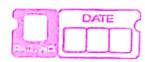


		. 4-22 /			PAGENO				
- 1		Tarl Jak.	DATA AL	2 SSETFLAN	MACHINE	LEART	VINA		
			No.						
									1/23
Q.5							.0.		
->	Candi	date	Tu		UNE	TR	free s		8
10-	1	· · · · · · · · · · · · · · · · · · ·	cupation	n: Service	Occur	patro	: Sal	معا	
21 1 1	1000	- 1 1 200	porr V	who you			rent, s		
	2	0	cupato:	n: Managen	ent Occu		r. Se		
							Staff	7	
	3	000	cupation	: Sales			m : Se	_	FSE
							rent, S.	j	
	. 4	000	upatron	Staff			n se		
					Mar	nager	nest, S	celos	
	5	Ger	nder:	Male	Ge	der:	Fema	le	
-	6		je < 30			~	30	7	F58
	7	A	ge < 40		·A	ge >=	40		
									•
	0	i p	Do 1	P(14 )	P(: 140)	-P P	D ( clt)	YCA	
	Split	3/11 = 0.272	0.72	PCj/tz)	11 - 0 125	27LTE	Q CSIO	94	574
	3	3/11-0.242		12 = 0:33	12=0.25	0.39	0.58	0.22	
	1			13 = 0 33	L3=0.395	<del></del>			
			)	L4=0	Lu =0.25				
	1		,	7 - 0				-	
	2	0.26	0.64	L1=0	14=0.285	10.46	1.428	0.65	150
	1	2.1	es.	12=0	1 12=0.428		17		
				L3=0.5	13 = 0.289	5			
				L4=0'5	L4=0	1			
						1			
	3	0-181	0.81	LL =0	L1 = 0.222	10-14	6 0.88	10.12	31:
				Lz=0.5	Lz = 0.22			1	
					L3 = 0-33			1	
				1 64=0	L4 = 0.22	)	Trail Control		7

	the state of the s				Sacarda, A
				DATE	
			PAGENO		
	4	it for Node 2	in no	1h	
	Spirt PL PR	PCjlte) PCjlte	), 2PLPE	(Q(s/t)	o (s)t)
2110	T12) 2 17,70 (ab) [)	1 1 (15/1.5/		JE 172	
		L1=0.111	1 0.146	1033	0.194
9.1		1 L2 =0.5 : 1 Lz =0.22			
		13=00=1113=0.441		)	
	l T	14=0 1 Ly = 0.22	2		
		( OSP)			
- A		L1=0.33   L1=0	0.486	0.93	0.45)
-		1 Lz =0133 1 Lz=0.20	0.280	2	
		L3=0.33=1 L3=0.4	1		<u> </u>
		L420.4		·	
	1004		1	1	2
	)	11=0.5 11=0	1 0.46	1.428	0.656
		12 = 0=11 12=0.42		3	
				1	
		Ly= 0 8/1 14=0.28	557	1	
,	-	(L1=0.285   L1=0	0.46	0.6429	0.2957
ė o	E841 87845 0 0 0 1 -		1	b	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
		13=0.285 13=0.5	1	1	_
		L4 = 0.1428   L4 = 0.21	-1	1	e
		OFAL			
				i	
0 0	18 1 32 0 200 13	05711 1150	8+40	1 3	-5
_		(60 1 - 2)			7
	.: 61	800 811			
	1	Ospl			7
180	2 5 88 80 0 0 1J	1111 NF.0	185 0	2)	
	99 0 7 2 3	0.51			
	P 3 11	6-81			
	L4 - 17	UPJ	1 2 2 2		
- 1					



