

Data Analysis for AC power consumption



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Problem Statement : We have been provided with power consumptions record for multiple AC's at the same hotel.

Dataset Information : The given dataset has been recorded on alternate minute basis for about 48 days.

Libraries Used :

* Pandas

* Seaborn

* Matplotlib

Observations :

- * It can be observed that the total power consumption readings recorded for 24 hrs were 720 for 48 days. From this information we can say that there have been fluctuations in usage AC's which suggests that there might have been climatic changes.
- * AC 18 have been consuming highest power among all the AC's which can be due to many reasons.
 - The area with AC 18 might have been direct sun facing area in the hotel premises.
 - The specific AC 18 might have been high in watt or big sized ac than other AC's.
 - The AC 18 might have been the oldest technology based ac which consumes high power for relevant efficiency.
 - There are chances that the AC 18 is requiring maintenance as it is not working efficiently which is why it has to run extra with extra power consumption.
 - The AC 18 might have been used more frequently at low temperatures (16 - 22 degrees) which causes more work for compressor and uses high power consumptions.
- * AC 5 have consumed least power among all the AC's which can be due to many reasons.
 - The area in which AC 5 is installed have not been used as frequently as others.
 - The AC 5 might be of latest technology like 5 star or inverter based AC which have high efficiency performances.
 - The AC 5 might have been used more frequently at normal to high (24 - 28 degree) temperatures which reduces work for compressor with low power consumption.
 - The AC 5 might have been under regular maintenance and monitored use.
- * There is rise in mid of the time of experiment recordings which indicates that there must have been climatic changes and rise in outside temperature during the summers.
- * The reduction in power consumption of the AC's might have been due to change in weather condition like rainfall/monsoon.

Discussions :

The given dataset had limited informations , if we can have informations like during what time of the year the data has been recorded , what brand , technologies Ac have been used , we can use this analysis for better decision making and cost reducing with cutting off extra power consumptions at the premises.

Declaration :

I would like thank **Zenatix Solutions** for considering and providing me the opportunity to show my skills. I enjoyed working on the assignment (AC_data).I am thrilled to mention that there have so many creative scenarios going in my mind while working on the assignment about how we can use this analysis in real world for business excellence and environment friendly solutions.