

Tipper example

2 input 1 output Mamdani Fuzzy Model. In general, the goal of this system is to make a decision about giving tip to somebody who serve you a service. Different type of MFs are used as in inputs and output. As a result value determination will be yielded by 'centroid' defuzzification method. (Input and output MFs are generated by using own intuitions and my definitions of universe of discourse.)

	Fuzzy Variables	Units	Ranges
input	height of grass	cm	[0 20]
input	area of the yard	m^2	[0 500]
output	Tip	Turkish Liras(TL)	[0 50]

First input, 'height of grass', has two trapezoidal MFs and one triangulation MF which are 'short' in the range of 0 to 7, 'medium' in the range of 2 to 18 and lastly 'wide' in the range of 12 to 20.

Second input, 'area of the yard', has three triangulation MFs that are 'narrow' in the range of 0 to 200, 'medium' in the range of 50 to 450 and finally 'wide' in the range of 300 to 500.

As an output of the system has two Gaussian combination MFs and one Generalized bell-shaped MF that are 'little', 'medium' and 'much'.