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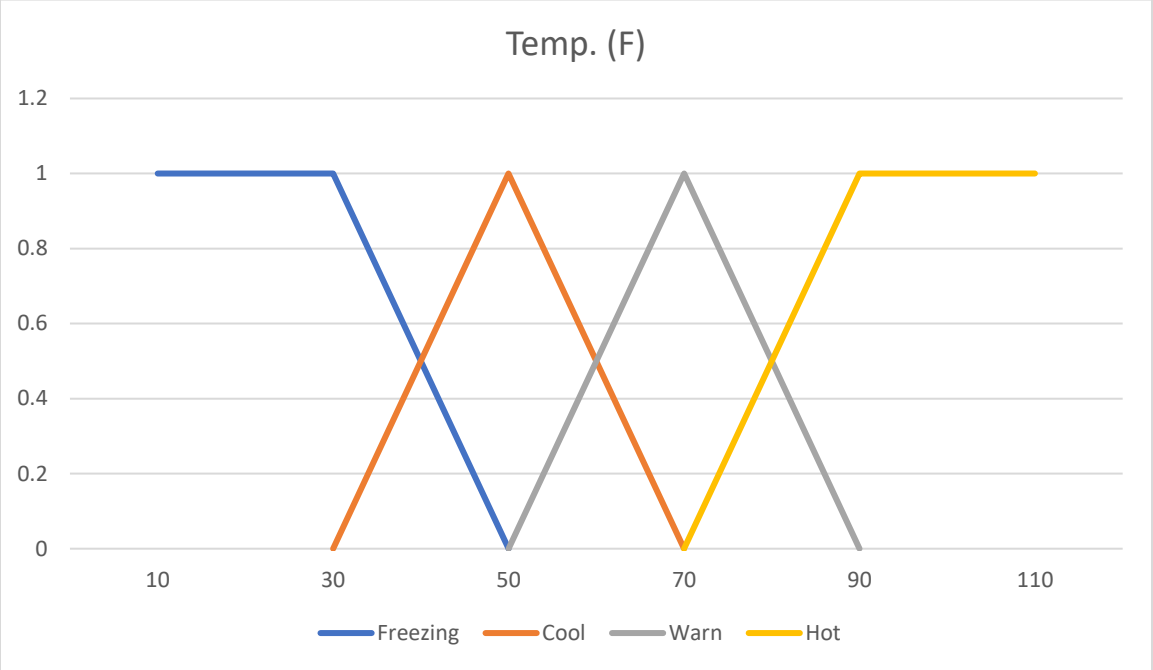
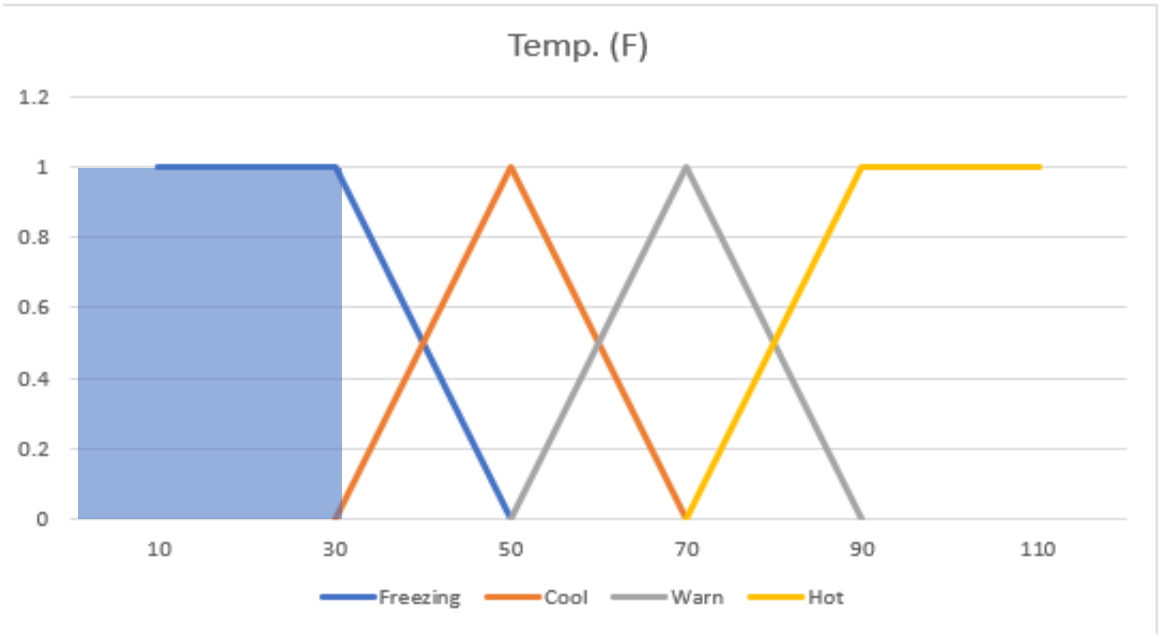
191011400390
06 TPLM 003
Kecerdasan Buatan

