**Project 4 – Decision Support System**

The project 3 is to give probabilities of recovery time of athletes based on observations as follows :-

**Height, Built, Age, Gender and skills.**

**Changes in this system is the decision node “Decision”**

**It decides which action to take based on MEU given evidence from nature nodes “Recovery\_time” and “ReplacementOptions”**

**There are in total 16 nature nodes and 1 decision node.**

**The flow : -**

Age, Gender 🡪 Cricket, Baseball, Soccer and Basketball

Skills 🡪 Cricket, Baseball

Built 🡪 Soccer

Height 🡪Basketball

Cricket, Baseball, Basketball, Soccer 🡪 Knee\_injury, shoulder\_injury

Knee\_injury, shoulder\_injury, training\_since, training\_level, body\_type 🡪 recovery\_time

Recovery\_time 🡪 U

ReplacementOptions 🡪 U

Decision 🡪 U

**Recovery\_time** gives the probability of recovering and getting back on the field in

Less than 6 weeks

6 to 12 weeks

12 to 24 weeks

More than 24 weeks

**Test cases ::**

**The probalities of any nodes can be testing by setting the observed variables to some variable.**

**Examples :**

P(cricket = yes| age>20) set age>20 as true.

P( recovery\_time = Weeks\_0\_6| age>20, cricket = yes)

Any combination of observations can be tested.

Given that

Recovery\_time = Weeks\_0\_6 , ReplacementOption = NoReplacement

Agent should perform action of Donotinclude with value 50 as opposed to 20 of Include action.

**Likewise,** the decision to perform which action will depend upon the values and evidences from the entire network(as it would alter the probabilities of Recovery\_time node).

So, a ton of test cases can be carried out to see to decision the system makes.