•								
	A	tter sp	lit for	2 Node 2			1	
+121 \$ 16	11218	27 21 5	(3) 11 11	(4) / 1 3 7	7 1	24	17/192	1 .
	Split	Pu	PR	PCJItwi	PCJIta)	2PLPE,	Q(517)	Q (S) T
0-190				20.	120	1210	1 -	
	1	0.429	025071	L1=0.33	L1=0.25 /	0.48	0.33	0-163
		1	HULD - 474	L2 =0+33 q	1 62-0.5	1	1	
	1	1	Ly = 0.222	13 =0:33	13=0.25	1	( )	
i.				44=0	L4=0		1	
1240	0 93	0.486	0=11	1 88.0 = 1.	740	0 5 4	1 3.	
	2	0.286	0571451	Ly = 200 - 5	L1 =0.4	0,40	0.80	0.32
		(	13=04	12-0.5	L2-0.4		}	
(			60-42	13=05	113=0.2		,	
				4= 0	,		l	
128 0 8	1.42	046	0:11	. 2.0:	11. 400	38.3	0 1 a	
	3	0.286		3.	SL1 =0.2		,	0.327
		+	13=0-285	L2=0.5	12=0.4		i	
					1 13 =0.4	- 1	1	-
				L4 =0	L4=0		1	•
9 0295	0.64	6 46	0=1	2810:	0.36	800	1 12	
	4 1	0.571	20.429	11705	: 1 L1 = 0	0.4898	1.33	0.653
			13:05	L2=05	L2 =0.33		1	
,		<del>}</del>			113 = 0.66			
				1420	14=0		1	1
					(			
	5	0.478	0.571	L1=0	1 4 = 0.5	0.488	1.33	0.651
				L2=0.3	5 LZ = 0.5			
				13=0.6	6 13=0			
				14=0	1 4=0			
	6	0.286	0.714	+ L1=1	L1 = 0	0.4087	2.0	0.816
				LZ = 0	1 62 = 0.66			
	-			L3 = 0	13 = 0.4			
	-			14=0	1420			
		21 23 1 23	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	. V	1 . 1	-U	1,000	- Land
	II				•	Caannad	by ComSe	