FUZZYFICATION

FUNGSI KEANGGOTAAN TEMPERATURE



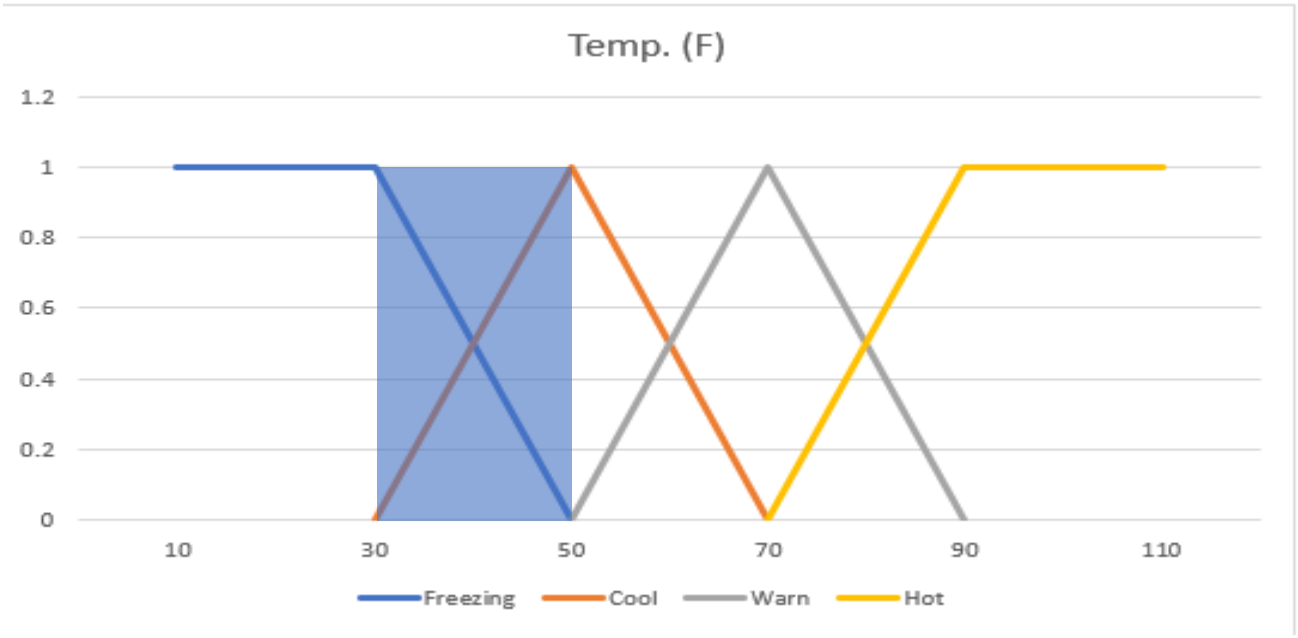


Jika Temp <= 30

Freezing bernilai 1
Cool bernilai 0
Warn bernilai 0
Hot bernilai 0

- Lalu pada peluang berikutnya

User memasukan nilai temp berapa di range (>30 dan < 50)



