

Detection of Chronic Kidney Disease with Machine Learning

1. What are you trying to do?

I will use machine learning algorithms to explore whether we can predict chronic kidney disease or not based on a patient dataset containing relevant features such as age, gender, blood pressure, serum creatinine levels, and other clinical indicators.

2. How is it done today, and what are the limits of current practice?

Currently the detection of chronic kidney disease is done by traditional diagnostic methods and some clinical assessments. However by this still its difficult to detect the disease in its early stages.

3. What's new in your approach and why do you think it will be successful?

I will use a machine learning algorithm on a patient dataset containing all the relevant attributes which will help to identify patterns and risk related to this disease. By using ML algorithms the disease can be detected in early stages and can be treated timely.

4. Who cares?

Early detection of chronic kidney disease (CKD) is important to healthcare providers, patients, and public health authorities. It can help prevent complications, improve patient health, and lower healthcare expenses.

5. If you're successful, what difference will it make?

If I am successful then obviously it can save many lives, reduce the healthcare expense and it may also reduce the complications as the disease will be detected in early stages and can be treated timely.

6. What are the risks and the payoffs?

The risks may include the data privacy concerns and possible biases in the model. However, the benefits include better patient care and efficient resource allocation.

7. How much will it cost?

The total cost will depend on data collection, infrastructure, and expertise required.

8. How long will it take?

The timeline varies depending on the availability of data, model development, evaluation, but it usually takes a few months to a year.

9. What will be the mid and final evaluations to check for success?

The mid evaluation check to success can be evaluated by model performance , cross validation result and feature importance. While the final evaluation can be done by external validation , clinical relevance and Impact Analysis.

