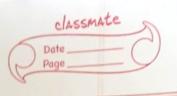
	class				classmate			
	100				Date			
		DA - Ass	signment	1	Khushi Patni			
					2019120047 BE EXTC			
	Problem 1-A	ir Traffic Dala	BOHINGUM	1 / 1/2636				
	There are four attributes A = [ Day, Season, Fog, Rain]							
	The categorie	s of classes are	c = Lon	Time, Late	Vlate, Cancel			
			18100	0 :				
	Attribute	On Time		U	Cancelled			
		9/4 0 (1)		31- 4				
DAYS	Weekday	2/14 = 0.64		3/3 = 1				
	Saturday	2/14 = 0.14		0 0	$\frac{1/1}{0} = 1$			
	Sunday	2/14 = 0.07		0				
	Holiday	2/14=0.14		mallo - III				
0==0=0	Cna	4/14 = 0.28		0 0	1/1 = 1			
SEASON	Spring		0		0			
	Summer	2/14 = 0.14	0	1/3 = 0.33	OCASE			
	Wenter	2/14 = 0.14 ×	2/2=1	2/3=0.67	0			
	VV21)(CC			0				
FOG	None	5/14 = 0.35	0	0	0			
100	High	4/14 = 0.28	2/2=05	1/3 = 0.33	1/1 = 1			
	Normal	5/14 = 0.35	2/2=0.5	2/3 = 0.67	0			
	(col	yes prometi	P( High)	11	•			
RAIN	None	6/14 = 0.42	1/2 = 0.5	1/3 = 0.33	0			
	Slight	6/14 = 0.42	1/2:0.5	210 0 (1	0			
10,10	Slight Heavy	2/14 = 0.14	0	2/3=0.67	2A 1/1 = 1			
2015 10 160	hain arron o	Mill Milmil.	2/2-01	3/20=0.13				
PRIOR	PROBABILITY	14/20 = 0.7	2/20=0.1	7/10-0113	720 - 0.05			

		classmate
450		Date Page
1719 1	Tre present to the	
1 1700	Instance -	
7	Weekday Winter High N	Jane 277
	The state of the s	
[4.69	CASE I - Claso - On Time	There are dear
- Manerally	Pontime = 0.7 x 0.64 x 0.14 x 0.28	
	= 0.00737	
Labore	Cotion Color Vinder Co	studist A
	CASE II - Class - Late	
	Prote = 0.1 × 0.5 × 1 × 0.5 × 0.5	mars weekery
	0 = 0.0125 HD = P12	hapmas
	114 6 0 1 0	Sunday
	CASE II - Class - Very Late	Heliday
	Priate = 0.15 x 1 × 0.67 x 0.33 x 0.33	
1 = 1	9 = 0.0109 = 0.019	DUAZ INTO
	6/14 = 0 45 6 6	Aummus Summus
-	CASE IL - Classo - Cancelled	TrouturA Automotive
	Produced = 0.05 x 0 x 0 x 1 x 0	Reference
	2 0	
	2/14 C 250 ht/s	20014
3	P(yes): P(yes) P(weekday   yes) P(High   yes) P(No. )	High
	P(yes): P(yes) P(weekday   yes)	P( Wenter (yes)
3	P(High   yes) P(None   y	les)
	Chap a Call March 10 10	MAR NOW
1	Ac Hoo no 1 1 1 1 1	Maril T
	As the probability of class-Late is The instance - Weekday, Winter Line	0.0125 the greatest
13000	The instance - Weekday, Winter, High	None will fall under
	Late category	Francisco con se



Problem	2 -	Statistical	Learning
			()

HO: 1	referred	reading	and	Gender	are	not	correlated.
HI:	Both are	correlated					

No.	of	people	=	1500
	-	proper		

	male	female	Total
fiction	250(90)	200 (360)	456
non fiction	50 (210)	1000 (840)	1050
Total	300	1200	1500

$$\chi^2 = (250 - 90)^2 + (50 - 210)^2 + (200 - 360)^2 + (1000 - 840)^2$$
90 210 360 840

For 1 degree of freedom, the X2 value needed to reject the hypothesis at the 0.001 significance level is 10.828. Since the value which we computed is above this, we can reject this hypothesis that gender and professed reading are independent. Concluding that, both attributes are strongly correlated.

<sup>= 284.44 + 121.90 + 71.11 + 30.48</sup> 

<sup>= 507.93</sup>