

Cities	Safeness Score	Environment	Affordability	Livability Score	Average GPA	Pseudo Residual
Delhi	50	Unhealthy	Affordable	50	72.4	-22.4
New York	70	Good	Expensive	79		6.6
Singapore	84	Good	Expensive	75		2.6
Seoul	86	Good	Affordable	78		5.6
Tokyo	88	Excellent	Expensive	80		7.6
Dhaka	52	Unhealthy	Expensive	???		

Safeness Score	Possible Splitters	Pseudo Residual
50		-22.4
70	60	6.6
84	77	2.6
86	85	5.6
88	87	7.6

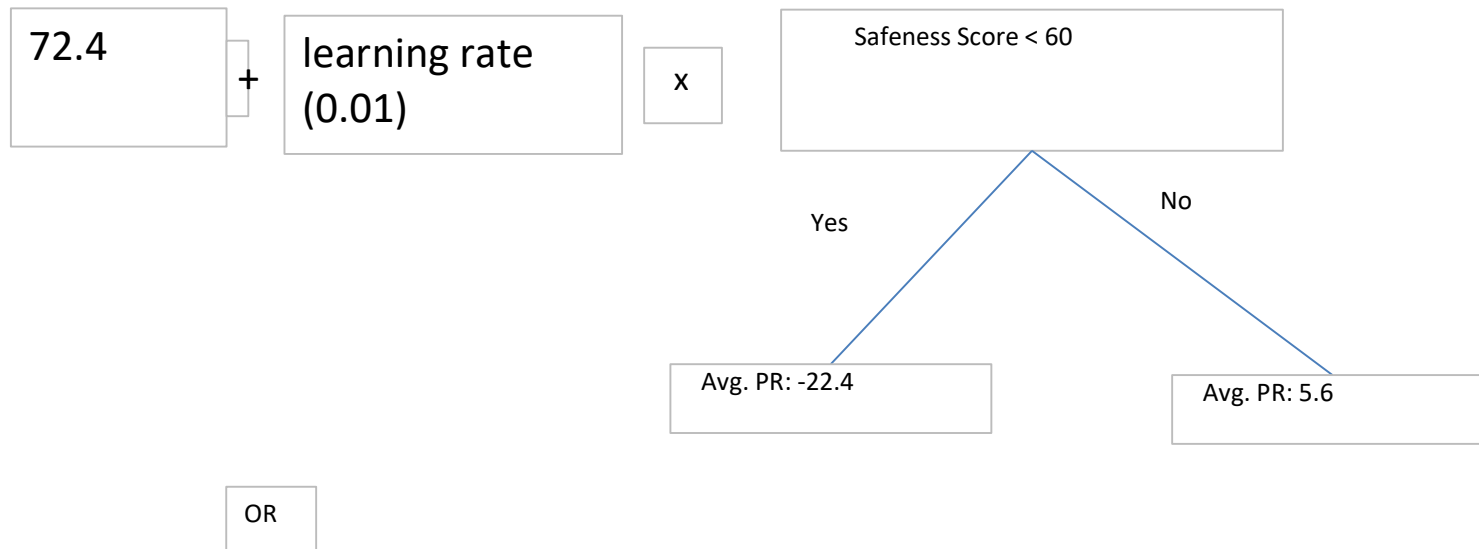
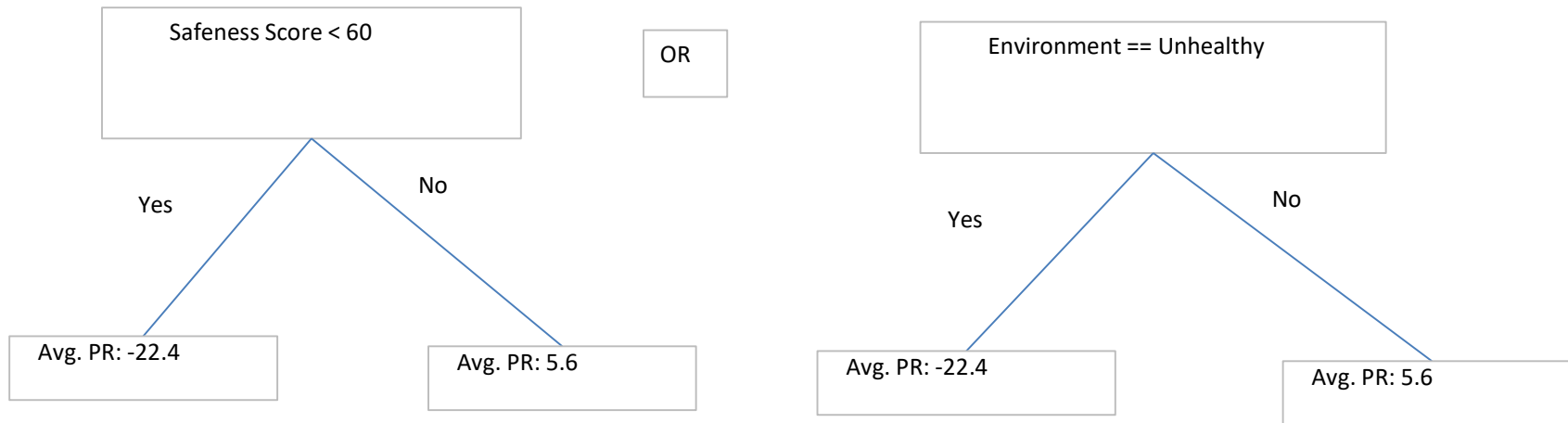
Cities	Safeness Score	Pseudo Residual (PR)		Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)/2
Delhi	50	-22.4	Considering safeness score 60 as the separator	-22.4	5.6	7
New York	70	6.6	Considering safeness score 77 as the separator	-7.9	5.266666667	216.5833333
Singapore	84	2.6	Considering safeness score 85 as the separator	-4.4	6.6	248
Seoul	86	5.6	Considering safeness score 87 as the separator	-1.9	7.6	284.5
Tokyo	88	7.6				
				Minimum SSR/2=	7	

