Kimberly Roeten

CIS 445-01: Data Mining

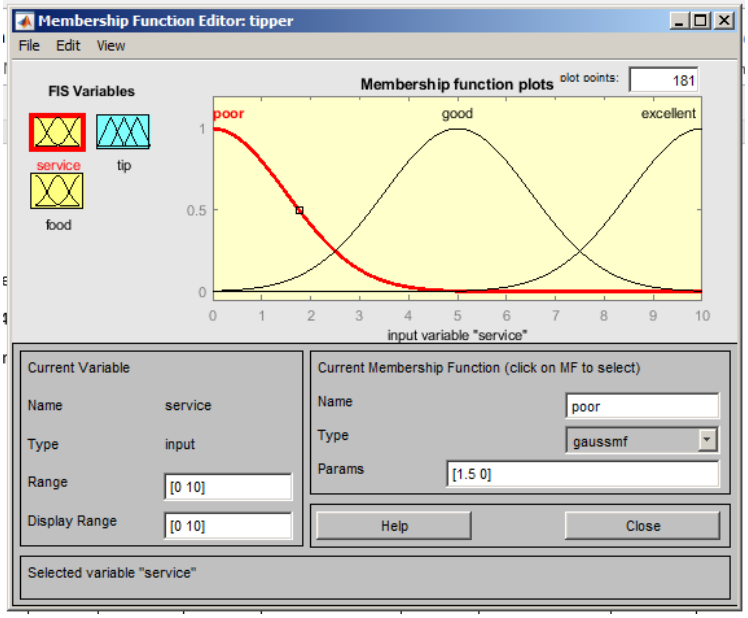
November 28, 2017

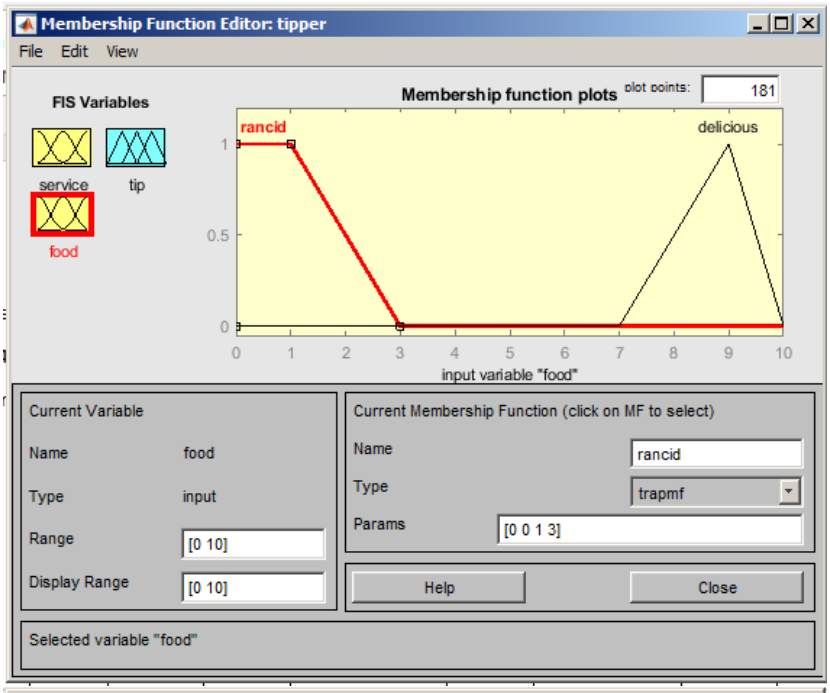
Tutorial 4 Report

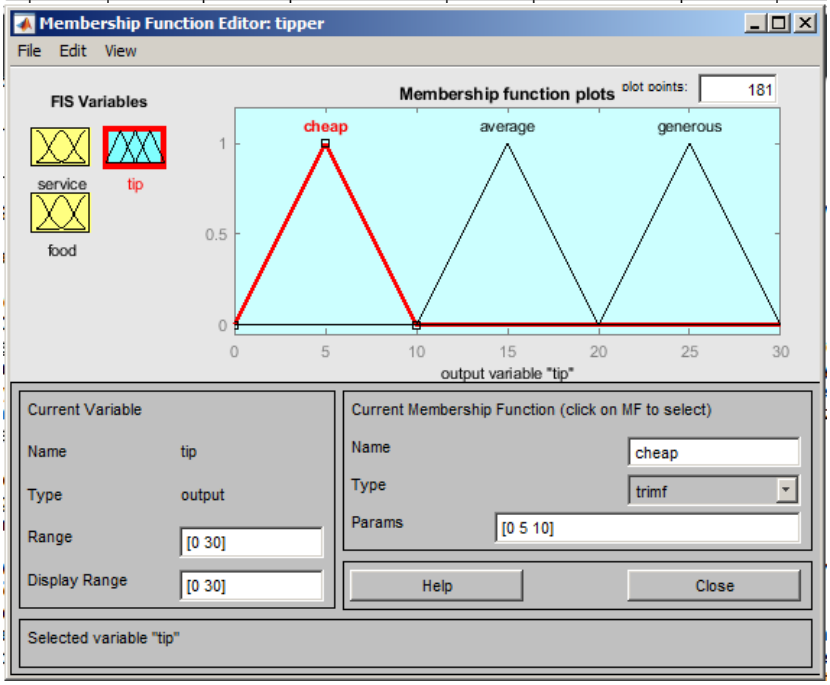
1.

Case #			OR version		AND version	
	Service	***Food***	**Rule(s) Fired**: 1, 2, 3, 1&2, 1&3, 2&3, or 1&2&3	***Tip***	**Rule(s) Fired**: 1, 2, 3, 1&2, 1&3, 2&3, or 1&2&3	***Tip***
1	**5**	**5**	2	15	2	15
2	**1**	**1**	1	5.54	1, 1	5.56
3	**10**	**10**	3	24.9	3	15
4	**3**	**5**	1&2	12.2	1&2	15
5	**7**	**3**	2&3	17.8	2&3	15
6	**5**	**9**	2, 3	19.9	2, 3	15.1
7	**1**	**8**	1, 3	13.8	1, 3	15
8	**3**	**8**	1&2, 3	18	1&2, 3	15

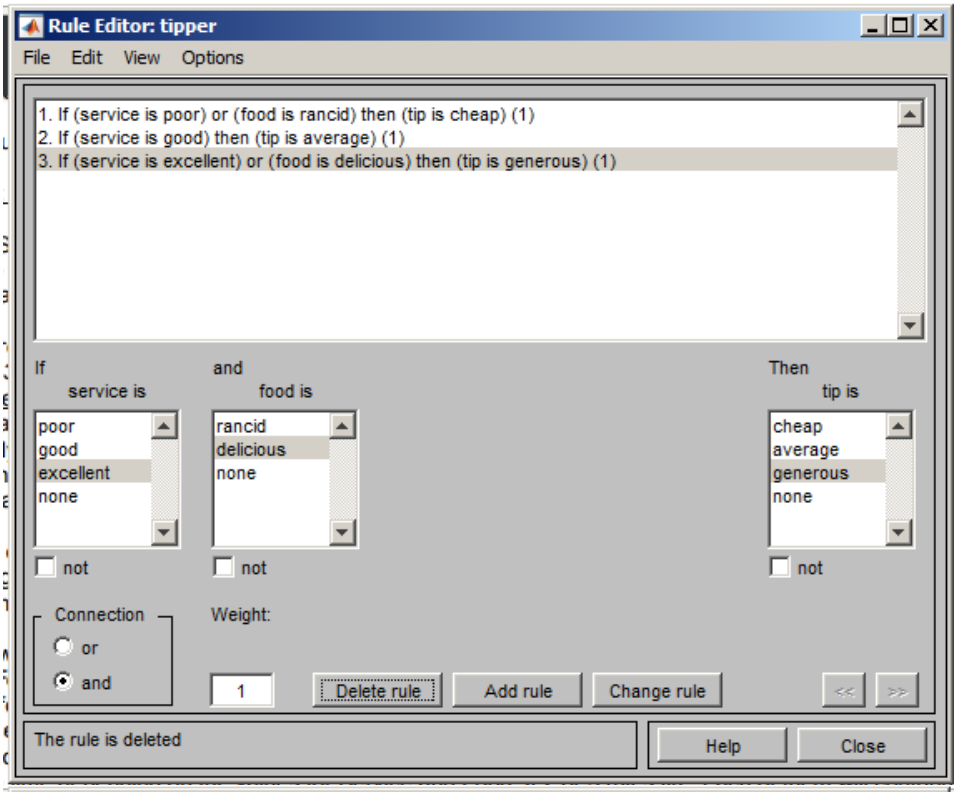
2. Starting off, I was a little confused on which software we were using for this tutorial because I was convinced this tutorial would be regarding Weka. So trying to establish that took a little while, but overall, once I got where the tutorial part actually started in the pdf file, the instructions were pretty straightforward. They were more numbered out this time, and important details were in bold, so finding them was much easier. Trying to figure out what rules you wanted entered and how to enter them was a challenge. On a scale of 1 to 10, in terms of getting students like myself acquainted with the software, it was an 8. In terms of the results, the system that I believe it better is the one with the OR operator, because if you consider two things equally, they may not produce the best results overall, with the or operator you only consider one. The OR version generates higher tips for the most part.

