1. Visitor Accesses Web Page

- The visitor accesses the web page.

2. Visitor Enters Symptoms

- The visitor enters symptoms of how they are feeling.

3. Symptom Extraction using Fuzzy Wuzzy ML

- The system uses Fuzzy Wuzzy ML to pick out the symptoms from the input text.

4. Disease and Criticality Prediction using ML Model

- The system uses another ML model to predict the disease and the level of criticality (Critical, Moderate, Mild).

5. Data Storage (doesn’t exist)

- The information (time of arrival and date, status of the patient (served / Not served), criticality status, patient\_name, patient Ticket id) is stored in the database. The system generates a ticket number in a sequence.

6. Reinforcement Learning for Queue Management (Not there, not working as expected)

- The stored data is utilized by reinforcement learning (RL) to manage patients based on their status, prioritizing critical patients, and optimizing waiting time for other categories to be below 120 minutes. The other reward for the RL is that critical patients have the lowest waiting time and that all queues are handled below 120 minutes.

7. Waiting Time Prediction

- The RL predicts the waiting time for each person in the queue who hasn't been attended to yet [status not served]. The reward for the RL is how close the predicted waiting time is close to the actual waiting time

8. Sharing Predicted Waiting Time

- The predicted waiting time is shared with the patient. On the webpage accessed above

9. RL Learning and Reward System

- The reward for the RL is optimizing waiting time for all queue cateroies [critical , moderate , mild] and how close the predicted waiting time is to the actual waiting time.

10. Interfaces needed

- interface doctor , where he clicks next patient to receive patients

- Each time he calls next patient, the next ticket number is called. [ We can use one of the free text to speech free cloud libraries]

-Interface for patients which displays the first 20 patients in the queue whether served or not.

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12. Use google text to speech to call next customer when doctor clicks next