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DCSI 311

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Project 2 Data Proposal

For my project I will be analyzing historical data for a weather wind and weather from a buoy in Erie, PA approximately a mile and a half offshore: NDBC - Station 45167 Recent Data

I am also considering merging the data with more detailed weather data, but have not decided yet. This data contains the following useable columns:

WDIR, Wind Direction, degrees from N

WSPD, Wind Speed, m/s

GST, Wind Gust, m/s

WVHT, Wave Height ,m

DPD, Dominant Wave Period, s

MWD, Mean Wave Direction, degrees from N

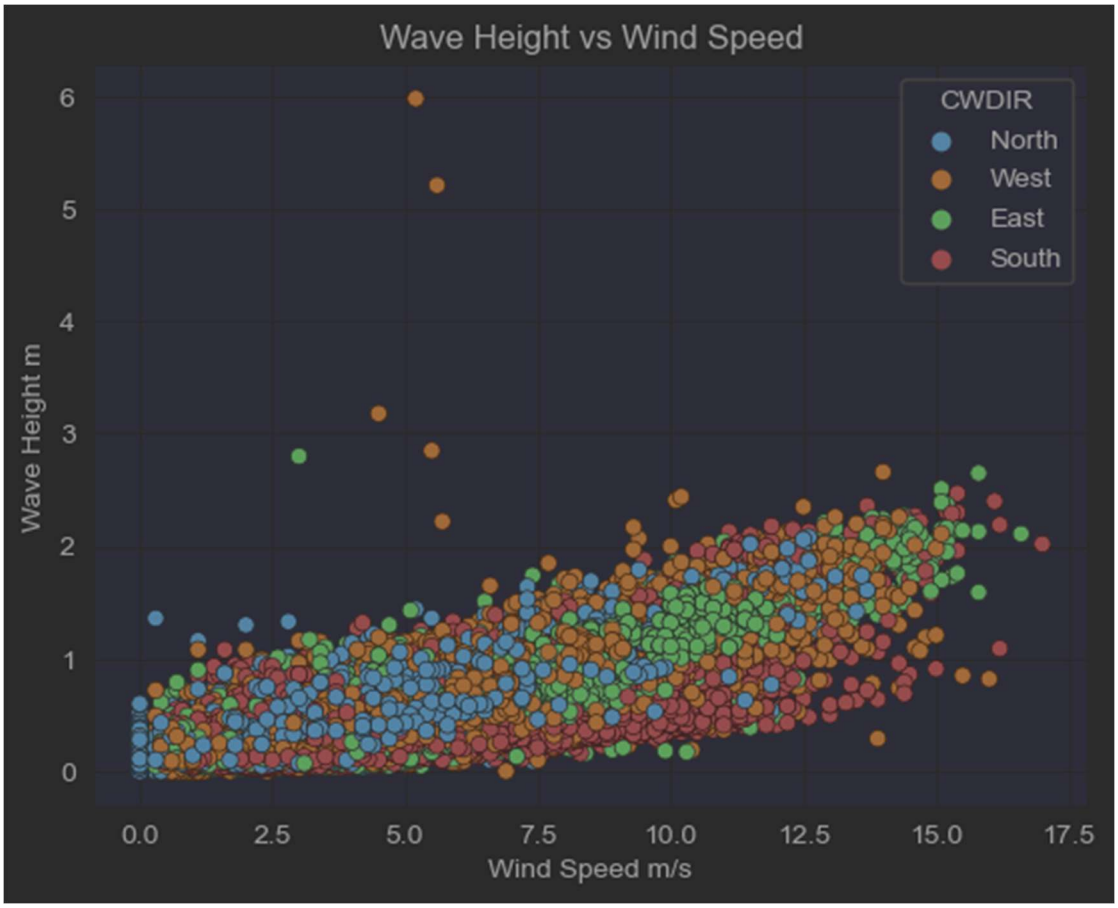
ATMP, Air Temperature, degrees C

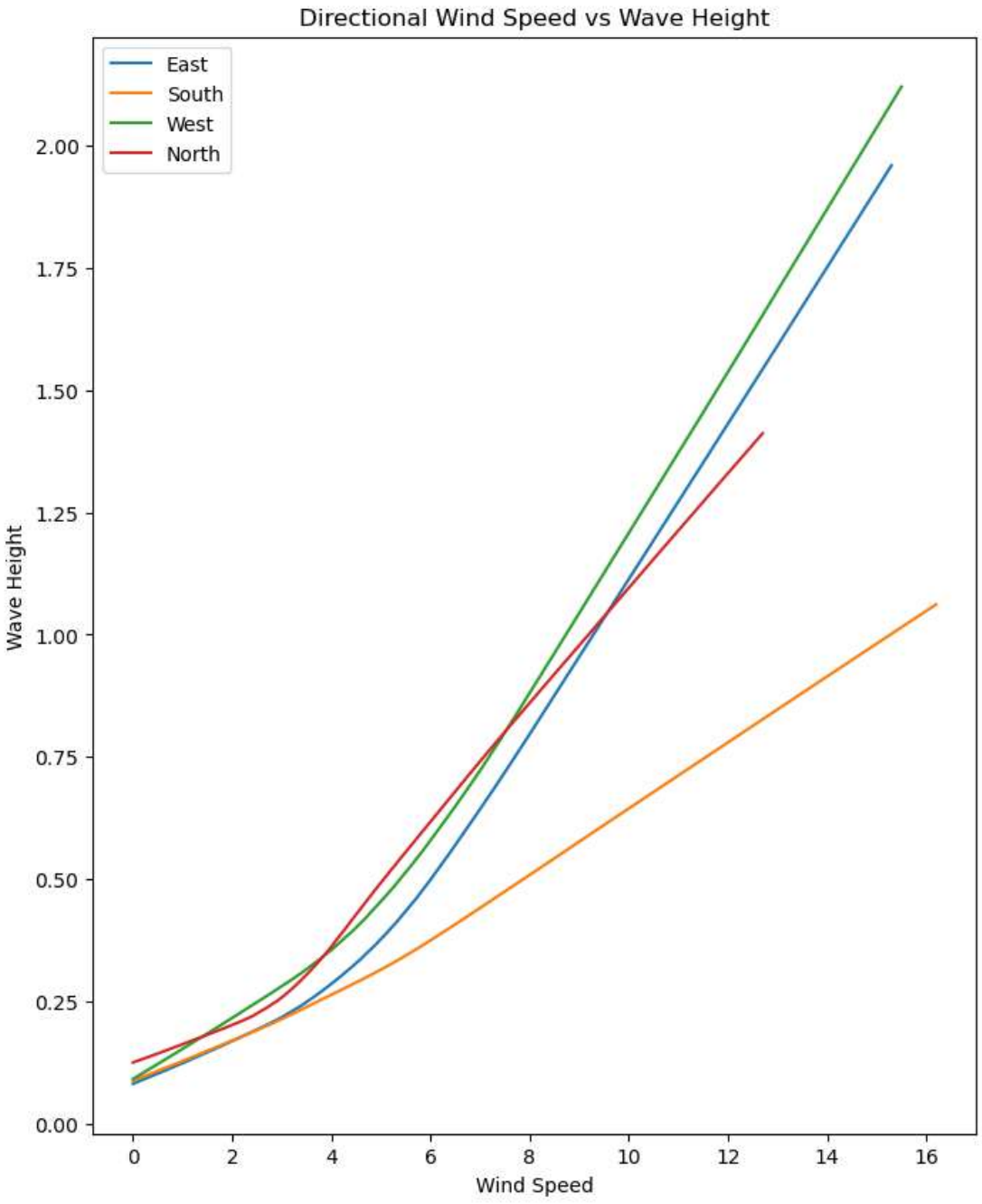
WTMP, Water Surface Temperature, degrees C

