I have last 10 years of sea S.S.T. and CHIL. data along with a separate record of what temperature the fish can live in. Based on this, I want to make a model so that we can predict what kinds of fishes are found in which places (latitude, longitude).

## Requirements

1) Perform data cleaning if required.

2) If any parameter seems less, add 1, 2 parameters.

3) Apply the latest 5 algorithm like (CNN,KNN,ANN,ARIMA,SARIMA...) and test this data and show the result and check who gets the best result.

4) A new algorithm was created by applying the algorithm which has the best result to make it more accurate. or improve the result by merging any 2 algorithms

5) Making applicable charts.

6) make the model.

## Input and Output

1) It will input the name and date of the fish and show the location (latitude, longitude) where the fish can be found.

2) If you don't give any input, show the name of all the fishes in which place (latitude, longitude) according to the day.

## Parameter Explanation

### Sst.csv

| Sr No | Parameter Name | Description |
|---|---|---|
| 1 | Sensor | Aqua & Terra Are Both Surface Sensor<br>Aqua = 1 Tera = 2 |
| 2 | Month | Taken Value of That Date of Month |
| 3 | Season | Fishing Season<br>spring = 1<br>summer = 2<br>fall = 3<br>winter = 4<br><br>Season 1 (Spring , summer) = January to May<br>Season 2 (fall , winter) = September to November |
| 4 | Time | Morning = 1<br>Afternoon = 2 |
| 5 | Lat | Latitude |
| 6 | Lon | Longitude |
| 7 | Sst | Sea Surface Temperature |

### chl.csv

| Sr No | Parameter Name | Description |
|---|---|---|
| 1 | Sensor | Aqua & Terra Are Both Surface Sensor<br>Aqua = 1 Tera = 2 |
| 2 | Month | Taken Value of That Date of Month |
| 3 | Season | Fishing Season<br>spring = 1<br>summer = 2<br>fall = 3<br>winter = 4<br><br>Season 1 (Spring , summer) = January to May<br>Season 2 (fall , winter) = September to November |
| 4 | Time | Morning = 1<br>Afternoon = 2 |
| 5 | Lat | Latitude |
| 6 | Lon | Longitude |
| 7 | chl | chlorophyll<br><br>the green substance in plants that takes in light from the sun to help them grow |

### FishName.csv

| Sr No | Parameter Name | Description |
|---|---|---|
| 1 | Sr.No | This is Just a Serial Number |
| 2 | Species Category | This Field Show the Category of Fish |
| 3 | Scientific Name | This is Scientific Language Name of The Fish |
| 4 | English Name | This is the Original English Language Name of The Fish |

| 5 | Local Name | This is the  Local Language Name of The Fish (Mother Tongue) |
|---|---|---|
| 6 | Min Temp | minimum  temperature for Fish leaving |
| 7 | Max Temp | maximum temperature for Fish leaving |
| 8 | Mean Temp | Mean temperature for Fish leaving |
| 9 | Fish Temp In Category | Divide Fish category based on the some range of temperature<br><br>Group 1 : 30 To 40<br>Group 2 : 29 To 26<br>Group 3 : 21 To 25<br>Group 4 : 16 To 20<br>Group 5 : 11 To 15<br>Group 6 : 01 To 10 |