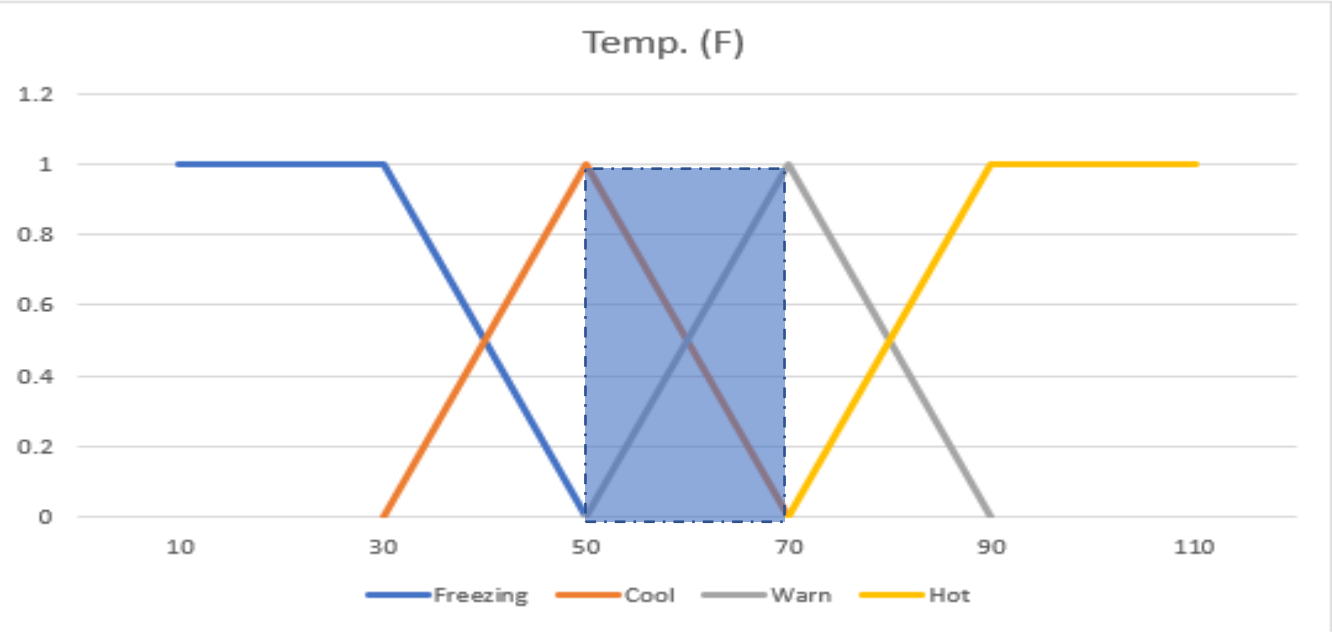
Freezing = 50 – temp / 50 -30
Cool = temp – 30 / 50 -30

Warm = 0
Hot = 0

- Lalu apabila temp = 50, maka nilainya adalah mutlak

Freezing = 0
Cool = 1
Warm = 0
Hot = 0

- Lalu jika temp (>50 dan <70)

