

SCDM Practical 2

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PART 1:

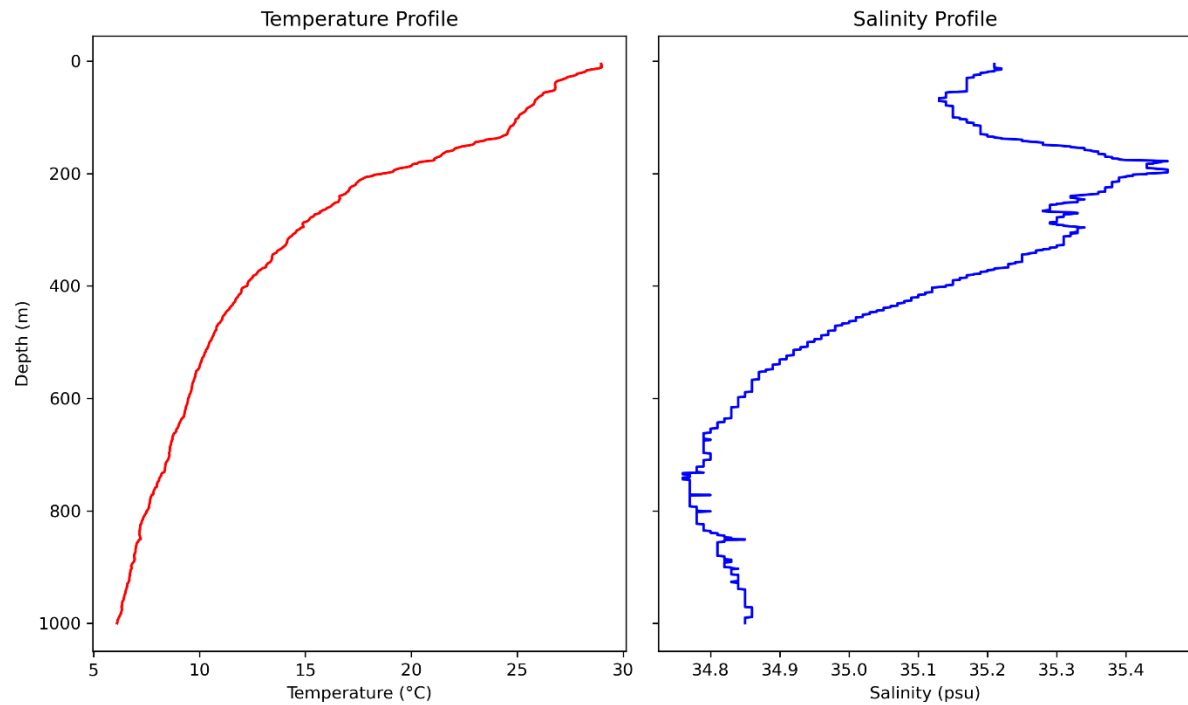


Figure 1: Temperature (left) and salinity (right) profiles from measured CTD data.

This figure displays the vertical profiles of temperature (left) and salinity (right) with depth, measured using a CTD. The temperature profile shows a decrease in temperature with depth, characteristic of ocean stratification. The salinity profile exhibits variability, with notable changes near the surface and deeper depths, indicating possible water mass mixing.

PART 2:

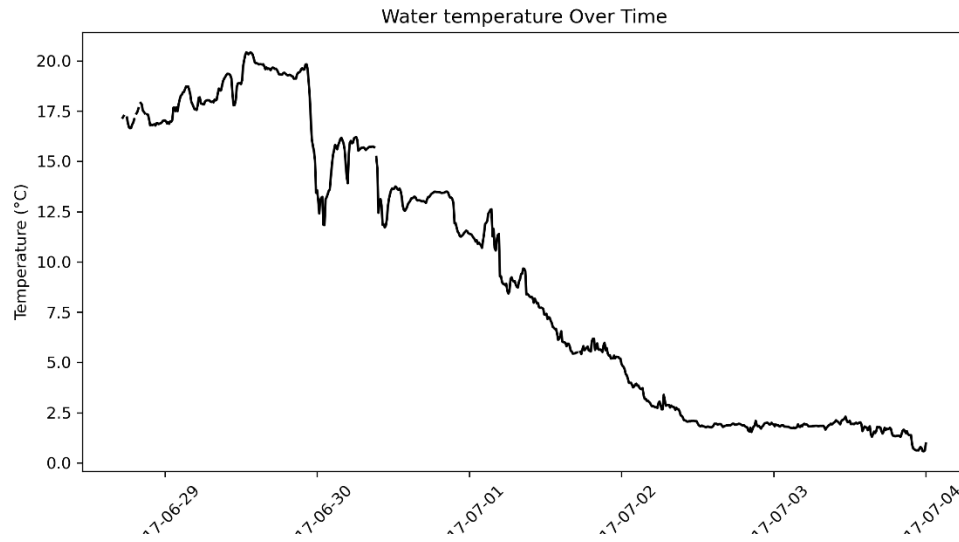


Figure 2: Time series of temperature from departure to July 4th, 2017

This time series graph illustrates changes in water temperature (°C) over time. A significant cooling trend is observed here.

