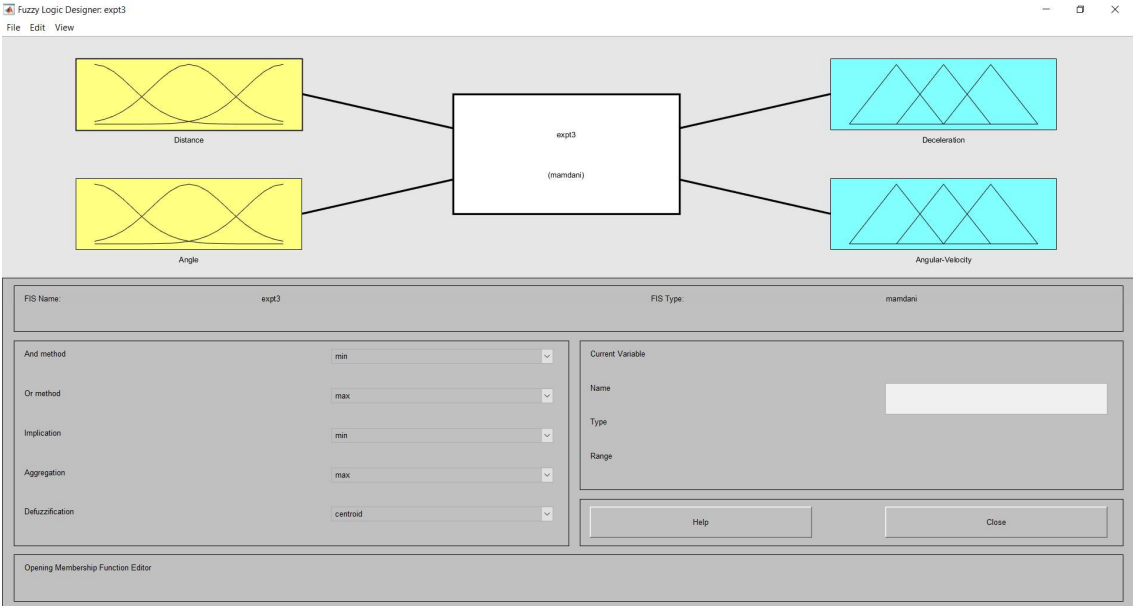


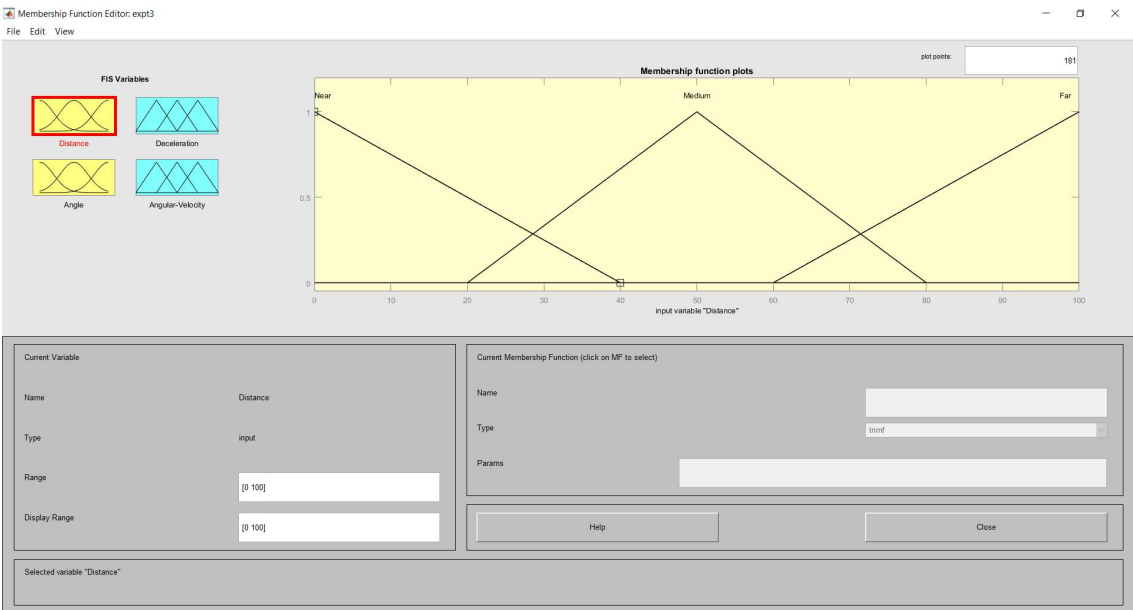
NNFL EXPT-3

