A Review Of Liver Patient Analysis Methods Using Machine Learning

Define Problem / Problem Understanding

Business Requirements

Liver disease is one of the most chronic and threatening diseases globally that can cause various side effects if not treated early (Dutta et al., 2022). According to World Health Organization (WHO) report in 2018, the number of deaths due to liver diseases is around one million and ranked 11th in the world with a critical number of fatalities (World Total Deaths, n.d.). As the symptoms of liver diseases cannot be visible until the condition becomes chronic, it is challenging and daunting for medical health professionals to identify liver disease at its early stages (Devikanniga et al., 2020). In addition, the traditional testing methods like sonography, MRI scans and CT scans that are available for detecting liver diseases are expensive and harmful with numerous side effects (Joloudari et al., 2019). Thus, a significant constraint found by health care workers is to predict liver diseases at an early stage, at minimal cost and at the same time provide a better health care system to treat liver diseases. Severe liver diseases include problems with indigestion, dry mouth, pain in the abdomen, skin colour turning yellow, numbness, memory loss and fainting problems (Shaheamlung et al., 2020). Unnoticed at the initial stages, these symptoms are only visible when the disease turns chronic. However, even though the liver is partially infected, it can still function (Devikanniga et al., 2020). Patients with Liver disease have been continuously increasing because of excessive consumption of alcohol, inhale of harmful gases, intake of contaminated food, pickles and drugs and other factors. Due to the asymptomatic behaviour and higher costs of liver disease treatment, it is essential to prevent or diagnose early for better treatment. This dataset was used to evaluate prediction algorithms in an effort to reduce burden on doctors. Use these patient records to build a prediction model that will predict which patients have liver disease and which ones do not.