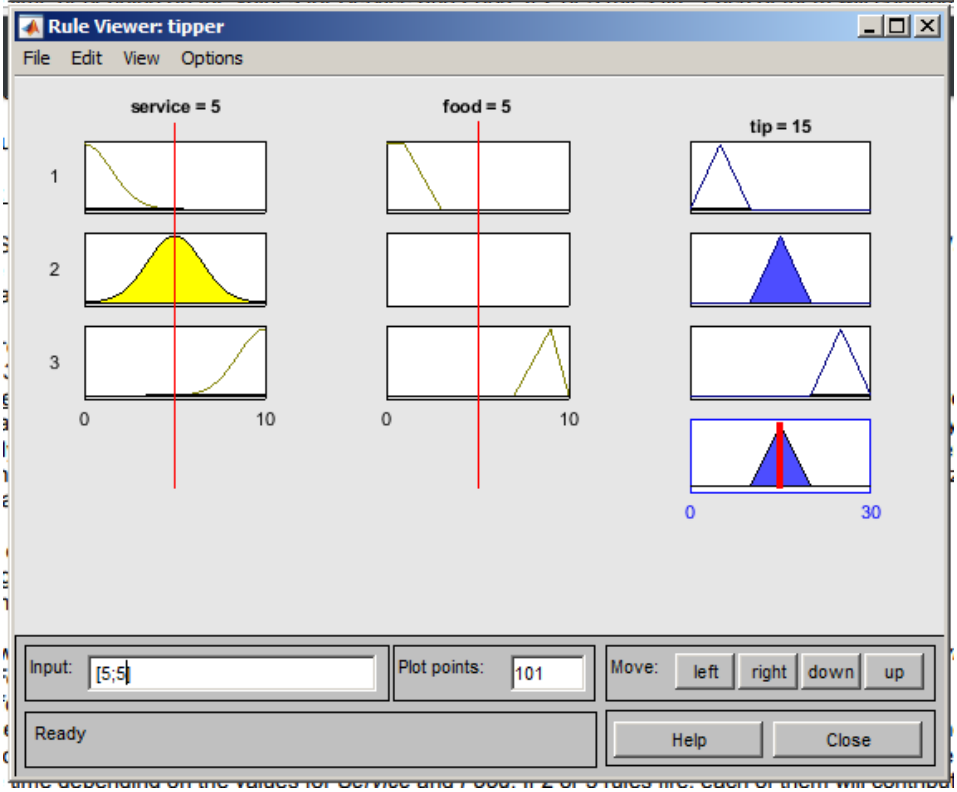
3. 