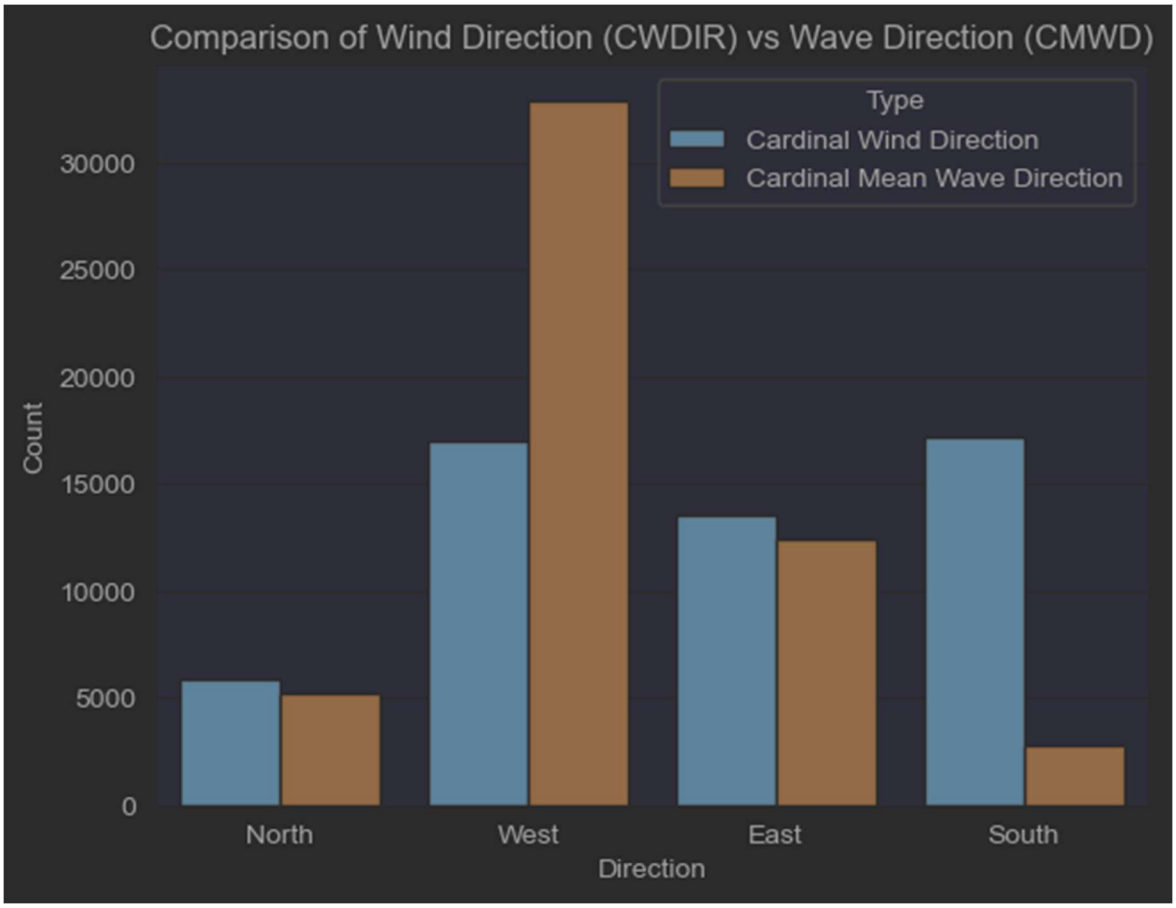
(While doing that I accidentally overwrote my file with days of work on this project :(I am now in catch up mode after previously having a professional level project. I need to work with git more. I believe I still have some images saves however.)

