Detailed Analysis of all Tasks - Nisarg Mehta

1. Relations of different columns against AUM - (Link of Task)
    - When compared with ‘year Established’ - most of the data available are from 2003 onwards and the AUM for most of the data is less than 2000$.
    - When found the Interquartile Range (IQR) - 91% of AUM are less than equal to 3000.0
    - Most of the ‘organisations’ and ‘types of organisations’ are present in the USA.
    - When compared with "Financial Asset Class", commodities and Bonds are playing an important role for AUM.
    - Considering the number - Median for AUM is 300, min AUM is 54$ and max is 10000$.
    - When compared with organisations, 'Global forest partner LP’ has a sum of maximum AUM and ‘World bank Climate PAF’ has a minimum AUF.
    - Considering ‘Year Established’ - 1982 has sum of max AUM and 1985 has sum of min AUM, but interestingly, for AUM many are from onwards 2003.
    - For Type of Organisations - ‘TIMO’ has 68.3% share out of many other organisations and the other maximum is of private equity fund which is of 13.6% which is a very important result.
    - When doing histogram, I came to know that ‘New forest’ Organisations has maximum AUM in commodities in "Financial Asset Class” and about “Global forest partner LP” Organisations has maximum AUM in Capital Commitment in "Financial Asset Class”.
    - In ‘types of organisations’, as TIMO is playing an important role, TIMO has the Maximum portion of AUM in capital commitment and in commodities for "Financial Asset Class”.
    - For “Returns Profile (Target IRR)”, TIMO is playing a very important role.
    - 32% of AUM (i.e 24,000) has 'Returns Profile (Target IRR)' of 9-10% and 26.1% of AUM (i.e 19,600) has 'Returns Profile (Target IRR)' of 7-18%.
    - "Natural Asset Class" also played an important role against AUM.
    - For project size (hectares), TIMO organisations had occupied maximum project size out of all ‘type of organisations’.
    - For project state - ‘CA’ and for project country - ‘USA’ played an important role in AUM.

2. Relations Of Different Columns Against Project Size (hectares) and Returns Profile (Target IRR) (Link of Task)

- The ‘Conservation fund’ Organisation whose HQ is in USA has maximum sum of project size and it has percentage share is 77.6%
- ‘Non Profit’ is the "Type of Organization" which has a maximum sum of "Project Size (hectares)" which is 29.947k.
- Comparing the 'Project Size (hectares)’ and ‘'Financial Asset Class'', bonds play an important role which has a project size of 30,381 hectares and % share of 78.8%.
- Comparing the 'Project Size (hectares)’ and ‘'Financial Asset Class'', Equity, grant, loan play an important role which has a project size of 7936 hectares and % share of 20.6%.
- Comparing the 'Project Size (hectares) vs Natural Asset Class', Forest plays an important role which has a project size of 29947 hectares and % share of 77.6%.
- Comparing the 'Project Size (hectares) vs Project State', CA State plays an important role which has a project size of 30,381 hectares and % share of 78.8%.
- For the "Returns Profile (Target IRR)", the conservation fund organisations has 10 - 14 % and the sum of the project size is 30,000 hectares.
- For the "Returns Profile (Target IRR)", the Non Profit which is a type of organisation has 10 - 14 % and the sum of the project size is 30,000 hectares.
- Commodities in "Financial Asset Class" played a very important role considering the project size.
- Many of the projects were established in 1985 and 2004 - according to data.
- Most of the ‘'Returns Profile (Target IRR)’ is of 5.90 which has % share of 17.8% and another major is <15% which has % share of 10.8%.
- Asset investment manager which is a type of Organisations has ‘'Returns Profile (Target IRR)’ of 5.90.
- Considering the financial Asset class - Equity, grant, loan plays an important role which has ‘'Returns Profile (Target IRR)’ of 5.90.
- Considering the Natural Asset Class - Forest (Riparian) plays an important role which has ‘'Returns Profile (Target IRR)’ of 5.90 and count of 10.
- Considering ‘Project Size (hectares) vs Returns Profile (Target IRR)’, Returns Profile (Target IRR) of 10-14% is maximum and has % share of 77.6%

3. Extreme_temperatures_Heat_and_Cold (Link of Task)
   It has 4 datasets -

A) High_summer_Low_winter_temps_USA -
   - It was already a cleaned dataset.
   - Taking into consideration - 'Hot Daily Highs (NOAA)' - median is 6.85, max is 49.4 and min is 0.
   - Highest count is 15 and it is from 1960 to 1980, where 'Hot Daily Highs (NOAA)' is -5-4.9.
   - Considering "9-year average (Hot Daily Highs)", the highest range is from 5-10. (This can be important factor)
   - Considering "9-year average (Cold Daily Lows)" and "Hot Daily Highs (NOAA)", the "9-year average (Cold Daily Lows)" is highest from 0 to 5, in which the sum of "Hot Daily Highs (NOAA)" is maximum upto nearly 500.
   - Taking '9-year average (Hot Daily Highs)', the median is 8.49, max is 28 and min is 1.51.
   - Highest count is 15 and it is from 1960 to 1980, where '9-year average (Hot Daily Highs)' is -5-4.9.
   - Taking into consideration 'Cold Daily Lows (NOAA)', the median is 2.6, max is 64 and min is 0. (So maximum can be considered as outlier)
   - 'Cold Daily Lows (NOAA)' is good from 1920 to 2019 for smaller values.
   - '9-year average (Cold Daily Lows)', the median is 6.72, max is 38.40 and min is 0.21. (So maximum cannot be considered as outlier)

B) Heat_wave_index_USA -
   - It was already a cleaned dataset.
   - Taking into consideration - ''Heat Wave Index (NOAA)" - median is 5.7, max is 125.5 and min is 0.4.
   - Highest count is 15 and it is from 1960 to 1980, where 'Hot Daily Highs (NOAA)' is 0 to 9.9.

C) Hot_change_data -
   - It was not a cleaned dataset. I added out the Project city column as an extra column which was really useful.
   - Taking into consideration - 'Change in 95 percent Days' - median is 0, max is +53.9 and min is -52.7.
   - Considering "State" and "Change in 95 percent Days", some state has negative values and some state has positive values.

D) Cold_change_data -
   - It was not a cleaned dataset. I added out the Project city column as an extra column which was really useful.

- Taking into consideration - 'Change in 5 percent Days' - median is 0, max is +19.04 and min is -48.14.
- Considering "State" and "Change in 5 percent Days", all states have negative values and only 1 state has value > 0 which is 18.54 and the state name is ‘Alabama(AL)’.

ADDING ABOUT MORE TASK DETAILED ANALYSIS SOON :)