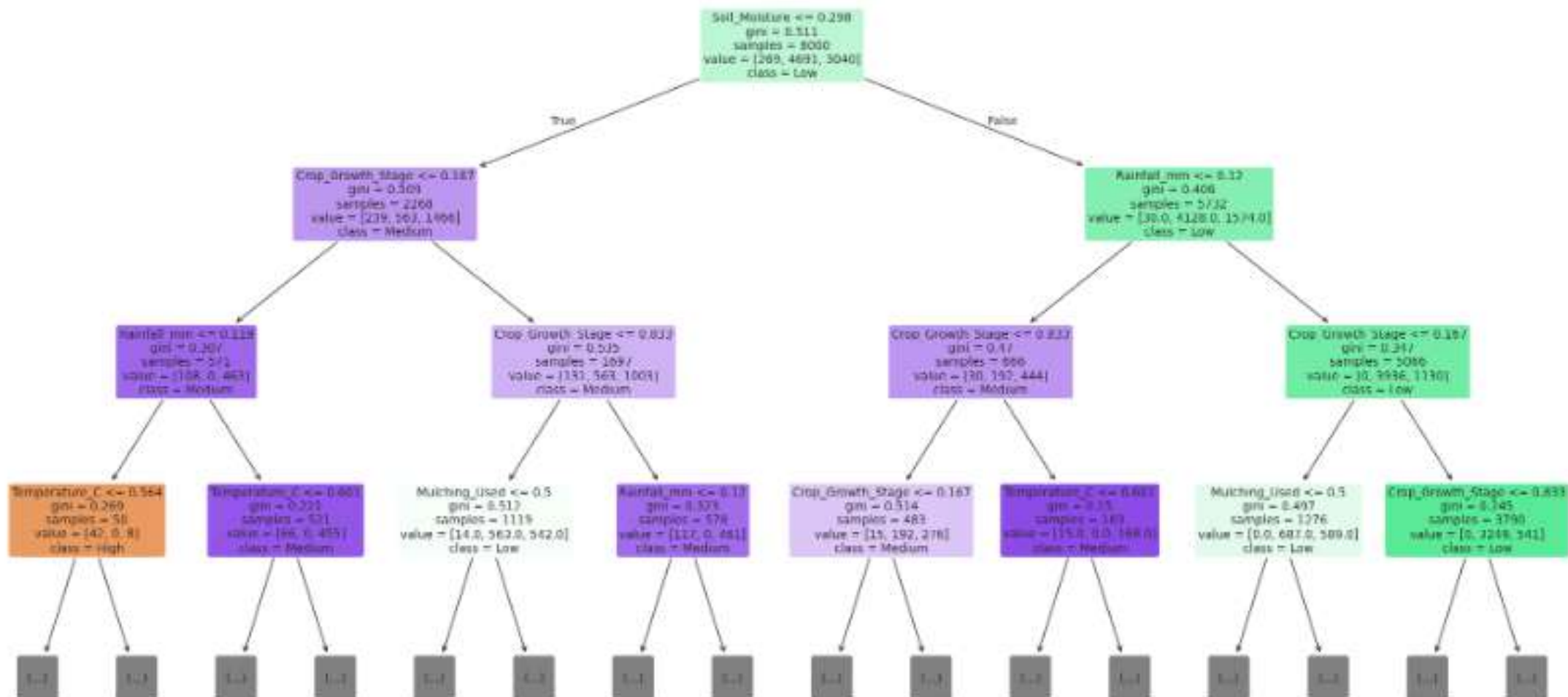
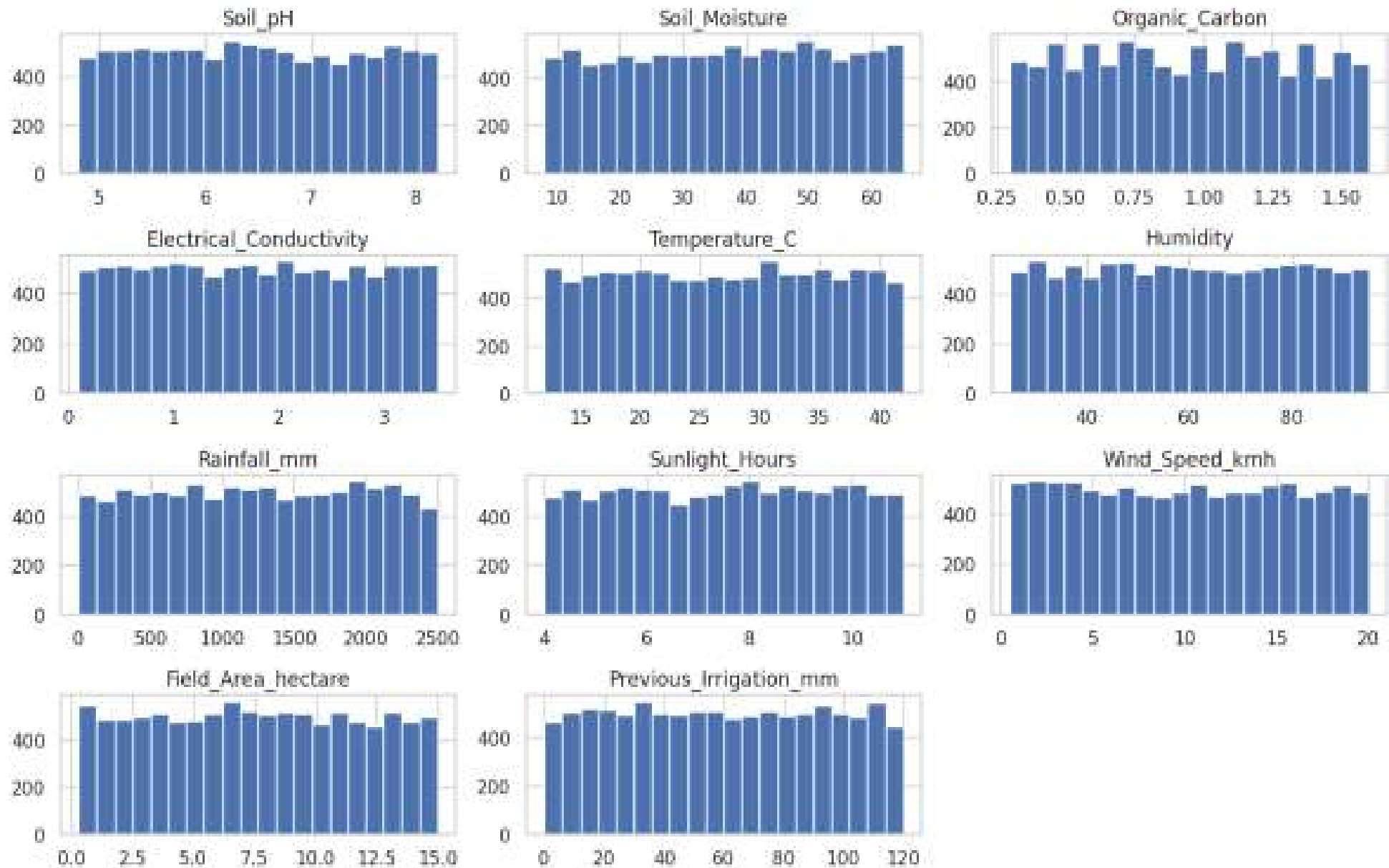


