

Vision Statement

Project goals:

Sepsis is a life-threatening condition that arises when the body's response to infection injures its own tissues and organs.

Patients who develop shock-septic have an increased risk of complication and death, and also face higher health care costs and longer hospitalization.

Early diagnosis for shock-septic condition is crucial to proper sepsis management.

Early and accurate prediction of the onset of sepsis could facilitate effective and targeted treatment which can in most cases reduce the patients death rate and lower the risk of organ damage.

That's been said, our main goal is to create a machine learning model that based on medical information using the CVRI scale we can give the patients who need treatment priority so they won't enter shock-septic.

Project scope:

The project scope will be on predicting early shock- septic condition and help prevent it using the CVRI scale.

We also want to measure and see how the CVRI scale is changed based on our results.

The project won't include other medical conditions (such as heart attack and so).

High-level features or requirements:

We will create the function $CVRI = (\text{blood pressure, heart beats, respiratory rate} | \text{weight})$.

Machine learning model that can identify and predict early shock- septic condition.

Also, the requirements include collecting a large database of patients that has sepsis before, with that database we can create our machine learning model.

Major milestones and deliverables:

- First milestone will be collecting our database, process the data and build our CVRI function.
- Second milestone would be to build our machine learning model, that can predict shock-septic condition by medical information with and without CVRI scale.
- Third milestone would be to analyst the data and check how the CVRI impact the results and try to see if we can make conclusions about the data.
And also presents an organized results analytically.

Diagnosis of sepsis has largely relied on identifying the presence of the Systemic inflammatory response Syndrome together with the presence of infections.

All of that dependent on the vigilance of the treating personnel.

With our model the intensive care units can decided earlier which patient need preliminary treatment.

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