

Psychiatric patient improvement

Likelihood of improvement in outcomes for psychiatric patients

Benefit

Provide psychiatric hospitals with optimal personalised patient treatment method to ensure the best patient outcome at a reduced cost.



Context

Psychiatric hospitals offer various services to help patients with advanced mental illness. These hospitals use a combination of medication and therapies to help patients manage through their conditions. It is a branch of medicine that is challenging because different patients respond in different ways, so we decided to use a machine learning approach to this challenge.

Methodology

There are standardised questionnaires that are used to measure progress while in hospital. One of these questionnaires measures the changes in patient symptoms. We built a solution to predict which patients will improve between admission and discharge from hospital based on the data available at admission to hospital. The next step is to include the data that describes the clinical activity in the hospital to define a personalised treatment patient for each patient.

Results

90.3%

accuracy at predicting which patients will improve while in hospital

74.3%

accuracy at predicting the quantum of improvement