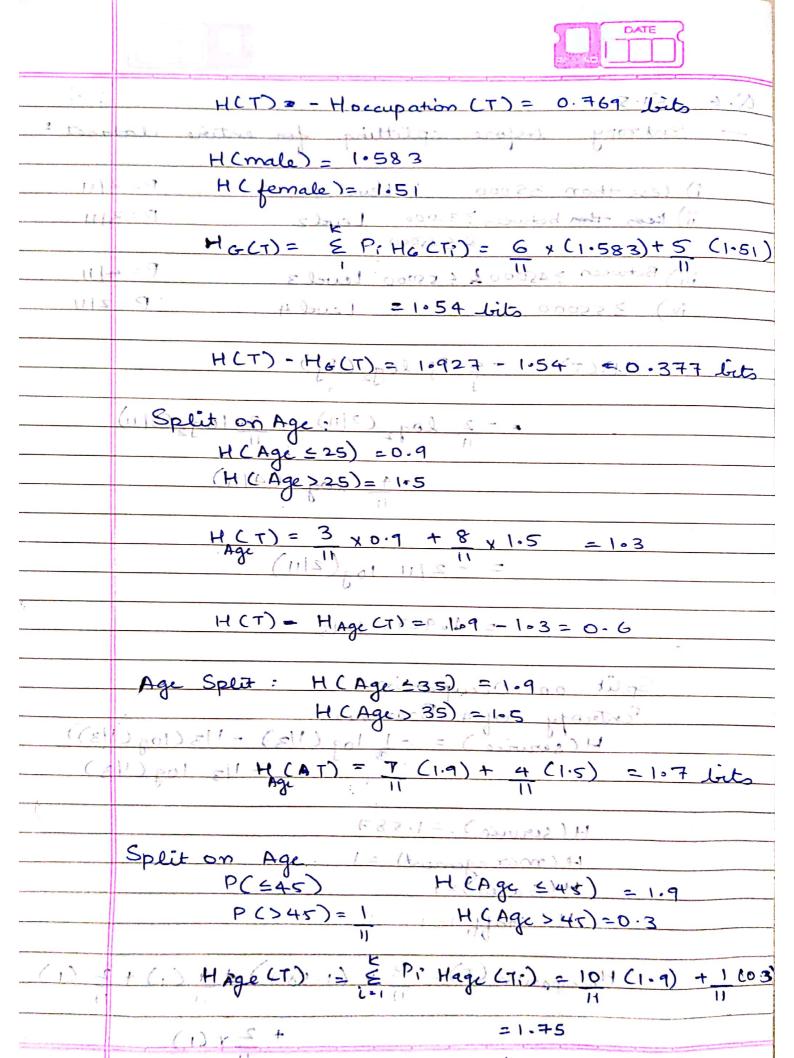


	Chilin.		Table 1	J		5374 TO L		
	Split	PL	PR	PCJ(th)	PCJ/ER)		Q(S)7	
	7	0.571	0.429	L1 = 0.5	L1 =0			
Jac me				L7=0;5				
			\ (	L3 =0	13 =0.66	0 '		
				L4 =0	L4=0			
			·.					
	CART	DE	HOESES	TREE				
		. 8 /						-
					Node			
				(AII	Records)	)		
		(D.C.)	pation		(0	cumpt	on= Sal	es Service
		= Mana	gement					_, _ / /
		CA,	5,6,7)	<del>)                                    </del>	1	Soword !	: 1,2,3,	3,9,10,11
			1			1		
				2	da			
	A	ge<30)	Age	>=30	Age	<u>&lt;30</u>	(A	ge>=30)
			-		0			1
		1		Carrie	d			7
		ale	1	male	Ma		<del>- ( ;</del>	1,8,10)
	0	4,6)		25,7)	C	2,11)		1,8,10)
		<i>\mathcal{V}</i>		<u> </u>		<b>)</b>		100 -
	Le	vel 2		Level 4	le	vel 1	Lei	rel 283
		•						
					The second second and the second seco			
				to the gain colonial with the control of the colonial street of the	1 2 2 2	•		
			-	A CONTRACTOR OF THE PARTY OF TH				
* **						U + 1		
	1	the second of the second	the second commence of the	The state of the s			-	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW



