Data Collection and Preprocessing Phase

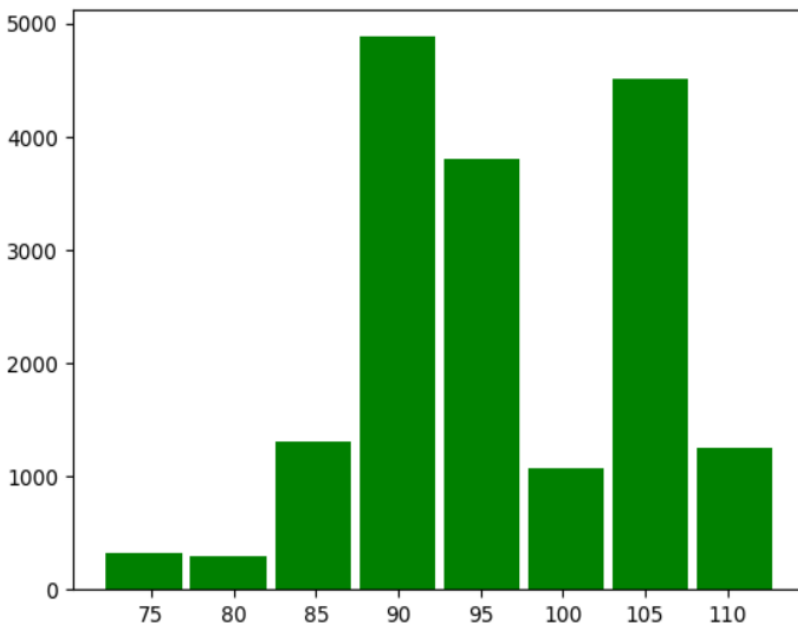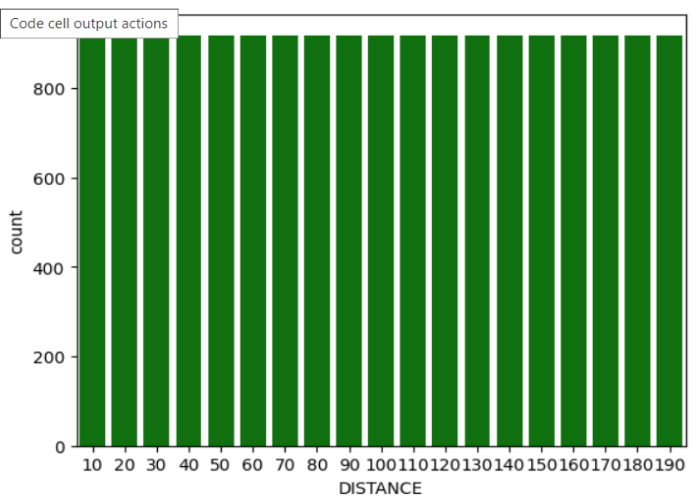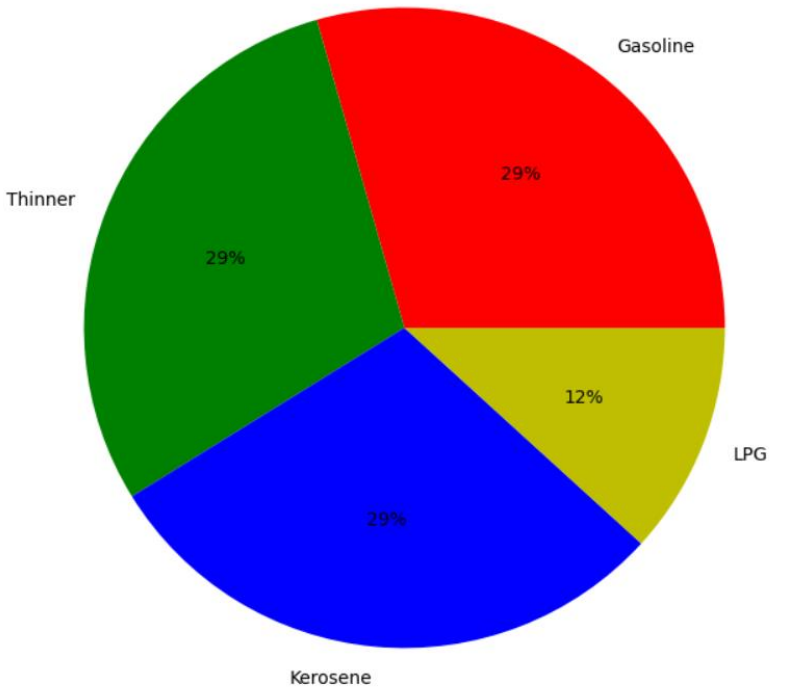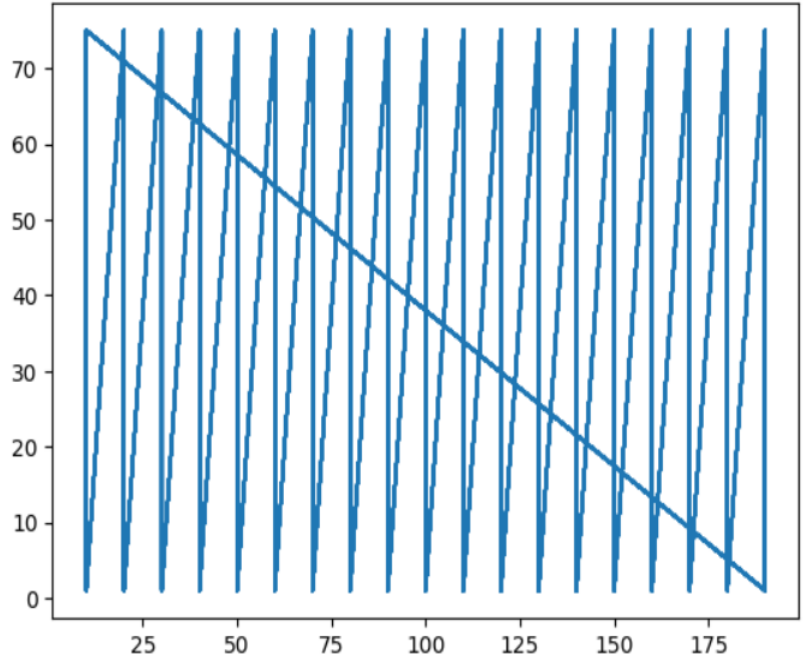|	
Date	23 June 2024
Team ID	739698
Project Title	Acoustic Fire Extinguishing Prediction
Maximum Marks	6 Marks

