

## EXPLORATORY DATA ANALYSIS

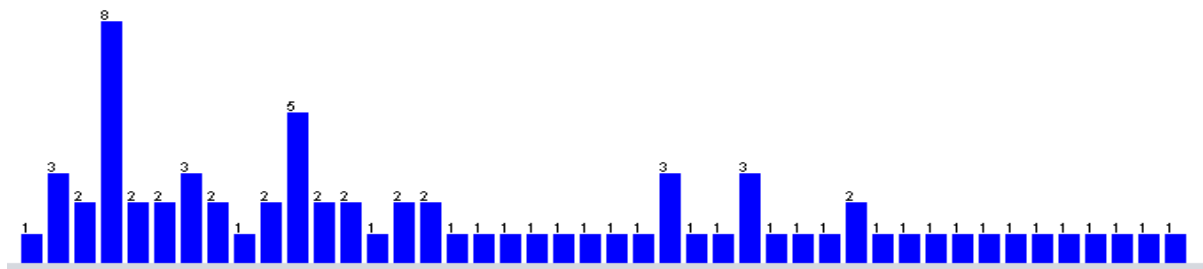
### Location:

**Selected attribute**

Name: Location  
Missing: 0 (0%)  
Distinct: 44  
Type: Nominal  
Unique: 28 (38%)

No.	Label	Count	Weight
1	Coligny Beach, Hilton Head, B...	1	1.0
2	Sullivan s Island	3	3.0
3	Avon, Hatteras Island, Outer B...	2	2.0
4	Myrtle Beach, Horry County	8	8.0
5	Folly Beach	2	2.0
6	Folly Beach, Charleston County	2	2.0
7	Ocean Isle, Brunswick County	3	3.0
8	Atlantic Beach, Carteret County	2	2.0
9	Atlantic Beach	1	1.0

Class: Attack (Nom) Visualize All



It can be observed that Myrtle Beach is prone to more number of attacks among all the locations of nc and sc.

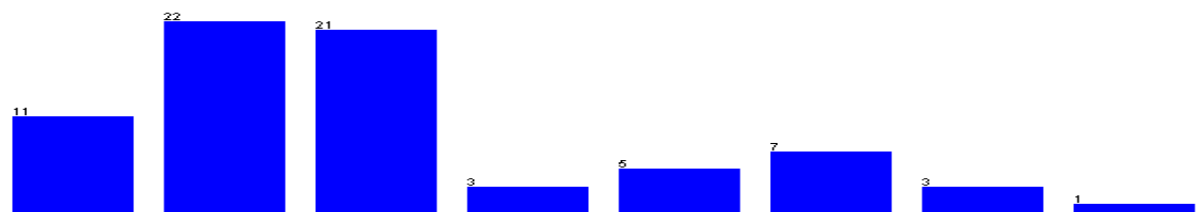
### MoonPhaseExtended:

**Selected attribute**

Name: MoonPhaseExtended  
Missing: 0 (0%)  
Distinct: 8  
Type: Nominal  
Unique: 1 (1%)

No.	Label	Count	Weight
1	First quarter	11	11.0
2	New	22	22.0
3	Full	21	21.0
4	Waxing crescent	3	3.0
5	Waxing gibbous	5	5.0
6	Waning gibbous	7	7.0
7	Third quarter	3	3.0
8	Waning crescent	1	1.0

Class: Attack (Nom) Visualize All



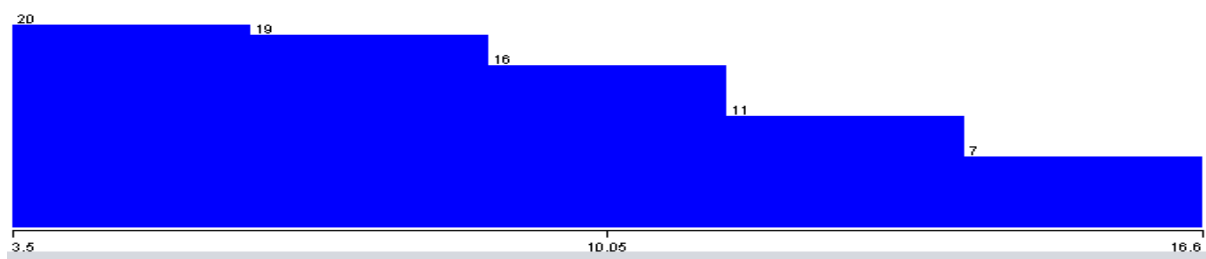
Attacks are almost equal in both the cases New moon and full moon. As we know tides favour the shark attacks, but when moon and sun align, known as full or new moon, the pull is at its strongest, causing the tides to be at their highest and lowest. This is known as spring tides. And because of the

change from high tides to low tides and back again happens so quickly, sharks may move in areas closer to where people swim when the tide is low.