Fuzzy Controller for Avoiding obstacles

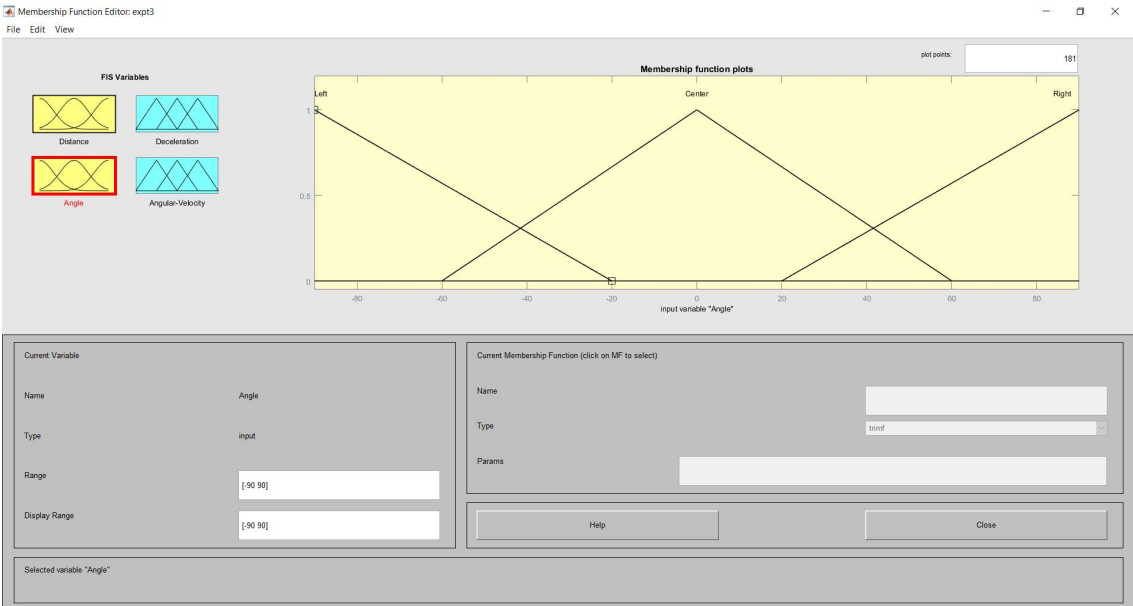


Inputs :

