SMOKE DETECTION

Why does indicating whether a fire occurs or not with fire alarm is important?
- in order to save lives
- minimizing and reducing the risk of fire
- reducing the damage of property

DATA DESCRIPTION

Data collected with the help of IOT device with attributes :
- UTC = Timestamp in Second
- Temperature(C) = Temperature in Celcius
- Humidity(%) = Humidity in %
- TVOC(ppb) = Total Volatile Organic Compound in part per billion
- eCo2(ppm) = Total of Co2 Equivalent Concentration in part per million
- Raw H2 = Total Molecular Hydrogen
- Raw Ethanol = Raw Ethanol Gas
- Pressure = Air Pressure in hectopascal(hPa), 1hPa = 100 Pa
- PM1.0 = Particular Matter diameter Size < 1μm
- PM2.5 = Particular Matter diameter Size < 2.5 μm
- NC0.5 = Number Concentration of particular matter Size < 0.5 μm
- NC1.0 = Number Concentration of particular matter Size < 1 μm
- NC2.5 = Number Concentration of particular matter < 2.5 μm
- CNT = Sample Counter
- Fire Alarm = Binary Output(1 if alarm ring, 0 if not)

OBJECTIVE

- **Building predictive models to predict whether a fire alarm will goes off.**
- **And to find in what condition a fire alarm will goes off.**

CONCLUSION

content

METHODOLOGY

1. Data Preprocessing
- Find missing value in the dataset (no missing value found)
- Find duplicated row (no duplicated row found)
- Compute descriptive statistic onnumerical variable to find insight of the dataset
2. Exploratory Data Analysis
- Plot the value count of each class in target variable
- Plot a heatmap correlation of the dataset to find correlated variable
- Plot a boxplot correlation of each numerical variable to target variable to find some insight

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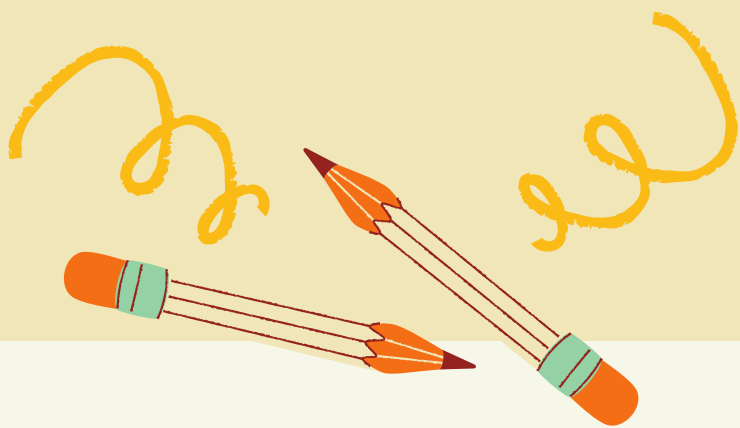
RESULT & DISCUSSION

conclusion

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67%
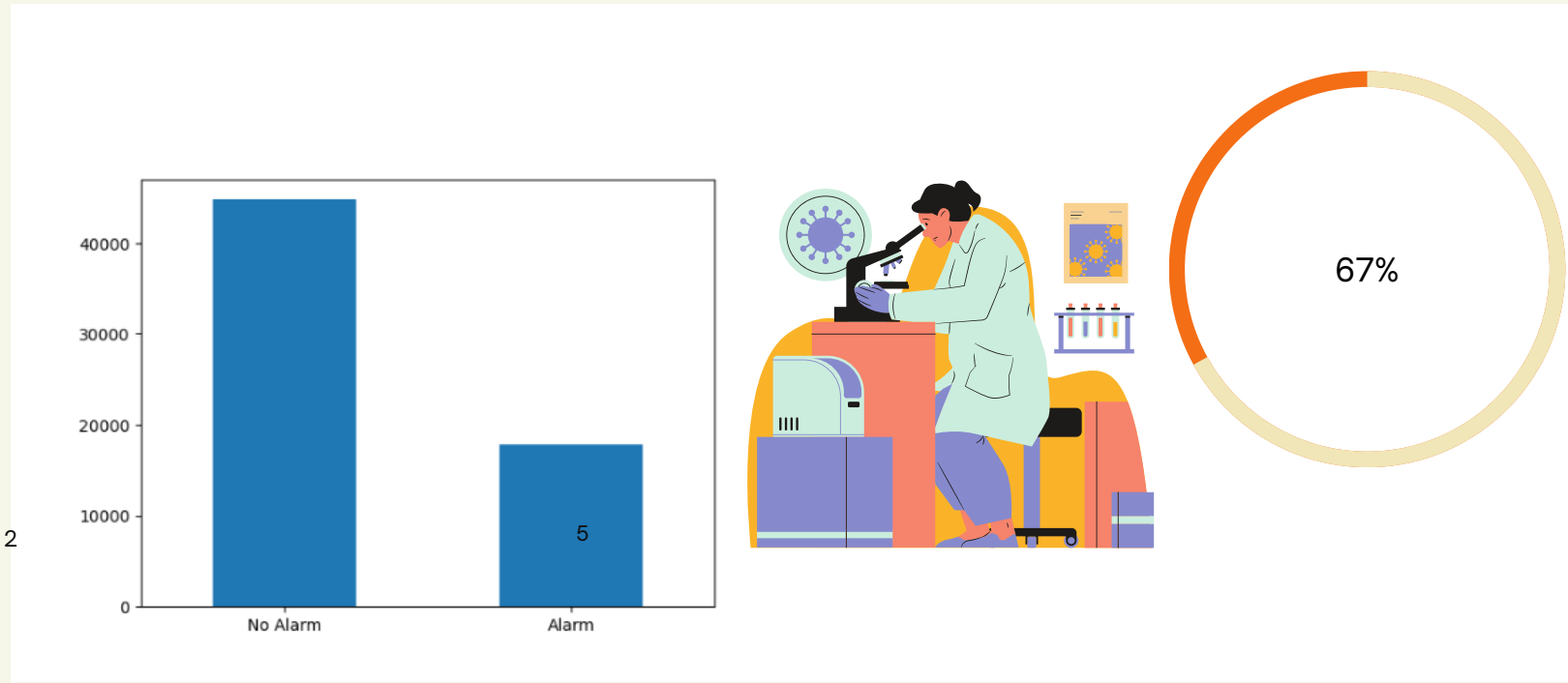
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