ATTRIBUTES/DERIVED ATTRIBUTES FROM RAW DATA:

Date: 2009-2016 [May to September]

Turtle data:

- TurtleExactCountSC :
  Method: 1) Added Nest and False crawls
  2)Aggregated date wise
  3) Merged with sharkattack file and alldatesfile date wise
- TurtleexactdiscretizeSC : Discretized from TurtleExactCountSC using equal width binning (no of bins = 3)

- TurtleExactCountNC :
  Method: 1) Added Nest and False crawls
  2)Aggregated date wise
  3) Merged with sharkattack file and alldatesfile date wise

- TurtleexactdiscretizeNC: Discretized from TurtleExactCountNC using equal width binning (no of bins =3)

- TurtleExactCombined: Combined variable for turtle activity
  Method: For NC attacks records: TurtleExactCountNC
  For SC attacks records: TurtleExactCountSC
  For other records: Mean of TurtleExactCountNC and TurtleExactCountSC

- TurtleAttackActivity: Mean of the total false crawls and nesting location wise
- TurtleAttackActivityDiscretized: Discretized from TurtleAttackActivity

Raw Data from Global Shark Attack File:

- Area
- Location
- Time
- Species
- Attack
- Beach
- County

Timeofattack: Discretized from Time Variable in Global Shark attack file using EDA.

MoonPhase: Used java to calculate the moon phase for each date.
Values include [new moon, full moon, First Quarter, waxing gibbous, waning gibbous, third quarter, Waning Crescent, Waxing Crescent]

MoonPhaseExtended: MoonPhase attribute is extended +-2 days

MoonPhase3daysextended: MoonPhase attribute is extended +-3 days

MoonPhase4daysextended: MoonPhase attribute is extended +-4 days

Weather Data:

Raw data from NOAA (File provided by Dr Pamela Thompson)

- Precipitation_Value :
- StationPressure:
- WindSpeed:

Salinity and Turbidity Data:

Variables derived date-wise from raw data:

- Salinity
- Turbidity
- Water Temperature
- DissovedO2

Variables derived after removing NAs:

- PrecipitationValueMod
- StationPressureMod
- WindSpeedMod
- SalinityMod
- TurbidityMod
- TemperatureMod
- DissovedO2Mod

Variables discretized with equal width binning (number of bins: 3)

- DissolvedO2discretize
- salinitydiscretize
- turbiditydiscretize
- temperaturediscretize
- precipitationdiscretize
- pressurediscretize
- windspeeddiscretize
- precipitationmvadiscretize

Calculation of wet /dry days:

Prepmovingaverage : Moving average method used on PrecipitationValueMod

Crab Data:

- CrabLandings : Raw data
- CrabLandingsnormalised: Z score normalization on CrabLandings
- CrabLandingsDisc: Discretized using equal width binning (no of bins: 3)

Wind Direction Data:

- **Degree**: Date-wise mean of all degree measurements taken for the day
- **Direction**: Derived from degree

Normalized Variables:

- Zscorewatertemp: Z score normalization of water temperature
- Changetemp: Derived from Water Temperature taking difference from the current to the previous day

Variables derived using Z Score Normalization:

- Precipitation_Normalised
- StationPressure_Normalised
- WindSpeed_Normalised
- Salinity_Normalised
- Turbidity_Normalised
- Dissolved02_Normalised

Variables derived using min max normalization:

- Precipitation_minmax
- StationPressure_minmax
- WindSpeed_minmax
- Salinity_minmax
- Turbidity_minmax
- Dissolved02_minmax
- WaterTemp_minmax