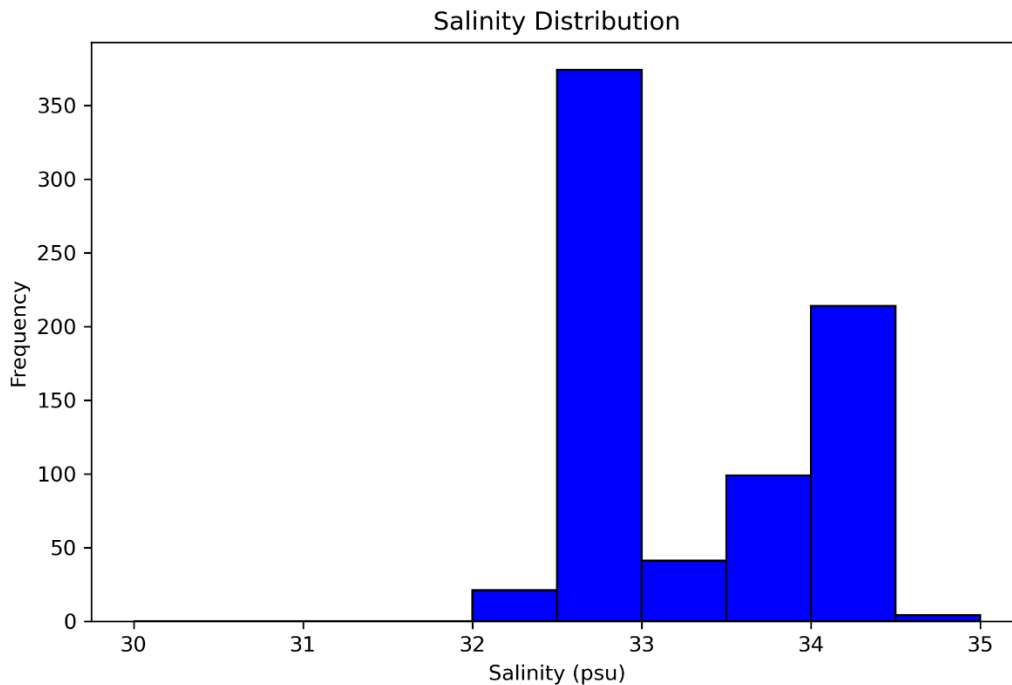


Figure 3: Salinity frequency distribution histogram.

This histogram represents the distribution of salinity (psu) values in the dataset. The data shows a distinct peak at 32.5psu, suggesting that this salinity level is more common.

Table 1: Mean, standard deviation and interquartile range for temperature and salinity

Variable	Mean	Standard Deviation	Interquartile Range
Temperature	9.245811686586984	6.763438351462871	13.86
Salinity	33.352330146082345	0.7375741107423347	1.4742000000000033

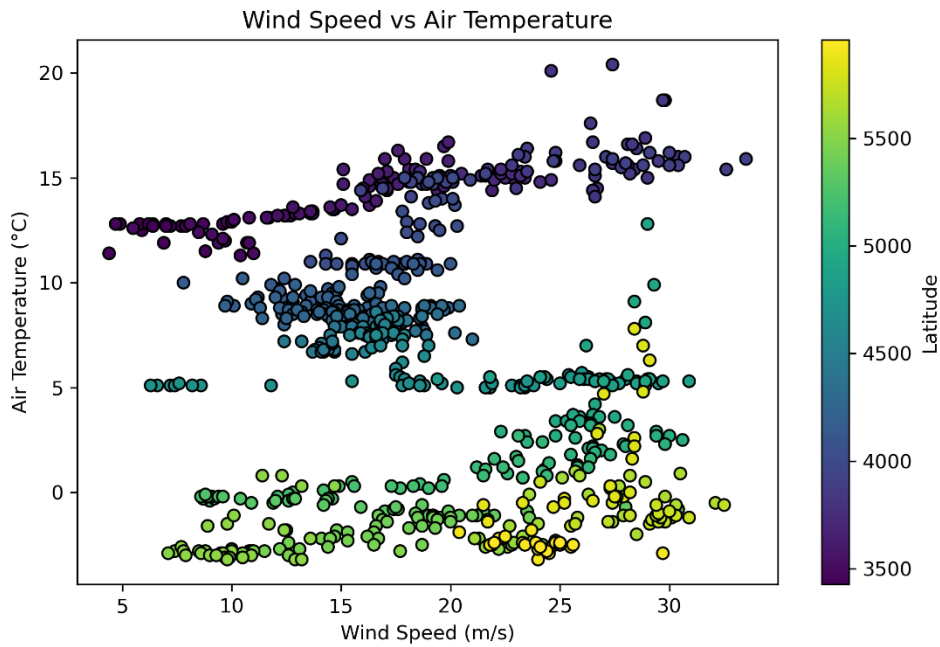


Figure 4: Scatter plot illustrating wind speed (m/s) vs air temperature (°C)

This scatter plot visualises the relationship between wind speed (m/s) and air temperature (°C), with data points color-coded by latitude. The distribution suggests that wind speeds are variable among latitudes, but it is evident that higher latitudes have cooler air temperatures while lower latitudes have higher air temperatures.