Group 3
ML-Powered Anemia Detection

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ANEMIA DISEASE DATA SET

- Source = https://www.kaggle.com/datasets/serhathoca/anemia-disease/data
- Goal = To determine whether a patient has anemia based on their data using logistic regression

Attributes and Descriptions

Number of attributes = 29
Number of rows= 15302

- GENDER: The gender of the patient (1 = Male, 2 = Female)
- WBC: White blood cell count (x10^3/µL), indicating immune system activity
- NE#: Neutrophil count (x10^3/µL), a type of white blood cell that fights infections
- RBC: Red blood cell count (x10^6/µL), responsible for oxygen transport
- HGB: Hemoglobin level (g/dL), essential for oxygen transport in blood
- HCT: Hematocrit (%), the proportion of red blood cells in blood
- MCV: Mean corpuscular volume (fL), the average size of red blood cells.
- MCH: Mean corpuscular hemoglobin (pg), average hemoglobin amount per red blood cell.
- MCHC: Mean corpuscular hemoglobin concentration (g/dL), hemoglobin concentration per red blood cell volume.

Important Attributes and Descriptions

- **B12**: Vitamin B12 level (pg/mL), crucial for nerve function and red blood cell formation.
- **All_Class**: Overall classification of anemia (e.g., 4 for anemia, 0 for normal).
- **HGB_Anemia_Class**: Binary label for anemia classification based on hemoglobin levels (1 = anemia, 0 = normal).
- **Iron_anemia_Class**: Binary label for iron deficiency anemia classification (1 = iron deficiency anemia, 0 = normal).
- **Folate_anemia_Class**: Binary label for folate deficiency anemia classification (1 = folate deficiency anemia, 0 = normal).
- **B12_Anemia_class**: Binary label for vitamin B12 deficiency anemia classification (1 = B12 deficiency anemia, 0 = normal).

- Total 29 columns and all of them decimal values.
- Target Column B_12_ Anemia_class

CO_2 EMISSIONS BY YEAR FOR COUNTRIES DATA SET

- Number of attributes = 11
- Number of rows= 55441
- 7 decimal, 2 integer, 2 string
- Source = https://www.kaggle.com/datasets/lobosi/c02-emission-by-countrys-grouth-and-population
- Goal = To predict countries CO2 consumption over the years using time series models (ARIMA, SARIMA)

Attributes and Descriptions

- Country - Country in question
- Energy_type - Type of energy source
- Year - Year the data was recorded
- Energy_consumption - Amount of Consumption for the specific energy source, measured (quad Btu)
- Energy_production - Amount of Production for the specific energy source, measured (quad Btu)
- GDP - Countries GDP at purchasing power parities, measured (Billion 2015$ PPP)
- Population - Population of specific Country, measured (Mperson)
- Energy_intensity_per_capita - Energy intensity is a measure of the energy inefficiency of an economy. It is calculated as units of energy per unit of capita (capita = individual person), measured (MMBtu/person)
- Energy_intensity_by_GDP- Energy intensity is a measure of the energy inefficiency of an economy. It is calculated as units of energy per unit of GDP, measred (1000 Btu/2015$ GDP PPP)
- CO2_emission - The amount of C02 emitted, measured (MMtonnes CO2)

THANK YOU FOR LISTENING