Membership Function of Distance from obstacle

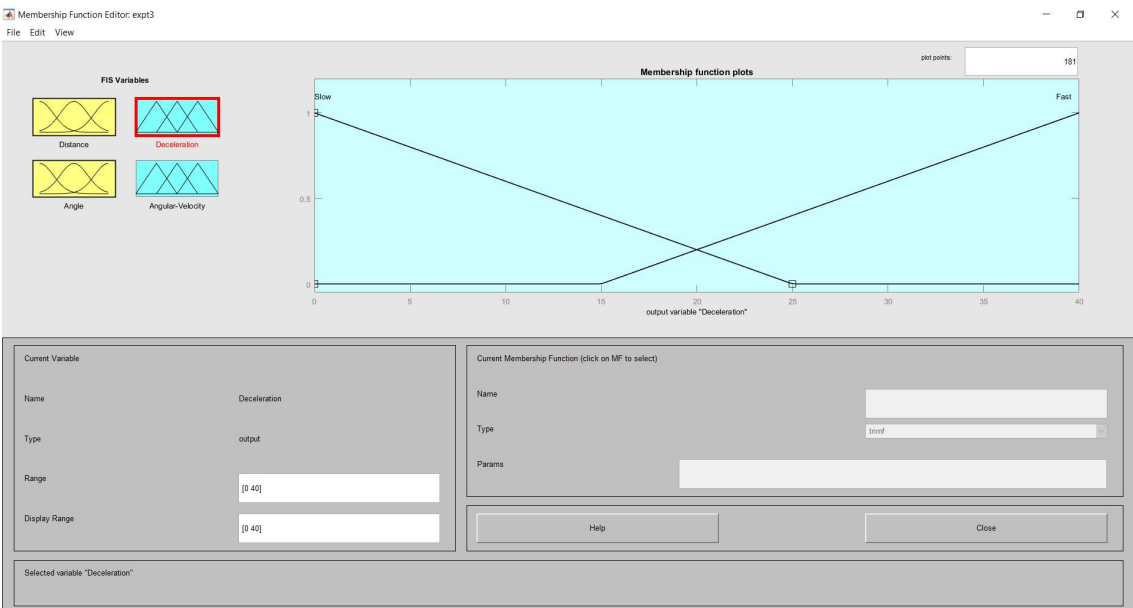


Membership Function of Sensor angle

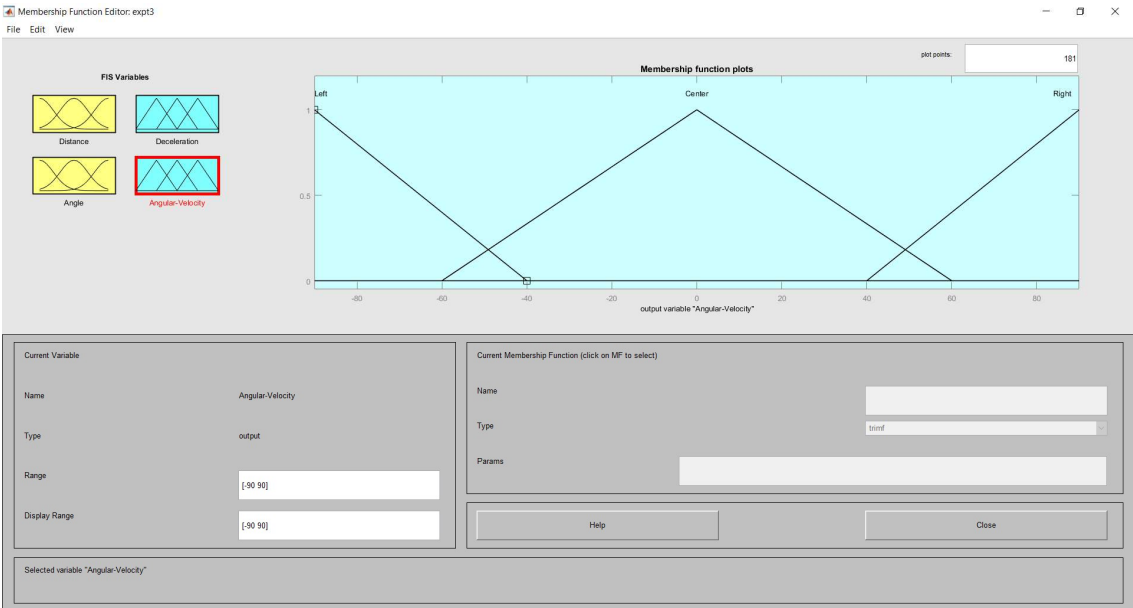


Output :

Membership Function of Deceleration



Membership Function of Angular Velocity



Rules

Rule Editor: expt3

File Edit View Options

1. If (Distance is Near) and (Angle is Left) then (Deceleration is Fast)(Angular-Velocity is Right) (1)
2. If (Distance is Near) and (Angle is Center) then (Deceleration is Fast)(Angular-Velocity is Left) (1)
3. If (Distance is Near) and (Angle is Right) then (Deceleration is Fast)(Angular-Velocity is Left) (1)
4. If (Distance is Medium) and (Angle is Left) then (Deceleration is Slow)(Angular-Velocity is Right) (1)
5. If (Distance is Medium) and (Angle is Center) then (Deceleration is Slow)(Angular-Velocity is Right) (1)
6. If (Distance is Medium) and (Angle is Right) then (Deceleration is Slow)(Angular-Velocity is Left) (1)
7. If (Distance is Far) and (Angle is Left) then (Deceleration is Slow)(Angular-Velocity is not Left) (1)
8. If (Distance is Far) and (Angle is Center) then (Deceleration is Slow)(Angular-Velocity is Right) (1)
9. If (Distance is Far) and (Angle is Right) then (Deceleration is Slow)(Angular-Velocity is not Right) (1)

If

Distance is

and

Angle is

Then

Deceleration is

and

Angular-Velocity is

Near
Medium
Far
none

Left
Center
Right
none

Slow
Fast
none

Left
Center
Right
none

☐ not

☐ not

☐ not

☐ not

Connection

☐ or

☒ and

Weight:

