Sec-A

play based on weather conditions like outlook, temperature, humidity step1:

m	8 thu Fee F	80 + 50 + 0s	Lac Lon Lo	2+56+31+91	1100130 3
	outlook	Temperature	Humidity	111	-hours to play
	Rainy	Hot	tigh	False 31-P	25 11
	Rainy	HOŁ	high	True	30
	overcast	40t	high		
	sunny	mild	high	Falge	450.P - ae
	Sunny	cool	normal od	False . o	52
	Sunny	cool	normal	True	23
dos		cool	hormal 1017	True +1/98	ध्य अध्यक्ति । इ.स.च्या
	Rainy	mild	high	False boys	35 38 et
	Rainy	0001	normal	False	46 Ho) CA
	sunny be	milditory	normal	PERMIT PE B	48 8
	Rainy	mild	normal	True (stro)	
	overcast	mild	high	Toue	44,000
	overcast	hot	normal	Toue	30
	sunny	mila	riigii	4	

Windy consider dataset shown below.

Termination contesta: cv <= 10% or minemum number of samples 4

bound

Calculate SD, CN, mean

## = 85+30+46+45+52+23+43+35+38+46+48+52+44+80

down

101-4

JOH.

billing

1000

blim

1000

DHITY

Min

Jort

offer

MAILOR

Direction B

Summy?

Point

uniou

Pours Is prog

$$SD = \sqrt{\frac{E(x-mean)^2}{n}}$$

$$CN = \frac{6D}{mean} \times 100 = \frac{9.67}{39.78} \times 100 = 24.30$$

e l'Arie

Stat!

99/03

Step3:- Dataset is split on different attributes the SD of each

Lomron

Mold

branch is calculated

Talse

98/01

3/161

& the result is Standard deviation reduction

0001011

HPIN

SDR = SD. SD (atta)

: SD (Taxqet) = 9.67

bullook

		1996	of the	12 125	plan data
a socia	mean	SD	CV	n	w(v)
Rainy	35.2	8.7	24.7	5	5/14
overcost	46.25	4.03	4.03	4	4/14
Sunny	39.2	12.2	31.0	5	5/14

SDR(outlook) = SD(Target) - SD(outlook) = 9.67 -8.59 = 1.08 14.8 x 11.6+ 10 x 8-41 80.1=

TEPE

Temp:

10- = EF.P - FO.P = (phonica) 90							
20	mean	SD	to CV	ı n	w(v)		
trot	36-25	10-34	30.6		4/19		
cold	39	12.14	36180	4	4/111		
meral	42.G	3.38	19.65	6	G/IIV		
			D > (1) = 0	10 m 6/0	111		

SD(Temp) = 4 (10.34) + 4 (12.14) + (4 (2.38)

SDR (Temp) = 9.67-10.01

silds require me used not to be of the splits

Humidity:

				(100140)	
	mean	SD	CV	n	w(v)
trigh	87.51	10:11	26.92	( acate)	-7/w
normal	42	νν	27.4	7	7/14

917

CO

	mean	SD	CV	-80	w(v)
Taue	34.6	11.6	30.8	68	6/14
-Falge	41.3	8:41	20.3	17) 83 -	18/14/0

3D(windy) = \( \frac{1}{4} \times 10.4 \) = \( \frac{1}{14} \times 8.41 \) = 9.77

SDR(windy) = 9.67-9.77 = -0.1

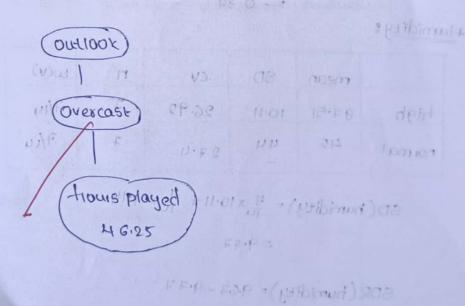
The value that tras highest SDR is considered as soot Node (i.e. decision mode)

considering termination criteria will per hour

Co is 10% or cv is (n=4) 88.8

butlook) + (ni-81) # + (ne-01) # + (9mot)03

Over cast that cr of 8% which is less than threshold value therefore we need not to futher Split



note.

whe need to Split mode Sunny and Rainy

Outlook		108.9	1) 80 1 CHO	La Lantit
- COOK	Temp	Humidity	1	THE RESERVE OF THE PERSON NAMED IN COLUMN TO SERVE OF THE
Sunny	Lim		windy	tiours played
	mild	thigh	-saise	erus (bimunt
Sunny	cool	normal		
Sunny	100		folse	52
Guman		normal	Touc	23
Sunny	mild	normal	false	46
Sunny	mild			
		trigh	True 00	3000

mean = 39.2 E UP. # 81.8 20.04

8D = 12.2 0 00 81 119-14 000

CN=31.0

Temp:-

	1	1064 11	E3.11 .	
	mean	SD	CV-12-8 21 His way	1
mild	40.3	8.96	22.23	
Cool	37.5	12.45	185 April - vel 6 18 18	
			54.66 8 815	4

(nb.n) 3 +(81-8) 08 = (6pulm) 08

FP-F=908

Then I sheek for sy value.

