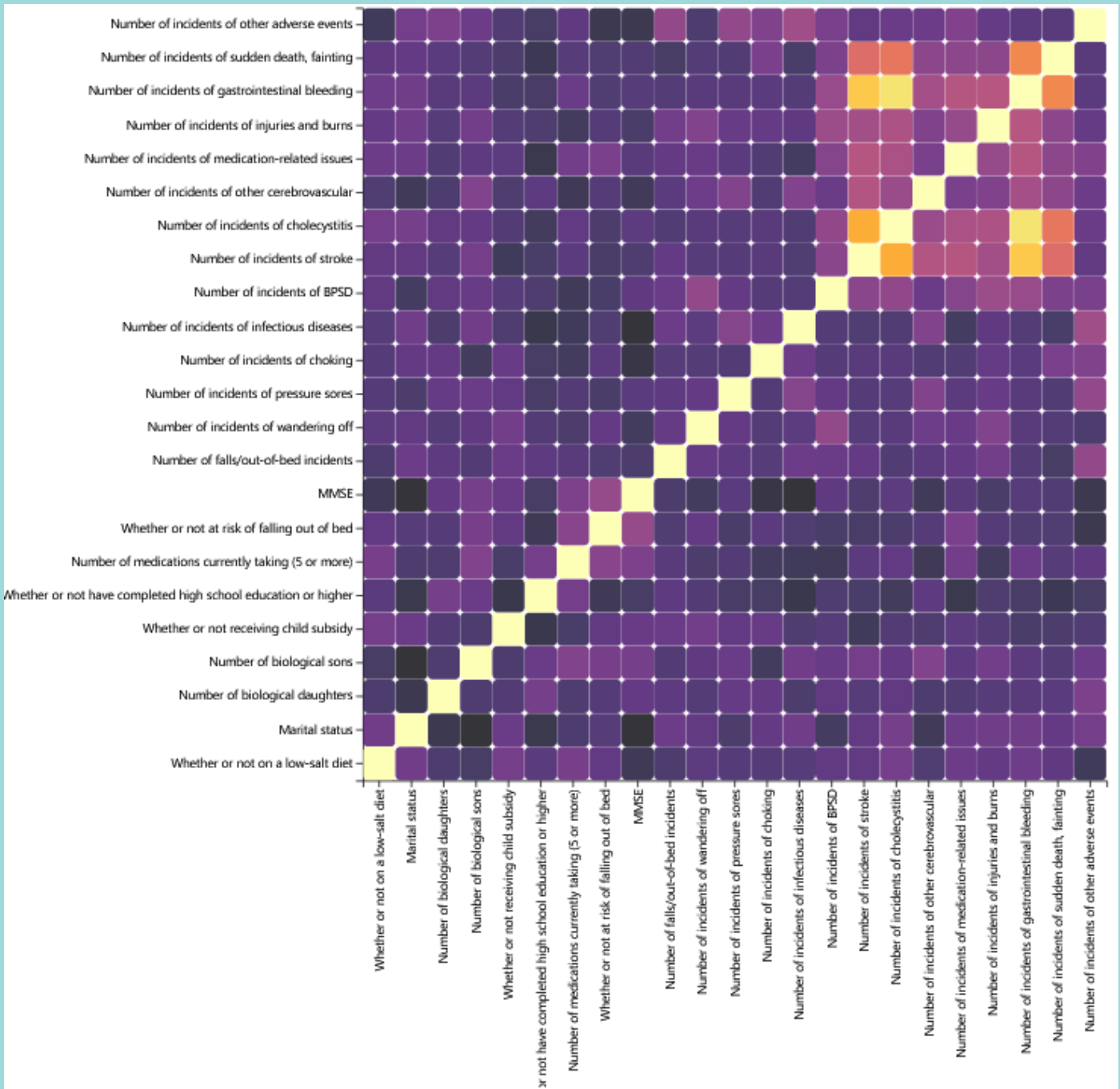
There are 213 women and 120 men, with age ranging from 50 to 100 and the BMI value ranging from 15 to 33. Patients who are dead are all above 70.

## FEATURE IMPORTANCE



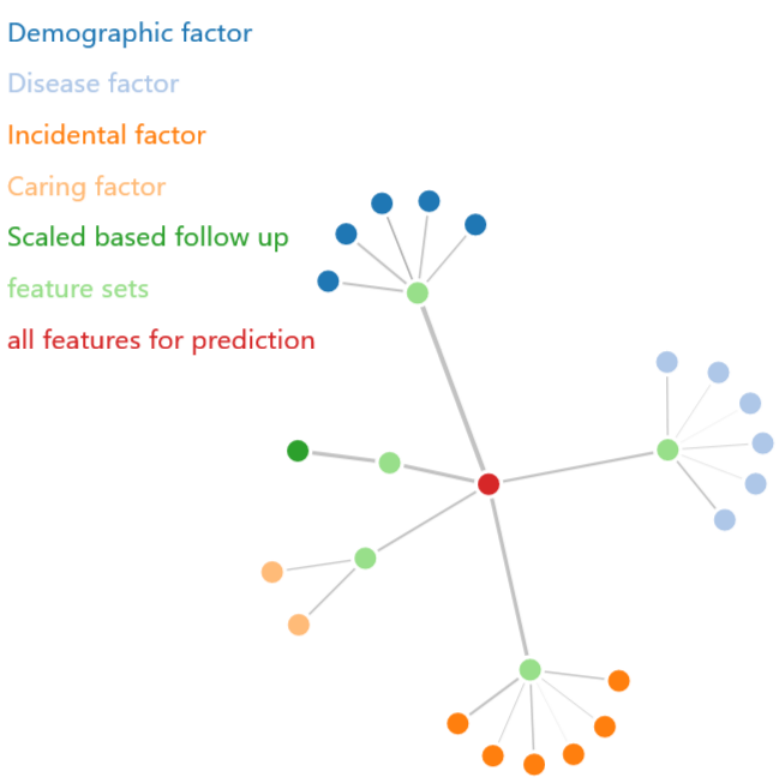
The features of the patients are correlated to different degrees. The bar chart shows an ordering of feature importance from random forest. Among the 23 features, we have noticed that scaled based follow-ups and demographic factors are the major factors to dementia.