1

Delete rule

Add rule

Change rule

<<

>>

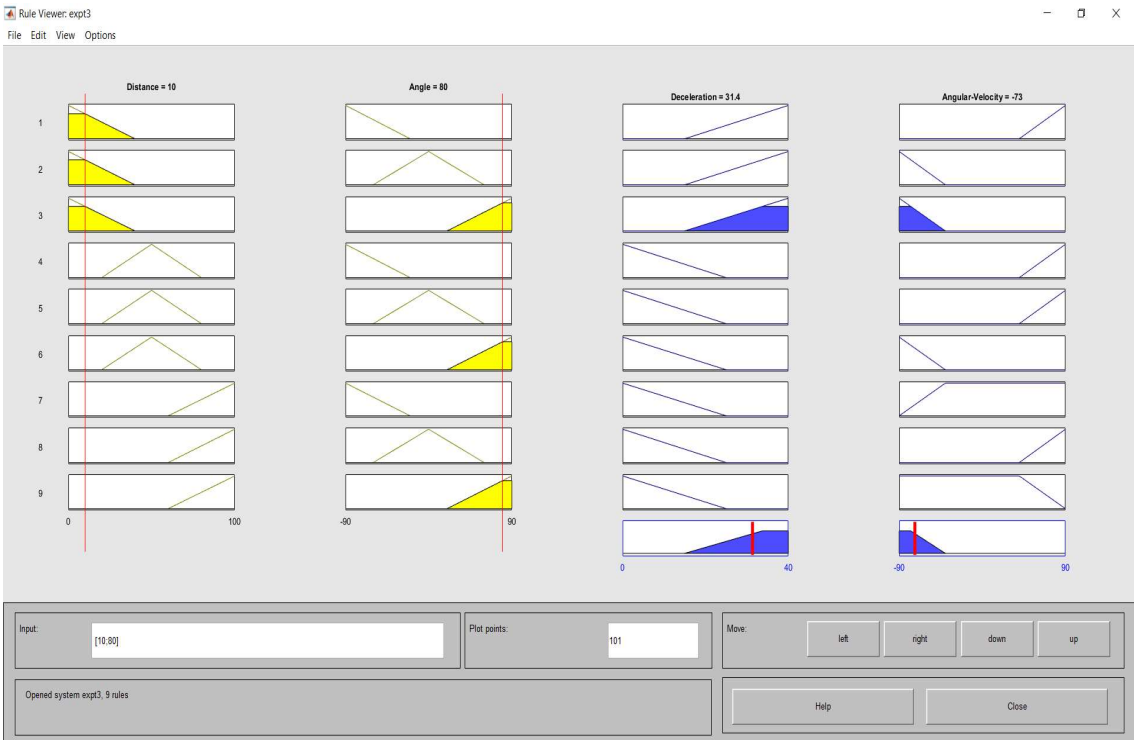
FIS Name: expt3

Help

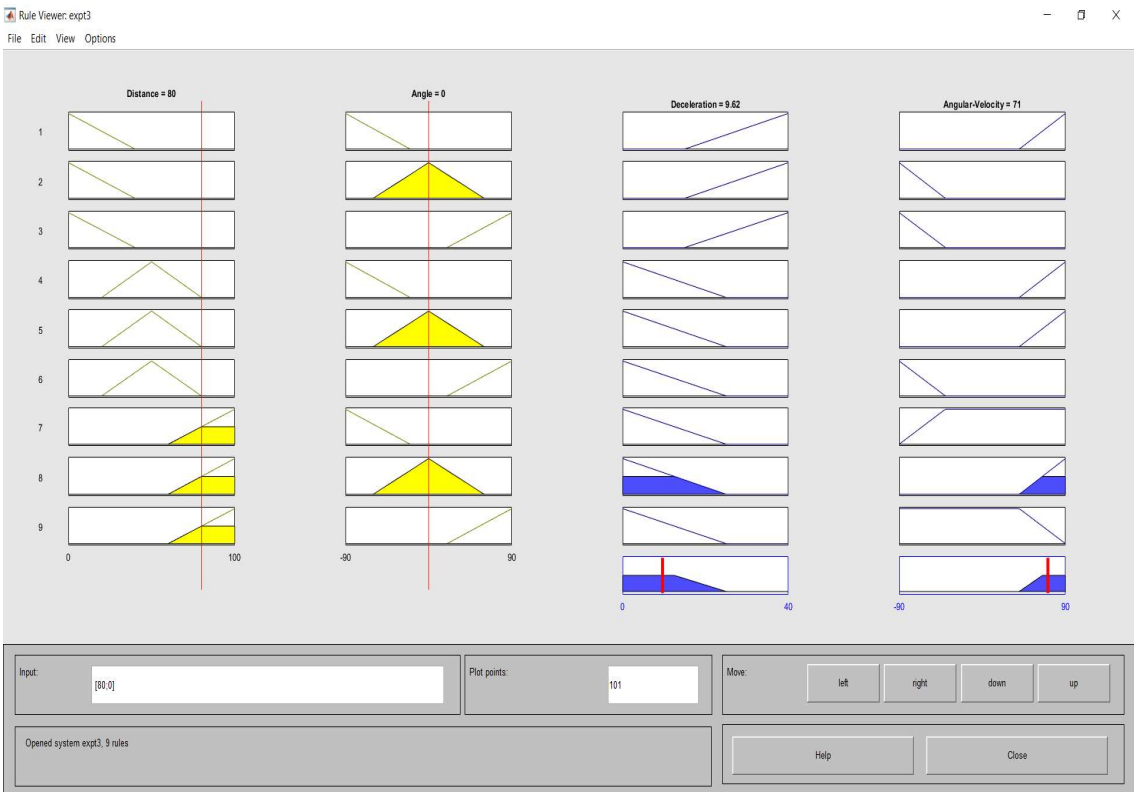
Close

Output :

For Near obstacle and sensed at Right side of the vehicle