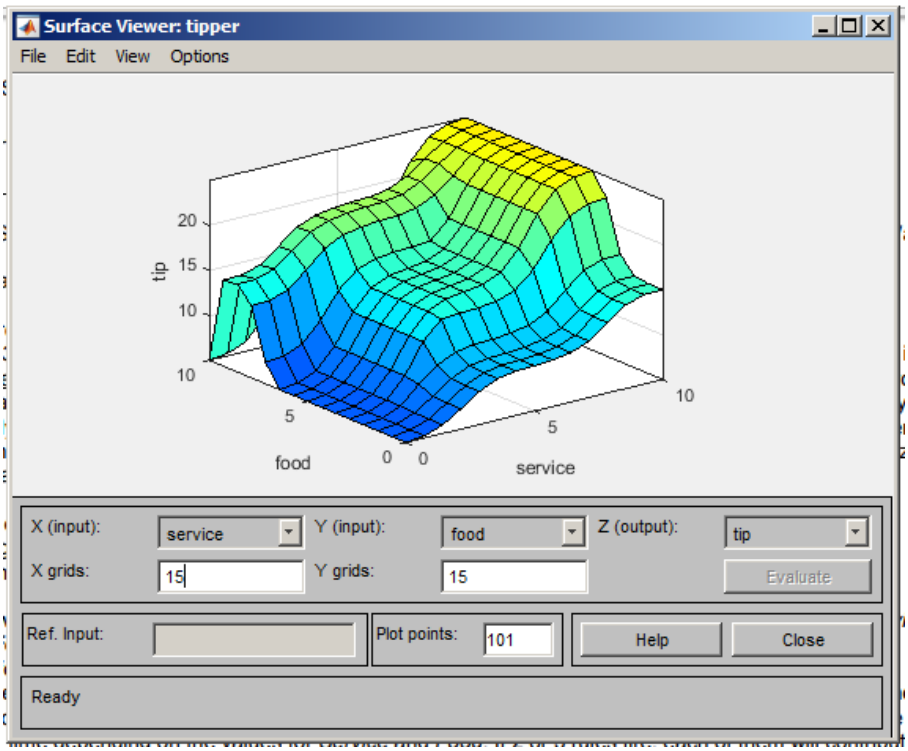

Membership Function Editor: tipper
File Edit View
FIS Variables
service
tip
food
Membership function plots
plot points:
181
rancid
delicious
input variable "food"
Current Variable
Name food
Type input
Range [0 10]
Display Range [0 10]
Current Membership Function (click on MF to select)
Name rancid
Type trapmf
Params [0 0 1 3]
Help
Close
Selected variable "food"

