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CSCE590 – Quiz 1

Tasks

[30 + 40 + 20 + 10 = 100 points]

Task 1 – Load data programmatically (10 points), summarize its statistics (10 points) and report on missing data (10 points). Note that a number of parameters are reported for the same date/time in successive rows.

[30 points]

Task 2 - Create plots for all the parameters with X-axis showing time and Y-axis showing the parameter value.

[40 points]

Task 3 – List at least 3 feature pairs with strong correlations (> 0.5 or < -0.5) among them? Show heatmap of correlation, if possible. What does this indicate?

ActivityDepth and Actual_Latitude : .87

ActivityDepth and Actual_Longitude: -.79

Actual_Latitude and Actual_Longitude: -.95

[20 points]

Task 4 – If you are a resident living near this location and looking at this water data. You want to know answers for questions like if it safe to go to swim in the water, use water to irrigate your garden or event drink from it? Can this data answer any such questions? Discuss.

Yes, this data can answer these questions. Pending how deep your water source is, residents will be able to check the kind of elements that are found in their water. Some elements may not affect irrigation but can impact a person's health and vice versa. This information is important to know and research when moving to a new city or deciding to buy an complex water filtration system.

[10 points]