### **Analytics for Hospitals Health-Care Data**

**TEAM ID: PNT2022TMID04331**

**LITERATURE SURVEY**

| **S.NO** | **PAPER** | **AUTHOR** | **YEAR** | **METHOD AND ALGORITHM** | **ACCURACY** |
| --- | --- | --- | --- | --- | --- |
| 1. | Predicting Hospital Length of Stay using Neural Networks on MIMIC III Data | Thanos Gentimis  Ala’ J. Alnaser  Alex Durante  Kyle Cook  Robert Steele | 2017 | Neural Networks one of the most prominent tools for analyzing big data sets and generally data that comes from different modalities is Artiﬁcial Neural Networks. These algorithms emulate the “learn by example” technique that we use to understand a phenomenon. MIMIC is a crucial component of this project is to be able to analyze the large amount of data contained in Electronic Medical Records (EMRs). | 80% |
| 2. | Predicting SARS-CoV-2 infection duration at hospital admission:a deep learning solution | Piergiuseppe Liuzzi  Silvia Campagnini  Chiara Fanciullacci  Chiara Arienti  Michele Patrini  Maria Chiara  Carrozza  Andrea Mannini | 2022 | Classical machine learning algorithms, such as optimized linear regressions and random forests, resulted in performances not fully satisfying for this problem. However, non-linear models resulted to significantly improve the prediction accuracy. | 90% |
| 3. | The application of machine learning algorithms in predicting the length of stay following femoral neck fracture | Hao Zhong  Bingpu Wang  Dawei Wang a  Zirui Liu  Cong Xing  Yu Wu  Qiang Gao  Shibo Zhu  Haodong Qu  Zeyu Jia  Zhigang Qu  Guangzhi Ning  Shiqing Feng | 2021 | In this Three algorithms are used BP,SVM and PCR. Among these three PCR is the most efficient algorithm. | 90.91% |
| 4. | Predicting the length of hospital stay of burn patients: Comparisons of prediction accuracy among different clinical stages | Chin-Sheng Yang  Chih-Ping Wei  Chi-Chuan Yuan  Jen-Yu Schoung | 2010 | Regression techniques like SVM regression and M5 are used to predict the LOS for burn patients.Each of them perform better at different stages of burns. | 80% |
| 5. | Machine learning model for predicting the length of stay in the intensive care unit for Covid-19 patients in the eastern province of Saudi Arabia | Dina A. Alabbad  Abdullah M. Almuhaideb  Shikah J.Alsunidi  Kawther S.Alqudaihi  Fadimah A.Alamoudi  Maha K. Alhobaishi  Naimah A. Alaqeel  Mohammed S. Alshahrani | 2022 | Four ML algorithms were used in this problem Random Forest(RF),Gradient Boosting(GB),Exterme Gradient Boosting(EGB),Ensemble Classifier. | 94.14% |