### Wind\_Speed\_Modified:

Selected attribute		
Name: Wind_Speed_Modified	Distinct: 45	Type: Numeric
Missing: 0 (0%)		Unique: 28 (38%)
Statistic	Value	
Minimum	3.5	
Maximum	16.6	
Mean	8.708	
StdDev	3.353	

Class: Attack (Nom) Visualize All

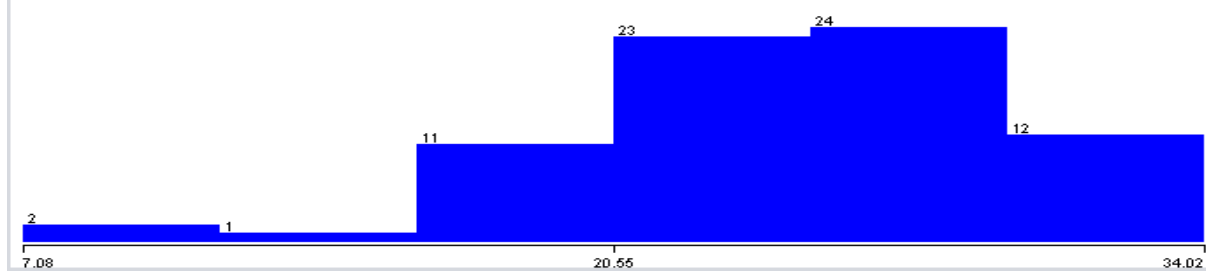


It is clearly understood that the number of attacks happened are constant for certain intervals of wind speed and decrease when the wind speed increases.

### Salinity:

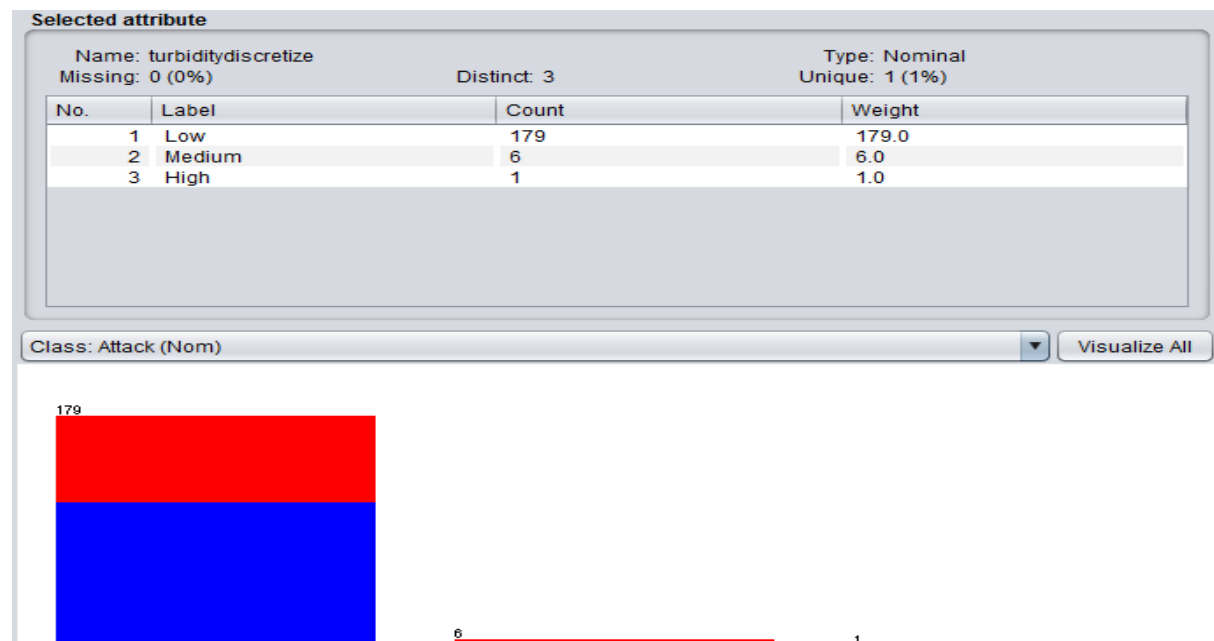
Selected attribute		
Name: Salinity_Modified	Distinct: 58	Type: Numeric
Missing: 0 (0%)		Unique: 46 (63%)
Statistic	Value	
Minimum	7.078	
Maximum	34.023	
Mean	24.786	
StdDev	5.073	

