

AI CS 6364.003 SP14 Project Description

Medical Diagnosis System

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Description:

The problems that are faced by patients are generally common and each and every time common solutions are given to them. If a patient is facing some new problem or some new symptom regarding a disease then the doctors need to think on every time and suggest some new medicines. So there should be a system which keeps track of the current and new symptoms and the medicines suggested against it so it can help saving time for future.

Solution:

The System will be asking few questions to the patients regarding the symptoms, which are common, and being faced. Based on the symptoms which faced the next set of symptoms related to it would be asked. There would be one more box in every set as Other in which a patient can type any extra set of symptoms which he is facing which would be added onto knowledge store for future reference so that the knowledge store is not outdated.

Suppose if some patient is having an allergy against some type of medicine then the system should suggest a new type of medicine that doesn't include the allergy. And if there is no medicine then a staff need to take look into it and suggest some medicine and update the knowledge store according to it.

Examples:

1) UTD HEALTH CENTRE

In UTD Health center I had been treated for a wound so was able to have a good look at the system. It consisted of dynamic entries based on the options selected at time. E.g. The nurse selected the wound option then the system asked for the size of the cut. After the size was mentioned the system recommended that stitches were not necessary. She asked me for any allergies so the medicine to go for the wound treatment was suggested by the system.

Data Set:

1. # Diseases (apprx 10-12)
2. # Symptoms/Disease (apprx 5)
3. # Cases/disease (apprx 5)

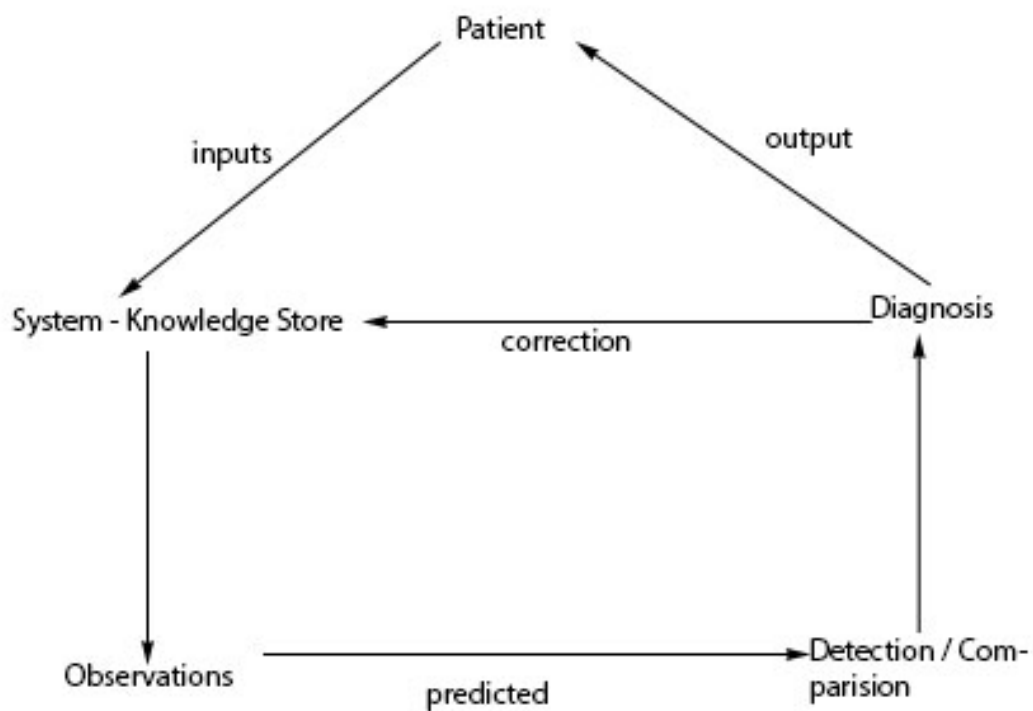
Techniques for Detection:

1. Bayesian Networks (Probability one given another)
2. Cluster Analysis

Programming Tools:

- Eclipse SDK (ASPX page)
- Eclipse to DB connectivity JAR file
- SQL SERVER
- MALLET
- ML TOOLS

Architectural Diagram:



reference:

1. [wiki/Diagnosis_ \(artificial_intelligence\)](#)
2. http://en.wikipedia.org/wiki/Bayesian_network
3. http://en.wikipedia.org/wiki/Machine_learning
4. http://en.wikipedia.org/wiki/Cluster_analysis