Data Exploration and Preprocessing Template

Identifies data sources, assesses quality issues like missing values and duplicates, and implements resolution plans to ensure accurate and reliable analysis.
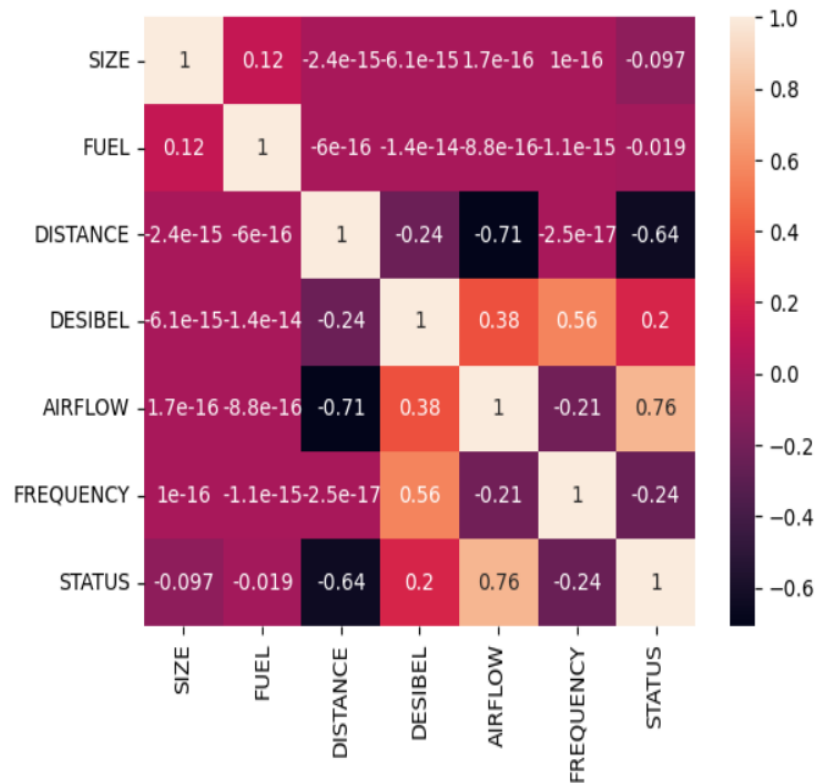
Section	Description
	Description
Section	
Data Overview	Dimensions: 602rows*9columns Descriptive statictics:

Univariate Analysis	

	Pie chart showing the distribution of Fuel of the Fire
Bivariate Analysis	

| Multivariate Analysis | |
| Outliers and Anomalies | – |

Data Preprocessing Code Screenshots

Loading Data	

	SIZE	FUEL	DISTANCE	DESIBEL	AIRFLOW	FREQUENCY	STATUS
0	1	gasoline	10	96	0.0	75	0
1	1	gasoline	10	96	0.0	72	1
2	1	gasoline	10	96	2.6	70	1
3	1	gasoline	10	96	3.2	68	1
4	1	gasoline	10	109	4.5	67	1

Handling Missing Data	```[ ] data.isnull().sum()

SIZE   0
FUEL   0
DISTANCE   0
DESIBEL   0
AIRFLOW   0
FREQUENCY   0
STATUS   0
dtype: int64``` |
| Data Transformation | ```[ ] lb = LabelEncoder()

[ ] data['FUEL'] = lb.fit_transform(data['FUEL'])```

New Section

∨ New Section

```[ ] data.head()```

<table><tr><th></th><th>SIZE</th><th>FUEL</th><th>DISTANCE</th><th>DESIBEL</th><th>AIRFLOW</th><th>FREQUENCY</th><th>STATUS</th></tr><tr><td>0</td><td>1</td><td>0</td><td>10</td><td>96</td><td>0.0</td><td>75</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td><td>10</td><td>96</td><td>0.0</td><td>72</td><td>1</td></tr><tr><td>2</td><td>1</td><td>0</td><td>10</td><td>96</td><td>2.6</td><td>70</td><td>1</td></tr><tr><td>3</td><td>1</td><td>0</td><td>10</td><td>96</td><td>3.2</td><td>68</td><td>1</td></tr><tr><td>4</td><td>1</td><td>0</td><td>10</td><td>109</td><td>4.5</td><td>67</td><td>1</td></tr></table> |
| Feature Engineering | Attached the codes in final submission |
| Save Processed Data | — |