SD (remp) = 3 (8 96) + 2 (20.50) = 13.5+6 1200 1001100 11.

= 12.2-13.576 Wholes to Trial at supply

= -1.37

Humid:

	mean	SD	CV Preshore	38/07- 8	w wind
tigh	34.5	10.6	28.26	2	215
normal	40.3	15-30	34.96	3	315

SD (trumid) = = (10.6)+ = (15.30)+1000 short silge of them = 6.4(10.4)+ 0.6(15.30)

political tributed himmel dust, xoothoo

50 (humid) = 12.2-13.42 doll blin come

151-122 98/01 lemron loos parus

Windy

	(d.)	951	0).	00000	blin	(manus
False	mean	SD SD	PCY	don:	ww)	Vanua
Toue	41.66	3.48	7.94	3 0.00	3/5000	
	26.5	4.94	18.65		12/5	

so sust lomon low yarms

nosna

SD(windy) = 3/5 (3.78)+ 2 (4.94) = 4.23

SD (windy)= 12.2-4.23

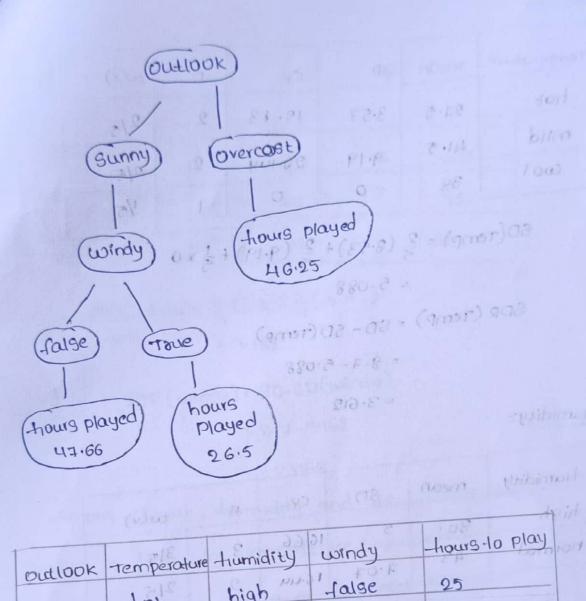
40-3 8-46 20-23 FP-8 314 then check for thighest SDR

In outlook, among temp, turnidity and windy 3DR value is trigh for windy.

SDR = 7.97

Then, sheck for cv value.

both True & false satisfy the cv value.



l wank	temperature	trumidity	windy	hours-to play
outlook	and the same	high wir	false	25
Rainy	hot			(30) janual ) 02
Rainy	hot .	high	-	35
Rainy	mild	high	False	
Rainy	cool	normal	False	38
Rainy	mildutib	normal	Tour Tribil	48 11
		668.5	8 .	

: mean = 35.2

9D = 8.7

CV = 24.7

Temperature	mean	SD	CV (	HOOL	to way	
trot	21.5	3.53	12.83	2	2/5	
mild	41.5	9.19	22.14	0)0	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	
cool	38	0	0		1/5	
SD(T	$emp) = \frac{2}{3}$	(8.53)+	2 (9.19)	+ 15 x	o (philes)	
SDR		= 5.088				
	(dulb)	= SD - SC		(0	1810 . (96	167.)
		= 8.7-5				
-turnidity:-		= 3.612	6:	Hours	policies (	mort.
trumidity	mean	SD	CV			
tiigh	30	5		η	w(v)	
normal SD(h	43	7.07	16.44	9	315	Olbjej
SD(h	umidity)	= 3 (~)	de	3	45d	min 9
	3.5	365)40	2 (4.07)	4	blim y	nto?
9	DR (Hun	= 5.828 nidity)= 8	50-8D(H	umidit	1000	ealest Carl
	1	E	8.1 - 5.82	8		¢ata
		-	2.872		7 0.05m · .	
				F.410	= 08	



				Jooks	O.
windy	mean	SD	CY	n	w(v)
False	82.66	6.80	20.85	) V/3	3(5 (1010)
Toue	39.	12.72	32.5	2	215
			19191/0 201		~13

$$50(windy) = \frac{3}{5}(6.80 + \frac{2}{5}(12.72))$$

$$= 9.168$$

= -0.468

Among, Temp, thurnidity and wirdy the SDR Value is thigh for temperature (1.e. 3.612)

Then, check for cv value of tol, mild & cool

Satisfy the cr value

Ubricu

LOURS

housed of

200

