Abstract:
Machine learning models are used to estimate the early prediction of Sepsis patients. We have tried few baseline models like Logistic Regression, linear discriminant analysis, AdaBoost, deep learning models such as LSTM model and anomaly detection models such as isolation forest but our linear discriminant analysis model stands out best to provide better score and prediction. Early Sepsis prediction and ways to intervene Sepsis is a challenge; furthermore, to the best of our knowledge no benchmark prediction systems has been developed yet which has culpability to detect early sepsis prediction before formal clinical prediction. To address this issue, our team train state of art Machine Learning algorithm on provided dataset consists of twenty thousand patient data.The dataset contains the patient of both Sepsis and no-sepsis patient with highly imbalanced class ratio. We used bootstrapping to handle class imbalance and did scaling and imputation at the preprocessing step. Our state of art Machine Learning Algorithm(LDA model) gives 71% accuracy and utility score calculated as 21%. We are constantly improving the performance of our model to build a prediction system that can make more accurate early Sepsis prediction in order to lower down patient health and reduce healthcare expenditure.