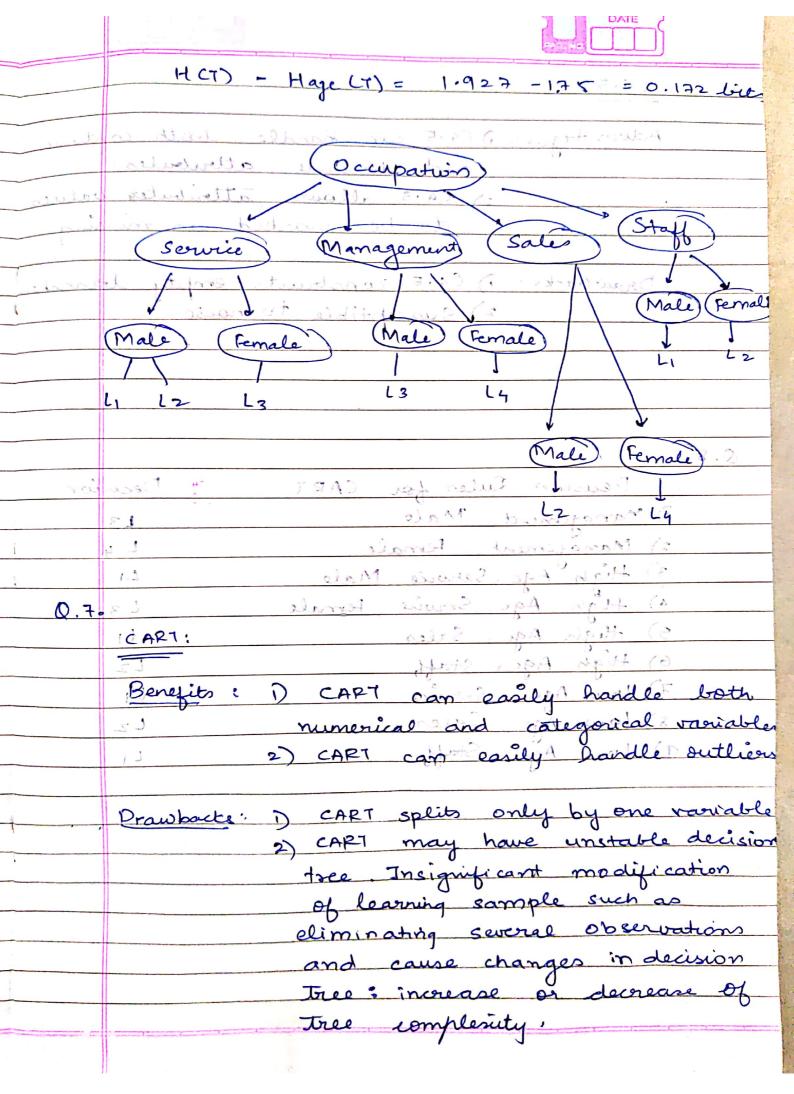
-> Entropy before splitting for entire dataset: i) less than 35000 level 1 set ii) kens the between 235000 Level 2 12:3/11 111) Between > 45000 L & 55000 Level 3 P= 4/11 iv) > 55000 010 1201= Level 4 P=2/11 12 FE OHLT DE - ESP; log (CP) - (T) H 2 - 2 log (2/11) - 3 log (3/11) 2-14 (log Payer) = -2/11 log(2/11) 0-0=8-1-=Pd'092712 lent - (T) H Entropy of 4 Branches  $H(service) = -\frac{1}{109} (1/3) - 1/3 (109 (1/3))$ H (service) = 1.587 H(management) = 1 pA 00 tilg?

(H(Sales) = 1 (2A=)9 0-0H(stapp15=1 1 (2PE)9 Hoccupation (T) = 3 x (1.507) +14 (1) + 2 (1) + 2 x (1) = 1.158



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	PAGENO								
sil se	C4.57 F.1- ECP.1 = (T) ARH - (D) H								
	,								
	Advantages: 1) C4.5 can handle both continuous								
	and discrete attributes								
	2) C4.5 allows attributes values								
- 10	to be marked as missing								
	to be marked as missing								
D(Rered	Drawbacks: 1) C4.5 constructs empty branches								
	2) Susceptible to noise								
33	11 / 1200								
	(1) (3) (4)								
0 %	(Male) (Terro								
(X+0)	Peusion Rules for CART Decision								
	Di Management, Male								
	2) Management, Female L4								
	3) High Age, Service, Male								
	4) High Age, Service, Fernale L3.F.								
	5) High Age, Sales								
	6) than Age, Staff								
1+14	Duland Age Service 1940								
	Sales								
	9) How Age, Staff								
July week	Language of the state of the bull of								
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Con it	with any transformation and								
	as and stamps phases of								
-	married leaving the a mile								
Co Chiles	ask the separate sound both								
1-3									
	the state of the s								



		FAGE NO.
Q.9	Decision Rules for C4.5	Decision
	1) Service, Male, Low Age	L,
	2) Service, Male, High Age	L <sub>2</sub>
	3) Service, Female	L 3
	4) Management, Male 5) Management, Female	L3
	Management, Female	L 4
	6) Sales, Male	· L2
	Sales, Fichale	L4
	7) Sales, Fichale 8) Staff, Male 1) Staff to	<u>L</u> 1
	1) Staff, Female	L2
Q.10	The decision rule for	C4.5 in man
	precise and descriptive	as compared to
	comparision to CART	tailed fecture is
	CA: 5 ehlitling init:	0 1
	CA. 5 splitting victoria	is based on
	0	
	·	
		1
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