Milestone 1: Define Problem / Problem Understanding

Activity 1: Specify the business problem

Refer Project Description

Activity 2: Business requirements

The business requirements for a machine learning model to predict chronic kidney disease include the ability to accurately predict the ckd based on given information, Minimise the number of false positives (predicting diseased) and false negatives (not diseased). Provide an explanation for the model's decision, to comply with regulations and improve transparency.

Activity 3: Literature Survey (Student Will Write)

Chronic kidney disease (CKD) is a significant public health issue, affecting an estimated 14% of the global population. The disease is characterized by a gradual loss of kidney function over time, leading to a range of serious health complications, including end-stage renal disease (ESRD) requiring dialysis or kidney transplant. Early detection and management of CKD is crucial to prevent progression to ESRD and improve patient outcomes.

There have been numerous studies in recent years aimed at developing accurate and efficient methods for predicting CKD progression. These studies have employed a variety of techniques, including machine learning, deep learning, and artificial neural networks.

Activity 4: Social or Business Impact.

On a social level, early detection and prediction of CKD can lead to improved patient outcomes and quality of life. By identifying individuals at risk for CKD, healthcare providers can intervene early and slow the progression of the disease through lifestyle changes, medication management, and other treatments. This can help prevent the need for dialysis or kidney transplantation, which can be costly and life-altering for patients. Additionally, early prediction can also help reduce the overall burden of CKD on the healthcare system by reducing the number of hospitalizations and emergency room visits.