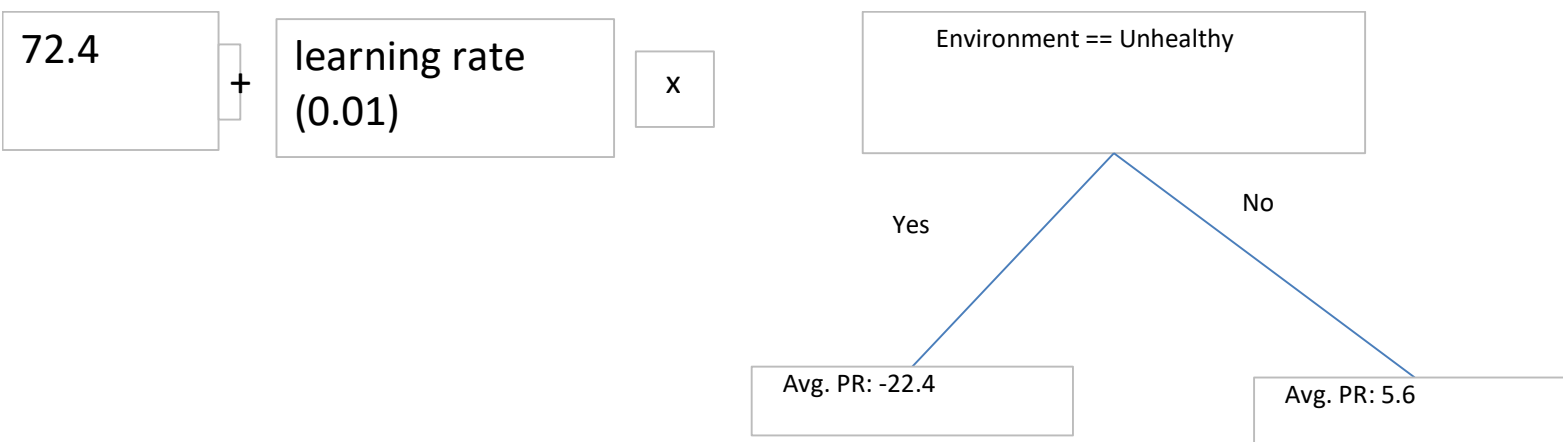
Environment	Encoded value for Environment	Pseudo Residual (PR)		Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)	SSR/2
Unhealthy	1	-22.4	Considering 'Environment=Unhealthy' as the separator	-22.4	5.6	14	7
Good	2	6.6	Considering 'Environment=Good' as the separator	4.933333333	-7.4	458.6666667	229.3333333
Good	2	2.6	Considering 'Environment=Excellent' as the separator	7.6	-1.9	1020.25	510.125
Good	2	5.6					
Excellent	3	7.6					
				Minimum SSR/2=	7		

Affordability	Encoded value for Affordability		Pseudo Residual (PR)	Considering 'Affordability=Af fordable' as the separator	Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)	SSR/2
Affordable	1		-22.4		-8.4	5.6	406	203
Expensive	2		6.6					
Expensive	2		2.6					
Affordable	1		5.6					
Expensive	2		7.6					

Minimum SSR/2= 203

Minimum SSR/2 for 'Safeness Score<60'=7
 Minimum SSR/2 'Environment = Unhealthy'=7
 Minimum SSR/2 for 'Affordability = Affordable'=203





2nd Iteration

Cities	Safeness Score	Environment	Affordability	Predicted Livability Score	Original Livability Score	Pseudo Residual (PR)
New York	70	Good	Expensive	72.456	79	6.544
Singapore	84	Good	Expensive	72.456	75	2.544
Seoul	86	Good	Affordable	72.456	78	5.544
Tokyo	88	Excellent	Expensive	72.456	80	7.544

Cities	Safeness Score	Pseudo Residual (PR)	Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)/2
New York	70	6.544	6.544	5.210666667	6.333333333
Singapore	84	2.544	4.544	6.544	5
Seoul	86	5.544	4.877333333	7.544	4.333333333
Tokyo	88	7.544		Minimum SSR/2:	4.333333333

Environment	Encoded value for		Pseudo Residual (PR)		Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)	SSR/2
	Environment							
				Considering 'Environment=G ood' as the separator	4.877333333	7.544	8.666666667	4.333333333
	Good	2	6.544					
	Good	2	2.544					
	Good	2	5.544					
	Excellent	3	7.544					

Minimum SSR/2= 4.333333333

Affordability	Encoded value for		Pseudo Residual (PR)		Average PR score of Left side instances	Average PR score of Right side instances	Sum of square residuals (SSR)	SSR/2
	Affordability							
				Considering 'Affordability=Ex pensive' as the separator	5.544	5.544	14	7
	Expensive	2	6.544					
	Expensive	2	2.544					
	Affordable	1	5.544					
	Expensive	2	7.544					

Minimum SSR/2 for 'Safeness Score<87'=4.33

Minimum SSR/2 'Environment = Good'=4.33

Minimum SSR/2 for 'Affordability = Expensive'=7