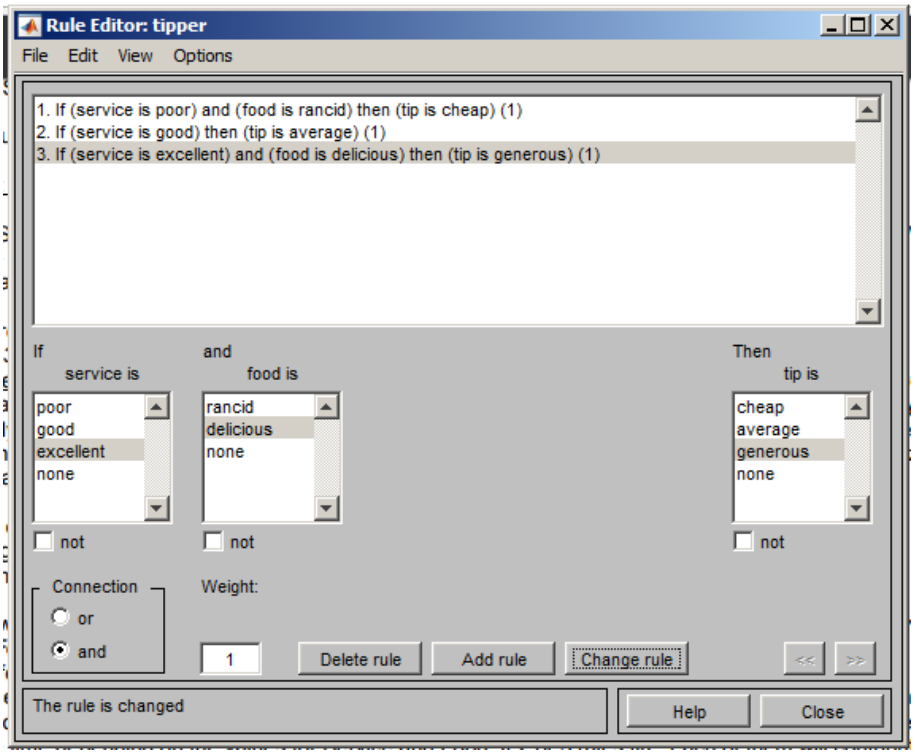

Membership Function Editor: tipper
File Edit View
FIS Variables
service
tip
food
Membership function plots
plot points:
181
cheap
average
generous
output variable "tip"
Current Variable
Name tip
Type output
Range [0 30]
Display Range [0 30]
Current Membership Function (click on MF to select)
Name cheap
Type trimf
Params [0 5 10]
Help
Close
Selected variable "tip"

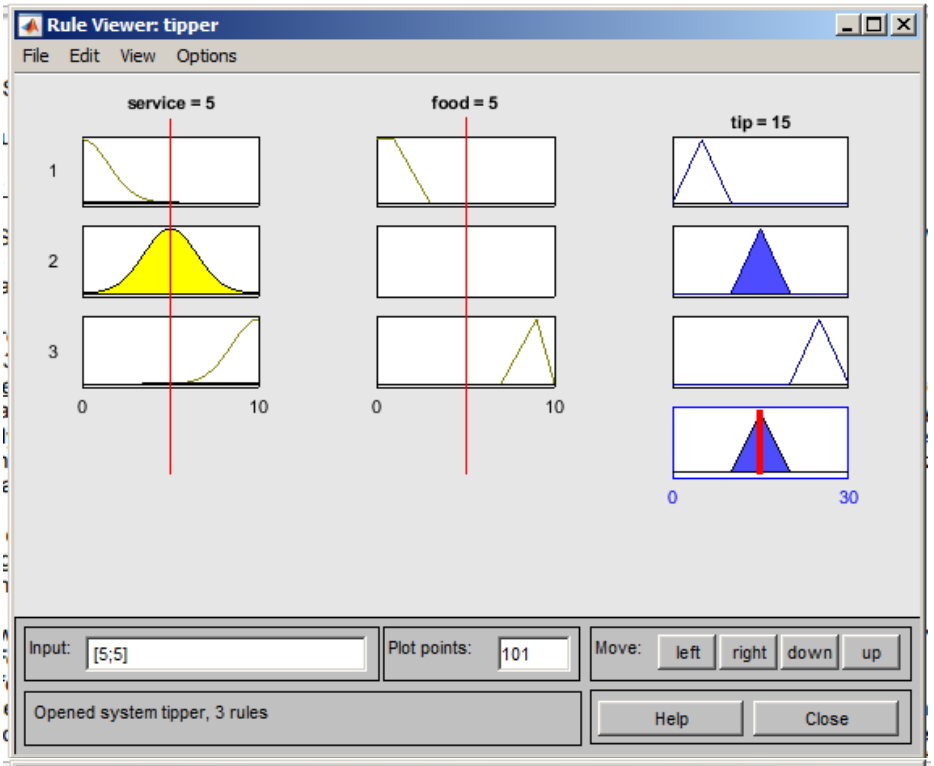
4.