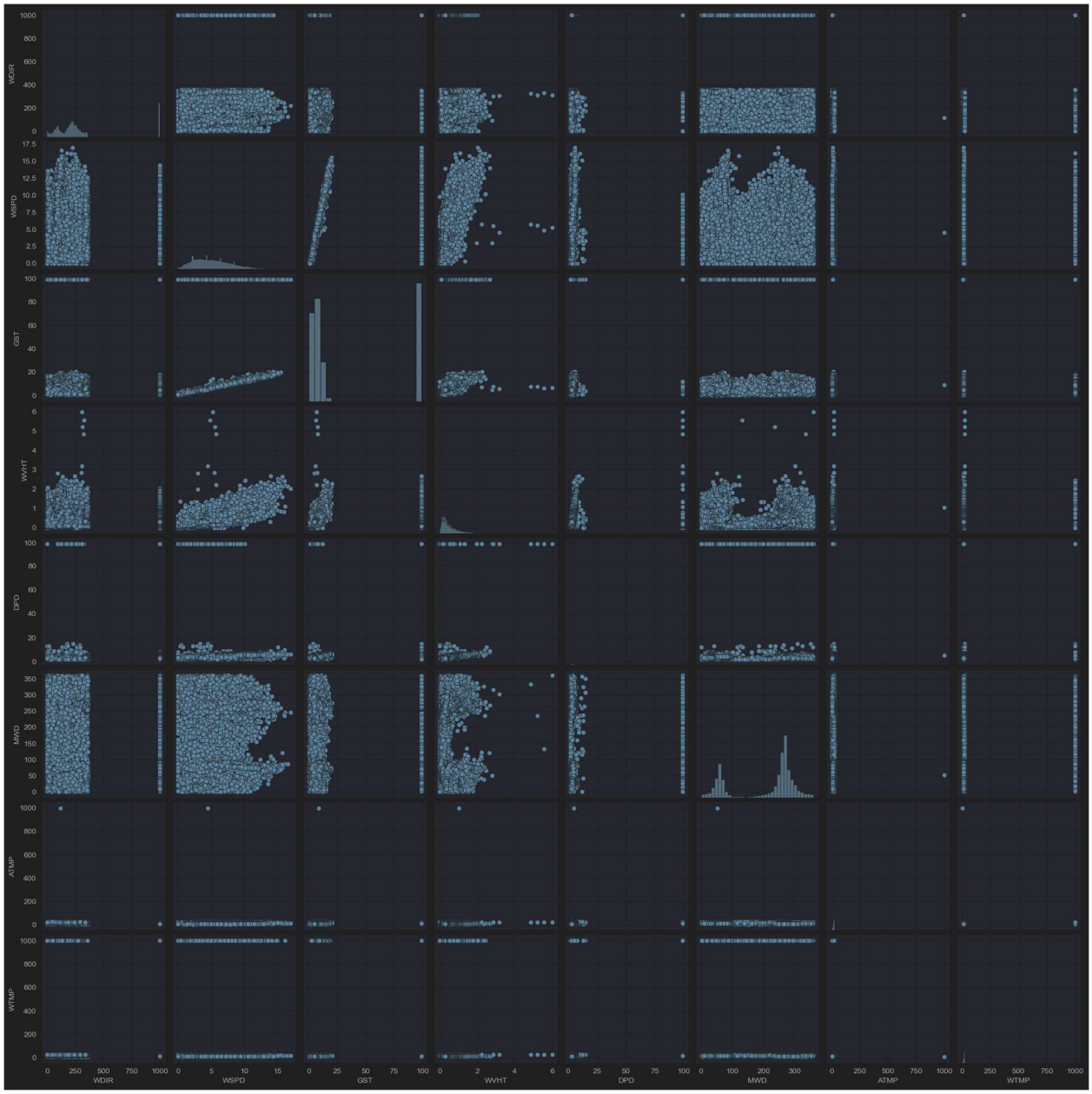
I own a 14-foot fishing boat, which I use on Lake Erie during my summers at home in Erie, Pennsylvania. My boat is quite modest—essentially a large canoe with an outboard motor attached. Despite its size, I often venture more than 5+ miles offshore on a daily basis.

However, Lake Erie is notorious for its rapidly changing weather conditions. These unpredictable shifts can make boating dangerous, especially when you are far from shore. In an effort to enhance my safety, I am undertaking this project to analyze weather and lake data. My goal is to identify patterns that could help me better understand how the lake behaves, potentially providing valuable insights for safer trips.


Wave Height vs Wind Speed
CWDIR
North
West
East
South
Wave Height m
0
1
2
3
4
5
6
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
Wind Speed m/s


Directional Wind Speed vs Wave Height
East
South
West
North
Wave Height
Wind Speed
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
0
2
4
6
8
10
12
14
16


Comparison of Wind Direction (CWDIR) vs Wave Direction (CMWD)
Type
Cardinal Wind Direction
Cardinal Mean Wave Direction
30000
25000
20000
15000
10000
5000
0
Count
North
West
East
South
Direction


WDIR
WSPD
GST
WVHT
DPD
MWD
ATMP
WTMP