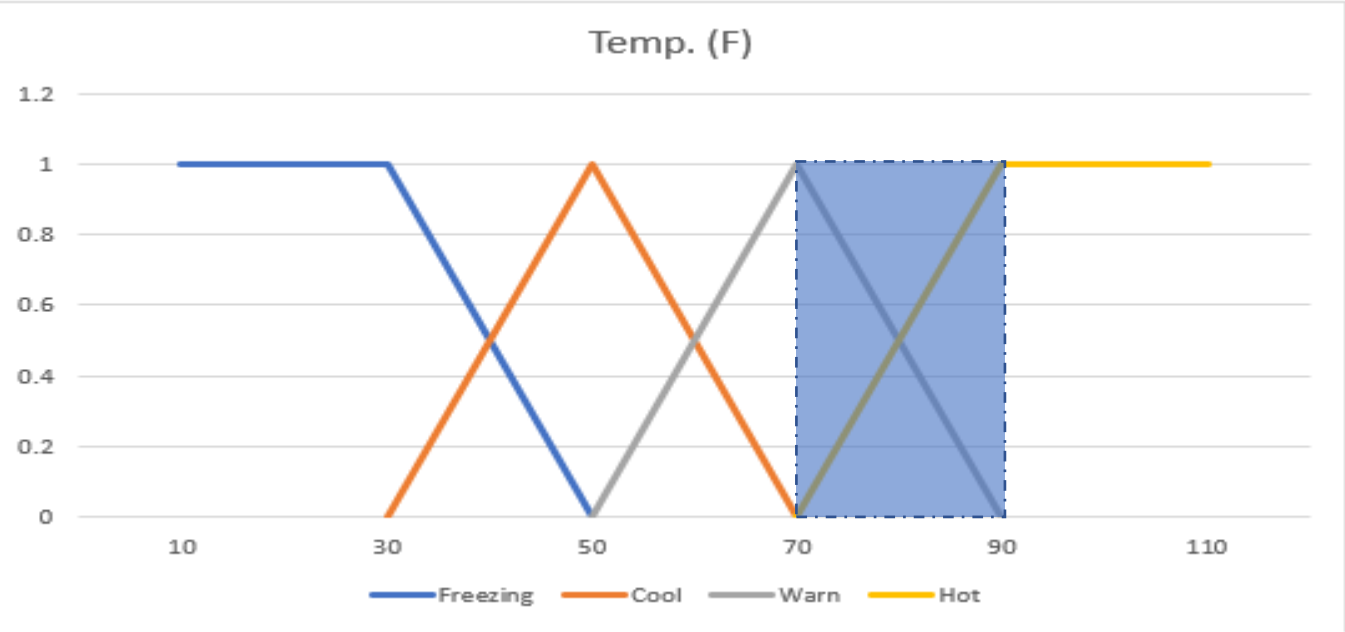


Freezing = 0
Cool = 70 – temp / 70 – 50
Warm = temp – 50 / 70 – 50
Hot = 0

- Lalu apabila temp = 70, maka nilainya adalah mutlak

Freezing = 0
Cool = 0
Warm = 1
Hot = 0

- Lalu apabila temp = (>70 dan <90)



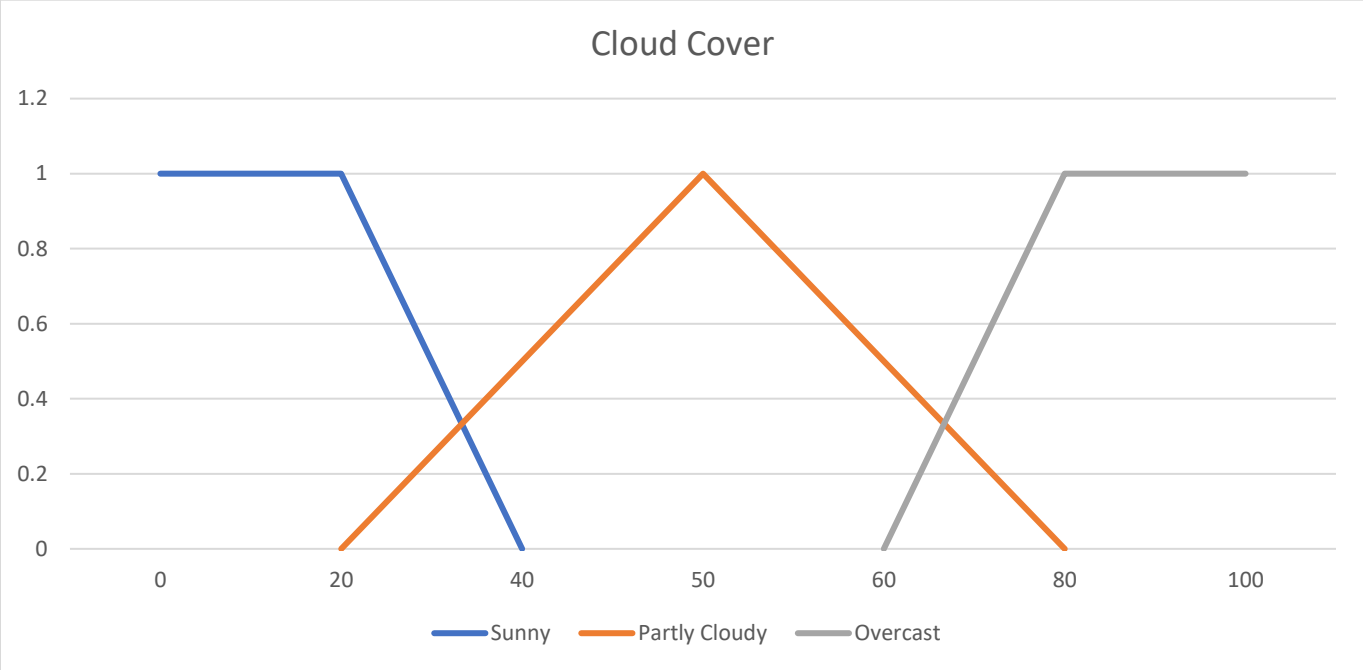
Freezing = 0
Cool = 0
Warm = 90 – temp / 90 -70
Hot = temp – 70 / 90 – 70

