

DATE 2/3

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SNo	weather condition	Road condition	traffic condition	engine problem	accident
1	rain	bad	high	no	yes
2	snow	average	normal	yes	yes
3	clear	bad	light	no	no
4	clear	good	light	yes	yes
5	snow	good	normal	no	no
6	rain	average	light	no	no
7	rain	good	normal	no	no
8	snow	bad	high	no	yes
9	clear	good	high	yes	no
10	clear	bad	high	yes	yes

Weather condition		weather condition	YES		NO		ALL	
rain	yes	rain	1	0.20	2	0.40	3	0.30
snow	yes	snow	2	0.40	1	0.20	3	0.30
clear	no	clear	2	0.40	2	0.40	4	0.40

clear	Yes			
snow	No	Rain-Yes		
rain	No	$P(\text{rain} \text{Yes})$	$1/5$	0.20
rain	No	$P(\text{Yes})$	$5/10$	0.50
snow	Yes	$P(\text{rain})$	$3/10$	0.30
clear	No	$P(\text{Yes} \text{rain})$	$(0.20 \times 0.50) / 0.30$	0.33
clear	Yes			

Rain - No		
$P(\text{Rain} \text{No})$	2/5	0.40
$P(\text{No})$	5/10	0.50
$P(\text{Rain})$	3/10	0.30
$P(\text{No} \text{Rain})$	$(0.40 \times 0.50) / 0.30$	0.67

VALIANT

snow - Yes			snow - No		
$P(\text{snow} \text{Yes})$	$2/5$	0.40	$P(\text{snow} \text{No})$	$1/5$	0.20
$P(\text{Yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{Snow})$	$3/10$	0.30	$P(\text{Snow})$	$3/10$	0.30
$P(\text{Yes} \text{Snow})$	$(0.40 \times 0.50) / 0.30$	0.67	$P(\text{No} \text{Snow})$	$(0.20 \times 0.50) / 0.30$	0.33

Clear - Yes			Clear - No		
$P(\text{clear} \text{Yes})$	$2/5$	0.40	$P(\text{clear} \text{No})$	$2/5$	0.40
$P(\text{Yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{Clear})$	$4/10$	0.40	$P(\text{clear})$	$4/10$	0.40
$P(\text{Yes} \text{Clear})$	$(0.40 \times 0.50) / 0.30$	0.50	$P(\text{No} \text{Clear})$	$(0.40 \times 0.50) / 0.30$	0.50

ROAD CONDITION

Road Condition	Yes		No		All	
bad	3	0.60	1	0.20	4	0.40
average	1	0.20	1	0.20	2	0.20
good	1	0.20	3	0.60	4	0.40

bad - Yes			bad - No		
$P(\text{Bad} \text{Yes})$	$3/5$	0.60	$P(\text{Bad} \text{No})$	$1/5$	0.20
$P(\text{Yes})$	$5/10$	0.50	$P(\text{Yes})$	$5/10$	0.50
$P(\text{bad})$	$4/10$	0.40	$P(\text{bad})$	$4/10$	0.40
$P(\text{Yes} \text{Bad})$	$(0.60 \times 0.50)/0.40$		0.75	$P(\text{No} \text{Bad})$	$(0.20 \times 0.50)/0.40$
					0.25

good - Yes			good - No		
$P(\text{good} \text{Yes})$	$1/5$	0.20	$P(\text{good} \text{No})$	$3/5$	0.60
$P(\text{Yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{good})$	$4/10$	0.40	$P(\text{good})$	$4/10$	0.40
$P(\text{Yes} \text{good})$	$(0.20 \times 0.50)/0.40$		0.25	$P(\text{No} \text{good})$	$(0.60 \times 0.50)/0.40$
					0.75

average - Yes			average - No		
$P(\text{average} \text{Yes})$	$1/5$	0.20	$P(\text{average} \text{No})$	$1/5$	0.20
$P(\text{Yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{average})$	$2/10$	0.20	$P(\text{average})$	$2/10$	0.20
$P(\text{Yes} \text{average})$	$(0.20 \times 0.50)/0.20$		0.50	$P(\text{No} \text{average})$	$(0.20 \times 0.50)/0.20$
					0.50

TRAFFIC CONDITION

Traffic condition	Yes		No		ALL	
High	3	0.40	1	0.20	4	0.40
Normal	1	0.20	2	0.40	3	0.30
Light	1	0.20	2	0.40	3	0.30