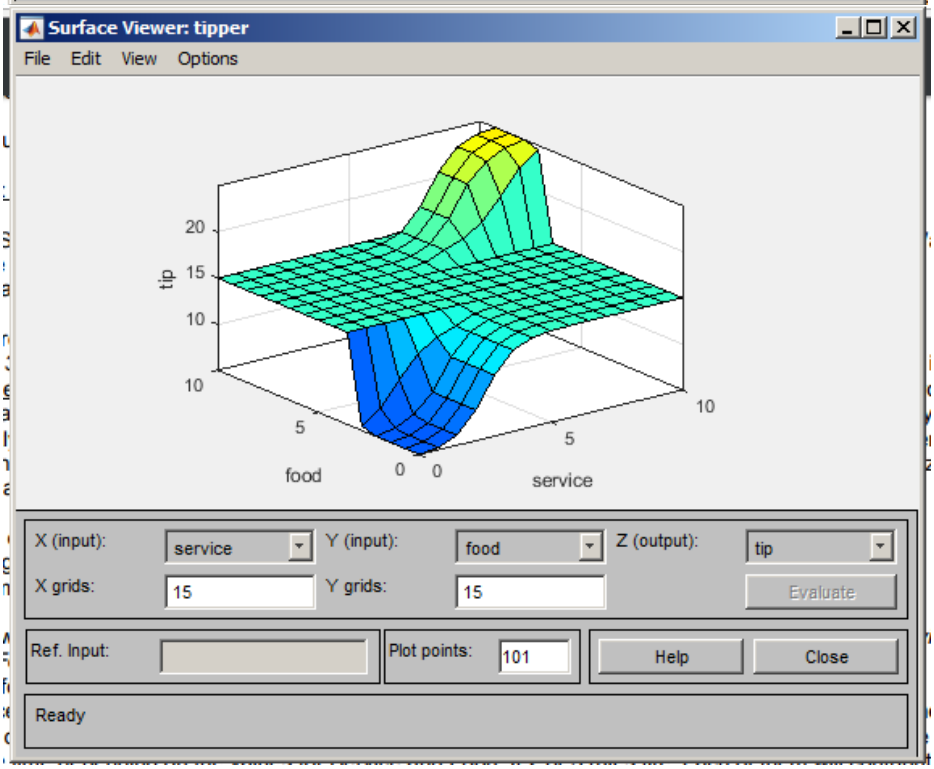

Rule Editor: tipper
File Edit View Options
1. If (service is poor) or (food is rancid) then (tip is cheap) (1)
2. If (service is good) then (tip is average) (1)
3. If (service is excellent) or (food is delicious) then (tip is generous) (1)
If
service is
poor
good
excellent
none
and
food is
rancid
delicious
none
Then
tip is
cheap
average
generous
none
not
not
not
Connection
or
and
Weight:
1
Delete rule
Add rule
Change rule
<<
>>
The rule is deleted
Help
Close


Rule Viewer: tipper
File Edit View Options
service = 5
food = 5
tip = 15
1
2
3
0
10
0
10
0
30
Input:
[5;5]
Plot points:
101
Move:
left
right
down
up
Ready
Help
Close


Surface Viewer: tipper
File Edit View Options
tip
20
15
10
10
5
food
0
0
5
10
service
X (input):
service
Y (input):
food
Z (output):
tip
X grids:
15
Y grids:
15
Evaluate
Ref. Input:
Plot points:
101
Help
Close
Ready


Rule Editor: tipper
File Edit View Options
1. If (service is poor) and (food is rancid) then (tip is cheap) (1)
2. If (service is good) then (tip is average) (1)
3. If (service is excellent) and (food is delicious) then (tip is generous) (1)
If
service is
poor
good
excellent
none
not
and
food is
rancid
delicious
none
not
Then
tip is
cheap
average
generous
none
not
Connection
or
and
Weight:
1
Delete rule
Add rule
Change rule
<<
>>
The rule is changed
Help
Close


Rule Viewer: tipper
File Edit View Options
service = 5
food = 5
tip = 15
1
2
3
0
10
0
10
0
30
Input: [5;5]
Plot points: 101
Move: left right down up
Opened system tipper, 3 rules
Help
Close


Surface Viewer: tipper
File Edit View Options
tip
20
15
10
10
food
5
0
0
5
10
service
X (input): service
Y (input): food
Z (output): tip
X grids: 15
Y grids: 15
Evaluate
Ref. Input:
Plot points: 101
Help
Close
Ready