- Dan yang terakir temp >= 90

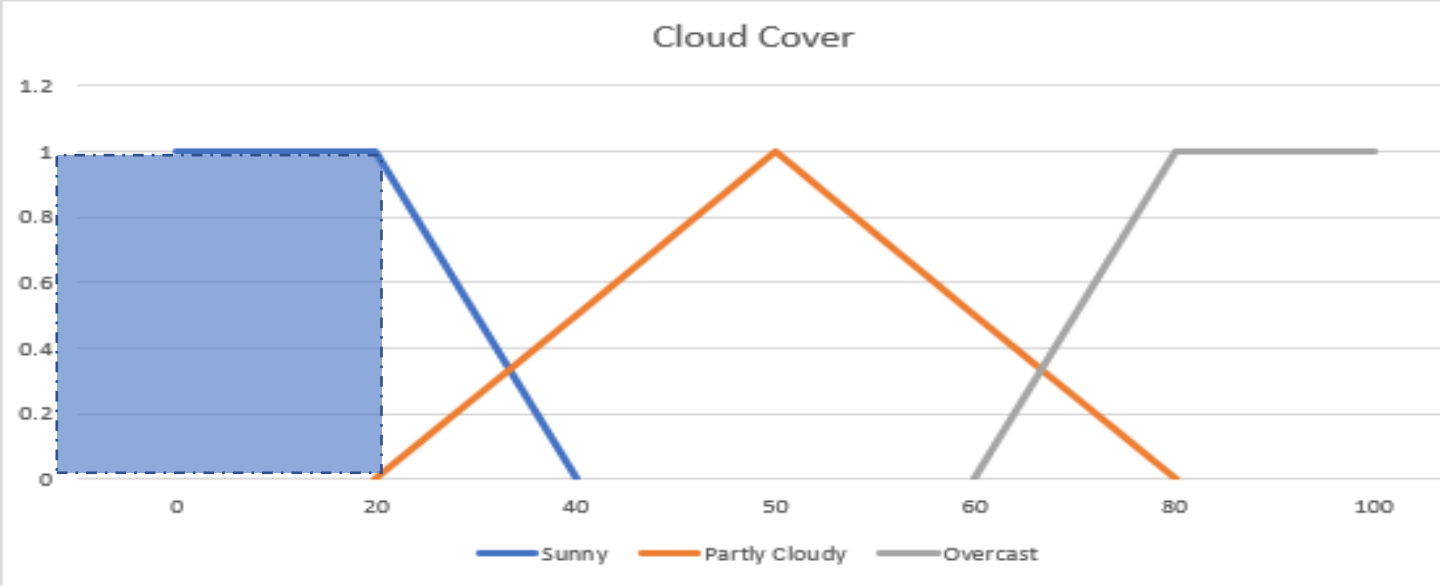
Freezing = 0
Cool = 0
Warm = 0
Hot = 1

FUZZYFICATION

FUNGSI KEANGGOTAAN : CLOUD COVER