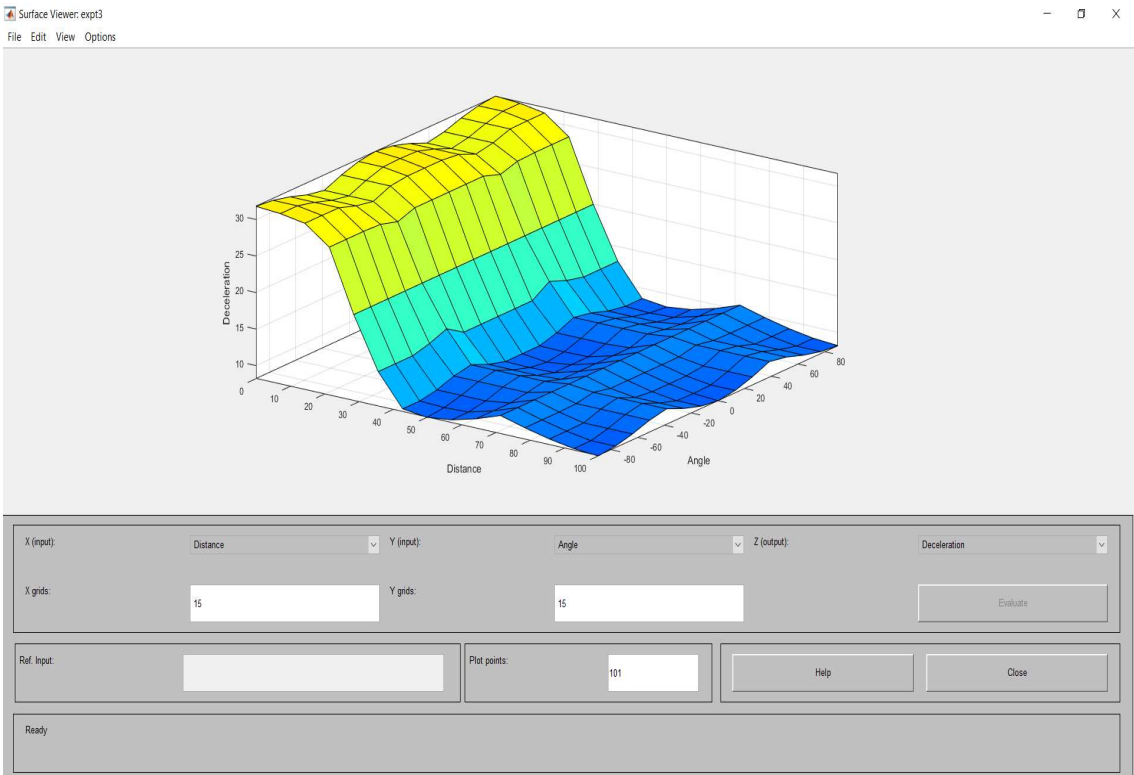


For Far obstacle and sensed at Center of the vehicle



Surface Viewer

Surface for Deceleration



Surface for Angular Velocity