## FEATURE CORRELATION



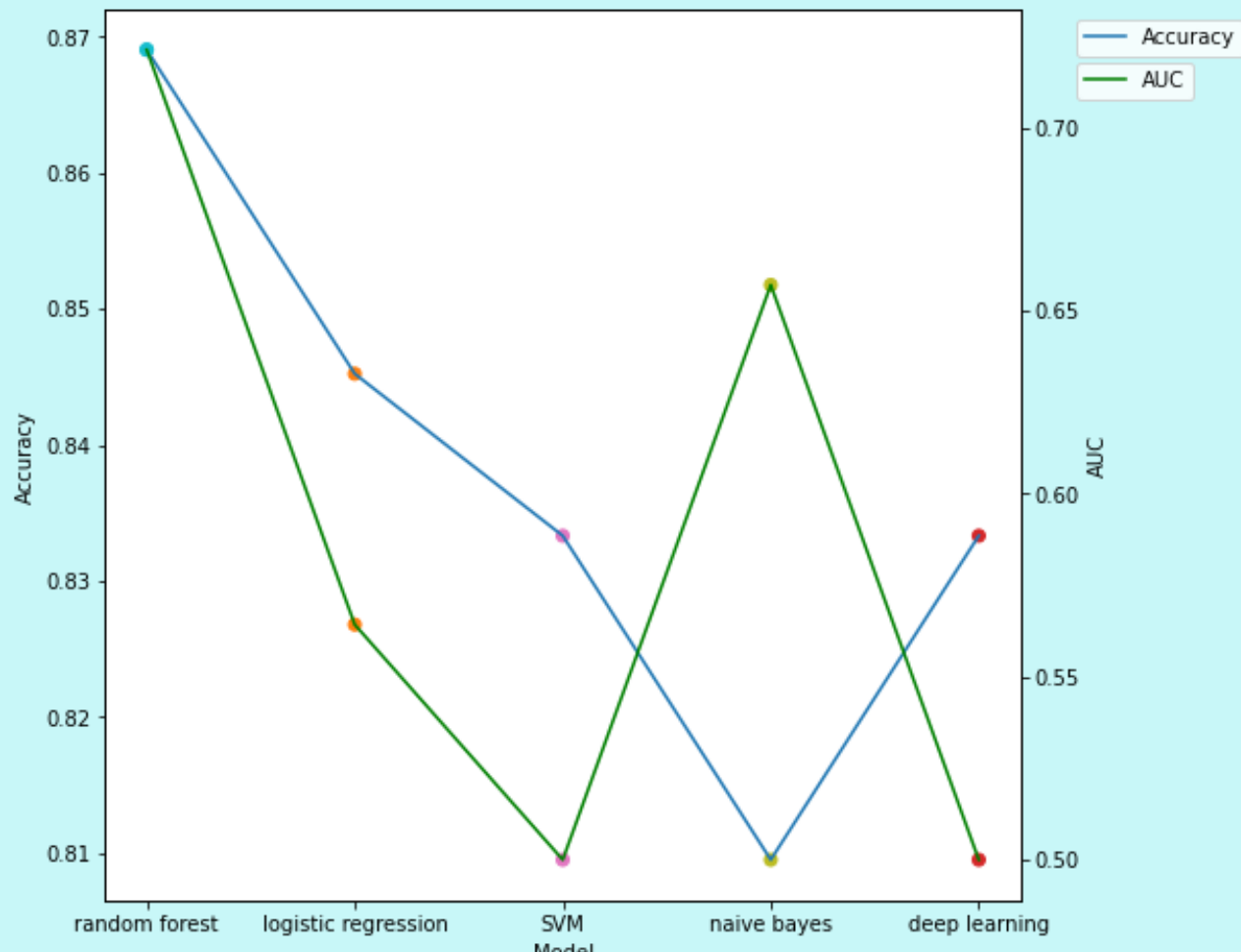
This graph exhibits a heatmap of correlation, and we have found that the number of sudden deaths and fainting are highly relevant to BPSD, strokes, cholecystitis and gastrointestinal bleeding

## FEATURE NETWORK



The network demonstrates the structure of features and the quantitative information of the feature importance. We have found that the demographic factors are most influential.

## MODEL ACCURACY



We used different models on the dataset in the early stage and compared their accuracies and AUC values. Random Forest has the highest score of 0.87 and 0.72. Random Forest also outperforms the others on R-square values.