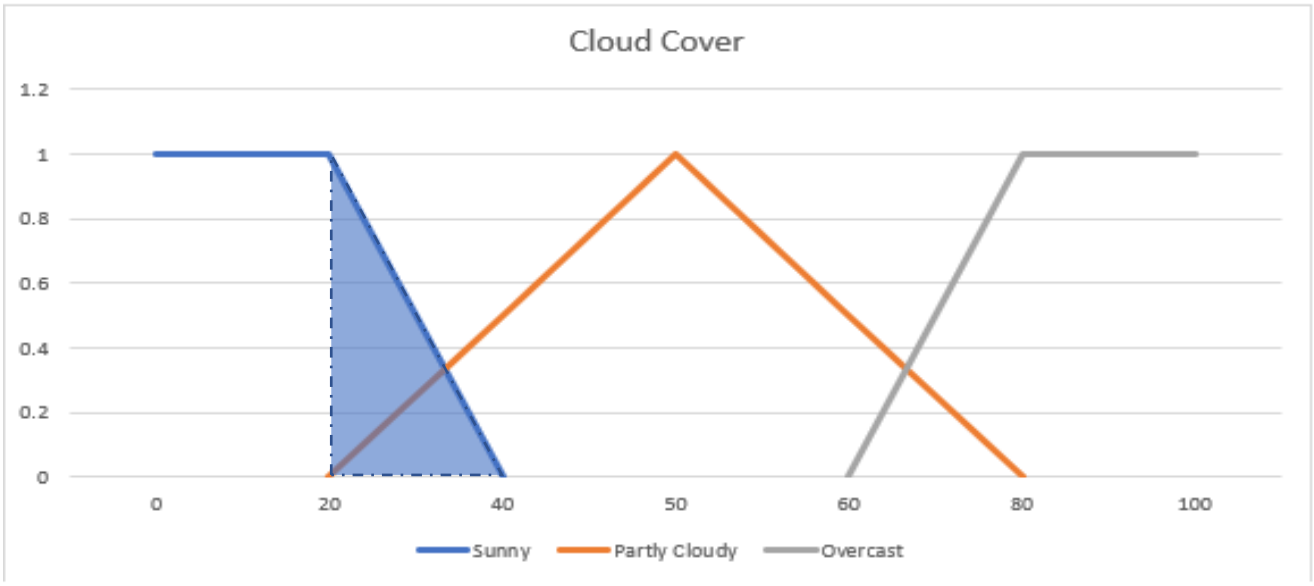


- Menghitung peluang jika cloud <= 20



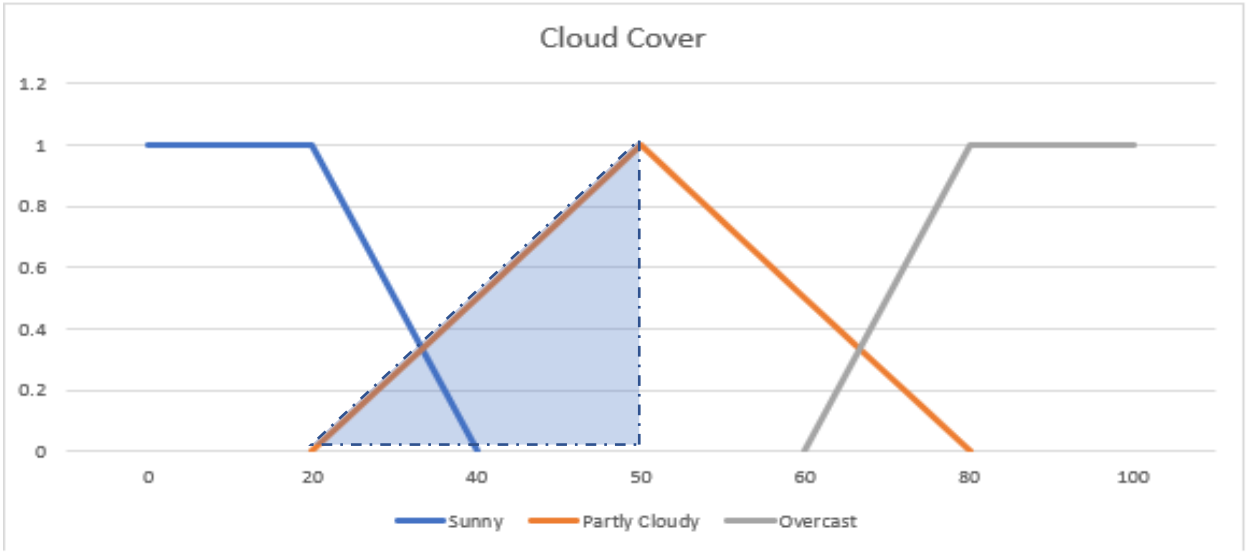
Sunny = 1
Partly Cloudy = 0
Overcast = 0

