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"# importing all the necessary libraries\n",

"import pandas as pd # data manipulation\n",

"import numpy as np # numerical python - linear algebra\n",

"import matplotlib.pyplot as plt # visualization lib\n",

"import seaborn as sns\n",

"from sklearn.model\_selection import train\_test\_split # sklearn - ML\n",

"from sklearn.preprocessing import StandardScaler # scaling"

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"location4['Location'] = 'Location4'\n",

"\n",

"# Concatenate to a dataframe\n",

"merged\_data = pd.concat([location1, location2, location3, location4], ignore\_index=True)\n",

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"merged\_data.head()"

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"merged\_data.to\_csv('merged\_locations.csv', index=False)"

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"--- ------ -------------- ----- \n",

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" 3 dewpoint\_2m 175200 non-null float64\n",

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" 8 windgusts\_10m 175200 non-null float64\n",

" 9 Power 175200 non-null float64\n",

" 10 Location 175200 non-null object \n",

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"merged\_data.info()"

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" Time temperature\_2m ... Location\_Location3 Location\_Location4\n",

"0 2017-01-02 00:00:00 28.5 ... 0 0\n",

"1 2017-01-02 01:00:00 28.4 ... 0 0\n",

"2 2017-01-02 02:00:00 26.8 ... 0 0\n",

"3 2017-01-02 03:00:00 27.4 ... 0 0\n",

"4 2017-01-02 04:00:00 27.3 ... 0 0\n",

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"[5 rows x 13 columns]"

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"# Encode the categorical variables\n",

"merged\_data = pd.get\_dummies(merged\_data, columns=['Location'], drop\_first=True)\n",

"merged\_data.head()"

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"Index(['Time', 'temperature\_2m', 'relativehumidity\_2m', 'dewpoint\_2m',\n",

" 'windspeed\_10m', 'windspeed\_100m', 'winddirection\_10m',\n",

" 'winddirection\_100m', 'windgusts\_10m', 'Power', 'Location\_Location2',\n",

" 'Location\_Location3', 'Location\_Location4'],\n",

" dtype='object')"

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"merged\_data.drop('Time', axis=1, inplace=True)"

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"\n",

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" <thead>\n",

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" <th>relativehumidity\_2m</th>\n",

" <th>dewpoint\_2m</th>\n",

" <th>windspeed\_10m</th>\n",

" <th>windspeed\_100m</th>\n",

" <th>winddirection\_10m</th>\n",

" <th>winddirection\_100m</th>\n",

" <th>windgusts\_10m</th>\n",

" <th>Power</th>\n",

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"0 28.5 85 ... 0 0\n",

"1 28.4 86 ... 0 0\n",

"2 26.8 91 ... 0 0\n",

"3 27.4 88 ... 0 0\n",

"4 27.3 88 ... 0 0\n",

"\n",

"[5 rows x 12 columns]"

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