High - Yes			High - No		
$P(\text{high} \text{yes})$	$3/5$	0.40	$P(\text{high} \text{No})$	$1/5$	0.20
$P(\text{yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{high})$	$4/10$	0.40	$P(\text{high})$	$4/10$	0.40
$P(\text{yes} \text{high})$	$(0.40 \times 0.50)/0.40$		0.75	$P(\text{No} \text{high})$	$(0.20 \times 0.50)/0.40$
					0.25

Normal - Yes			Normal - No		
$P(\text{Normal} \text{yes})$	$1/5$	0.20	$P(\text{Normal} \text{No})$	$2/5$	0.40
$P(\text{yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{Normal})$	$3/10$	0.30	$P(\text{Normal})$	$3/10$	0.30
$P(\text{Normal} \text{Normal})$	$(0.20 \times 0.50)/0.30$		0.33	$P(\text{No} \text{Normal})$	$(0.40 \times 0.50)/0.30$
					0.67

Light - Yes			Light - No		
$P(\text{Light} \text{yes})$	$1/5$	0.20	$P(\text{Light} \text{No})$	$2/5$	0.40
$P(\text{yes})$	$5/10$	0.50	$P(\text{No})$	$5/10$	0.50
$P(\text{Light})$	$3/10$	0.30	$P(\text{Light})$	$3/10$	0.30
$P(\text{yes} \text{Light})$	$(0.20 \times 0.50)/0.30$		0.33	$P(\text{No} \text{Light})$	$(0.40 \times 0.50)/0.30$
					0.67

ENGINE PROBLEM

engine problem	Yes		No		All	
No	2	0.40	4	0.80	6	0.40
Yes	3	0.40	1	0.20	4	0.40

No - Yes			No - No		
$P(\text{No} \text{Yes})$	2 / 5	0.40	$P(\text{No} \text{No})$	4 / 5	0.80
$P(\text{Yes})$	5 / 10	0.50	$P(\text{No})$	5 / 10	0.50
$P(\text{No})$	6 / 10	0.60	$P(\text{No})$	6 / 10	0.60
$P(\text{Yes} \text{No})$	$(0.40 \times 0.50) / 0.40$		0.33	$P(\text{No} \text{No})$	$(0.80 \times 0.50) / 0.40$
					0.47

Yes - Yes			Yes - No		
$P(\text{Yes} \text{Yes})$	3 / 5	0.60	$P(\text{Yes} \text{No})$	1 / 5	0.20
$P(\text{Yes})$	5 / 10	0.50	$P(\text{No})$	5 / 10	0.50
$P(\text{Yes})$	4 / 10	0.40	$P(\text{Yes})$	4 / 10	0.40
$P(\text{Yes} \text{Yes})$	$(0.60 \times 0.50) / 0.40$		0.75	$P(\text{No} \text{Yes})$	$(0.20 \times 0.50) / 0.40$
					0.25

1.	Clear	Average	High	No	Yes
$P(\text{Yes})$	0.5	0.5	0.75	0.33	$0.06 / 0.5 = \boxed{0.12}$
$P(\text{No})$	0.5	0.5	0.25	0.47	$0.04 / 0.5 = \boxed{0.08}$

2.	Rain	Average	Normal	Yes	No
$P(\text{Yes})$	0.33	0.5	0.33	0.75	$0.04 / 0.5 = \boxed{0.08}$
$P(\text{No})$	0.47	0.5	0.67	0.25	$0.06 / 0.5 = \boxed{0.11}$

3.	Snow	Bad	Light	Yes	Yes
$P(\text{Yes})$	0.67	0.75	0.33	0.75	$0.12 / 0.5 = \boxed{0.25}$
$P(\text{No})$	0.33	0.25	0.67	0.25	$0.01 / 0.5 = \boxed{0.02}$

4.	Clear	Good	High	No	No
$P(\text{Yes})$	0.5	0.25	0.75	0.33	$0.03 / 0.5 = \boxed{0.06}$
$P(\text{No})$	0.5	0.75	0.25	0.47	$0.04 / 0.5 = \boxed{0.12}$

5.	show	Average	High	No	Vel
P(Yes)	0.67	0.5	0.75	0.33	$0.08/0.5 = \boxed{0.17}$
P(No)	0.33	0.5	0.25	0.47	$0.03/0.5 = \boxed{0.06}$