- Jika cloud = >20 dan <40



Maka :
Sunny = 40 – cloud / 40 – 20
Overcast = 0

Dan partly cloudynya maka seperti ini jika cloud > 20 dan < 50

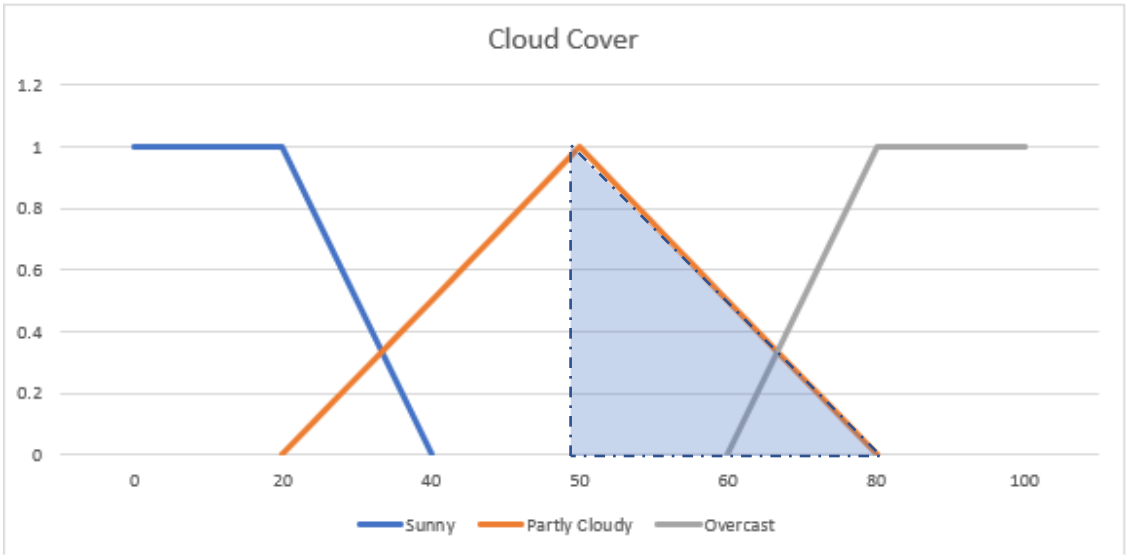


Partly Cloudy = cloud – 20 / 50 – 20

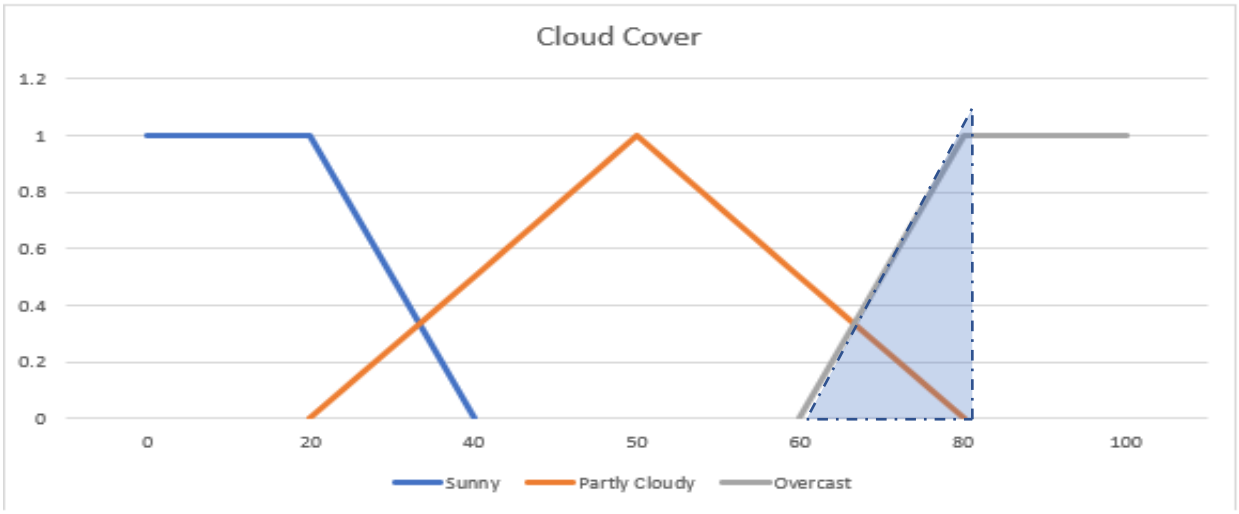
- Ketika mutlak berada di 50

Maka, Sunny = 0
Partly Cloudy = 1
Overcast = 0

- Selanjutnya Ketika cloud berada di >50 dan <80

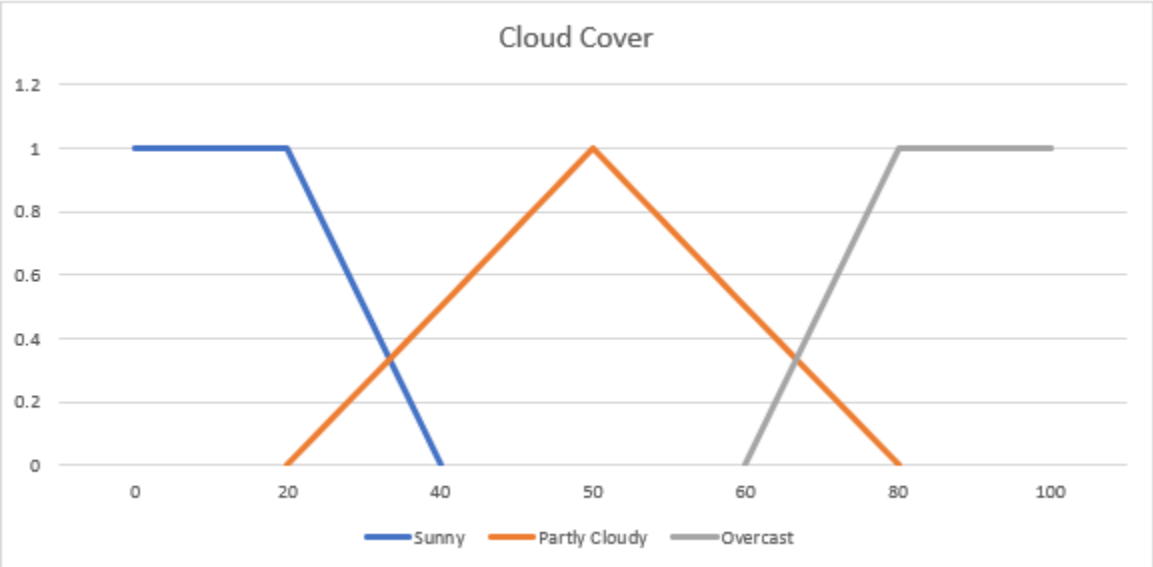


Maka sunny = 0
Partly cloudy = 80 -cloud / 80 -50
Dan untuk overcast, jika cloud seperti ini : (>60 dan <80)