Class: Attack (Nom) Visualize All



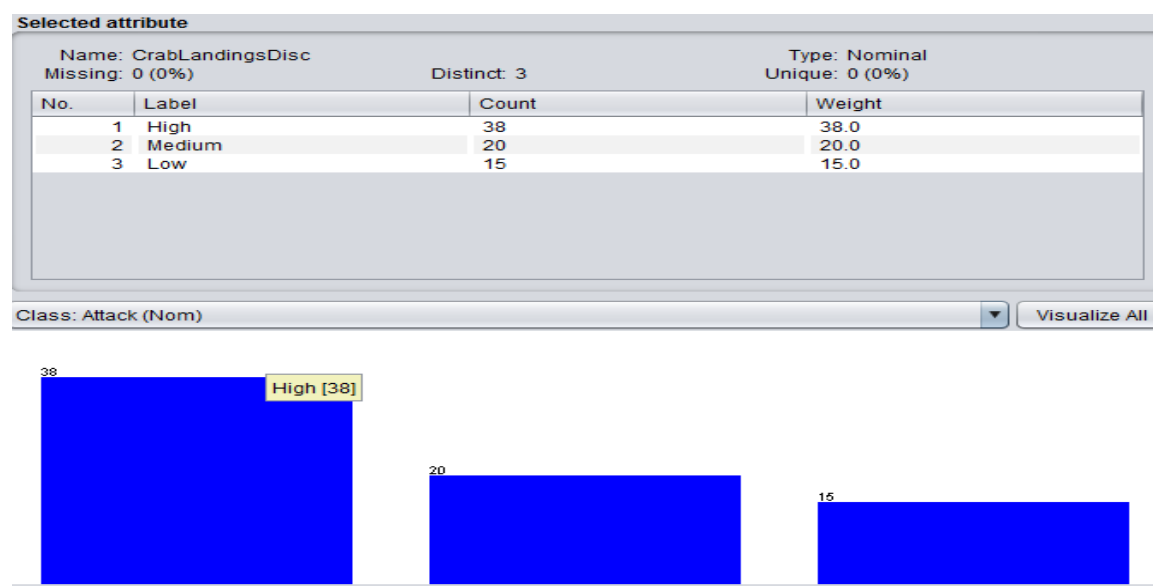
There is no particular proportionality for this relation. The number of attacks happened are highest when the salinity reached the optimal/desired levels.

### Turbidity\_discretize:



More number of attacks were happened when the relative clarity of water is high and the attacks are negligibly small when turbidity is low.

### CrabLandings:

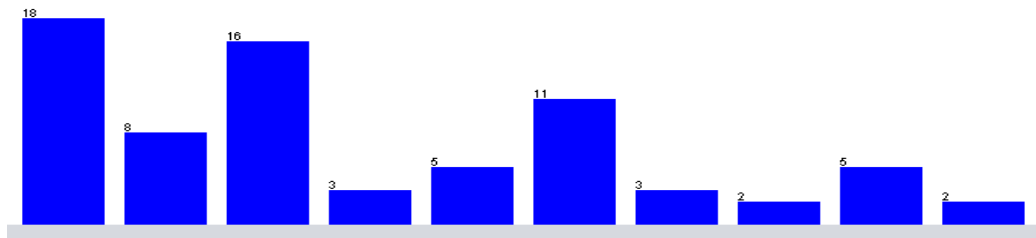


Attacks observed are high when the population of crabs i.e their landings are prominent

## Direction:

Selected attribute			
Name: Direction		Type: Nominal	
Missing: 0 (0%)		Unique: 0 (0%)	
		Distinct: 10	
No.	Label	Count	Weight
1	SW	18	18.0
2	E	8	8.0
3	SSW	16	16.0
4	SSE	3	3.0
5	S	5	5.0
6	WSW	11	11.0
7	NNE	3	3.0
8	NE	2	2.0
9	SF	5	5.0

Class: Attack (Nom) Visualize All



Attacks are almost equal in both the cases South-Southwest and Southwest winds. This might also be the area where shark population residing is high.

## Temperature:

Selected attribute			
Name: temperature_discretize		Type: Nominal	
Missing: 0 (0%)		Unique: 0 (0%)	
		Distinct: 3	
No.	Label	Count	Weight
1	Low	6	6.0
2	Medium	25	25.0
3	High	42	42.0

Class: Attack (Nom) Visualize All



High temperature favours shark attacks. As the temperatures of the water increase, the sharks may move into new locations where they will be more comfortable. This means they can be in areas where people are fishing, boating, and swimming.