Maka, Sunny = 0
Overcast = cloud – 60 / 80 – 60

- Maka selanjutnya Ketika cloud >80



Maka sunny = 0
Partly cloudy = 0
Overcast = 1

SISTEM INFERENSI

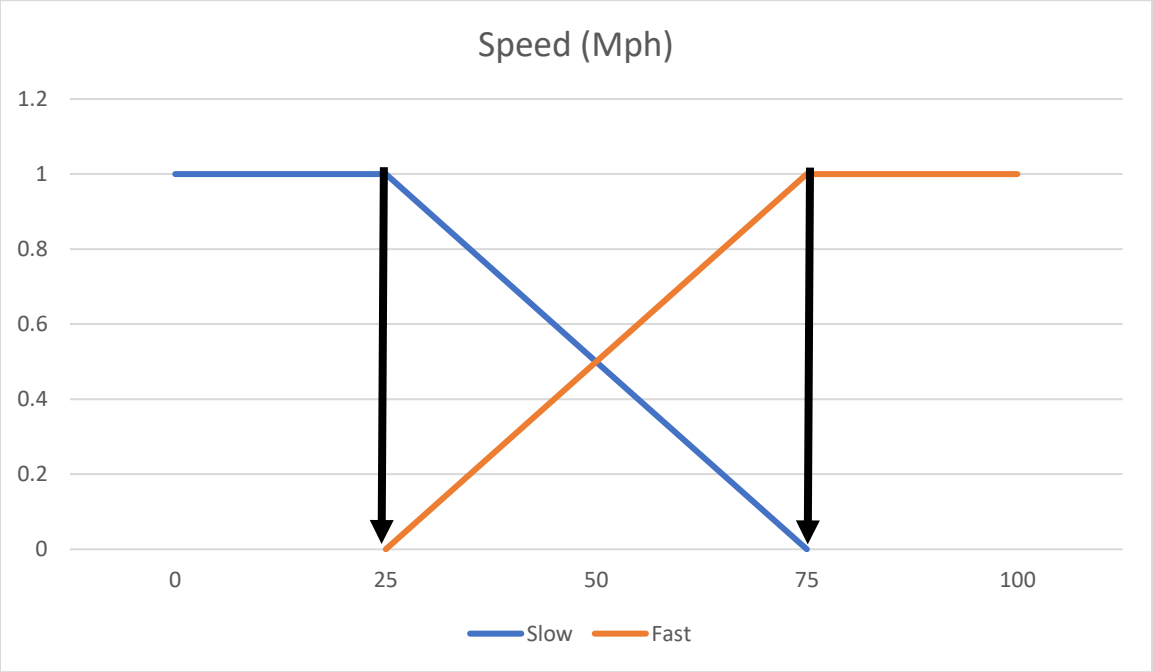
1. JIKA HARI INI SUNNY AND WARM, MAKA DRIVE FAST
   Sunny(Cover)^Warm(Temp)=>Fast(Speed)
   Fast = (min(Sunny(Cover), Warm(Temp))
2. JIKA HARI INI CLOUDY AND COOL, MAKA DRIVE SLOW
   Cloudy(Cover)^Cool(Temp)=>Slow(Speed)
   Slow = (min(Cloudy(Cover),Cool(Temp))

GENERATE ATURAN

Jumlah aturan = jumlah variable temperature x jumlah variable cloud cover = 4 x 3 = 12

NO	Aturan	NO	Aturan
1	If Freezing and sunny then slow	7	If warm and sunny then fast
2	If freezing and prtly cloud then slow	8	If warm and prtly cloud then fast
3	If freezing and overcast then slow	9	If warm and overcast then fast
4	If cool and sunny then slow	10	If hot and sunny then fast
5	If cool and partly cloud then slow	11	If hot and partly cloud then fast
6	If cool and overcast then slow	12	If hot and overcast then fast

DEFUZZYFIKASI



Speed = weighted mean
= (slow * 25 + fast * 75) / (slow+fast)
= z mph