Decision Tree - Smart Irrigation Prediction

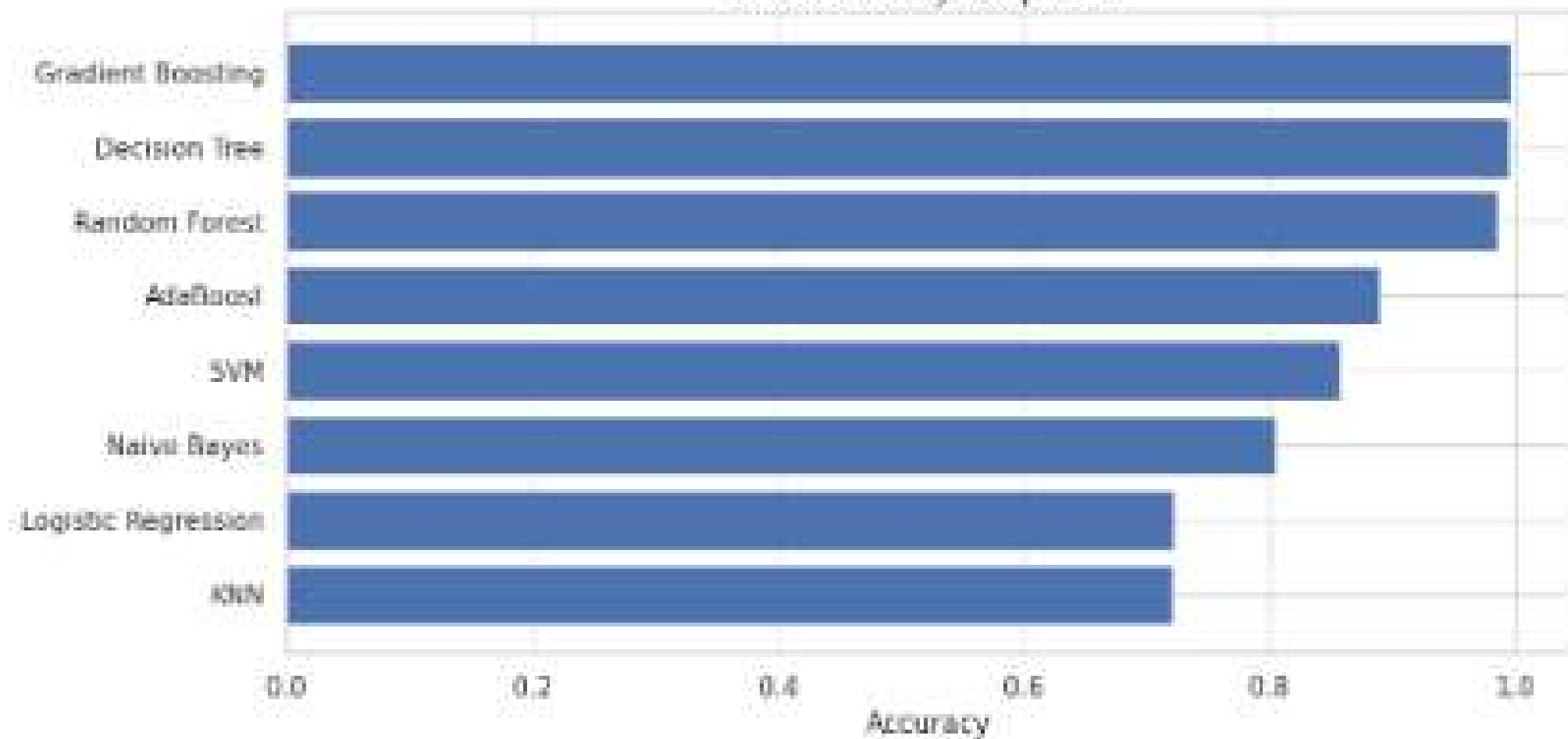


```
df_numeric.hist(figsize=(11,8),bins=28)
plt.subtitle("Histogram fo numeric Features",fontsize=14)
plt.tight_layout()
plt.show()
```

Histogram fo numeric features



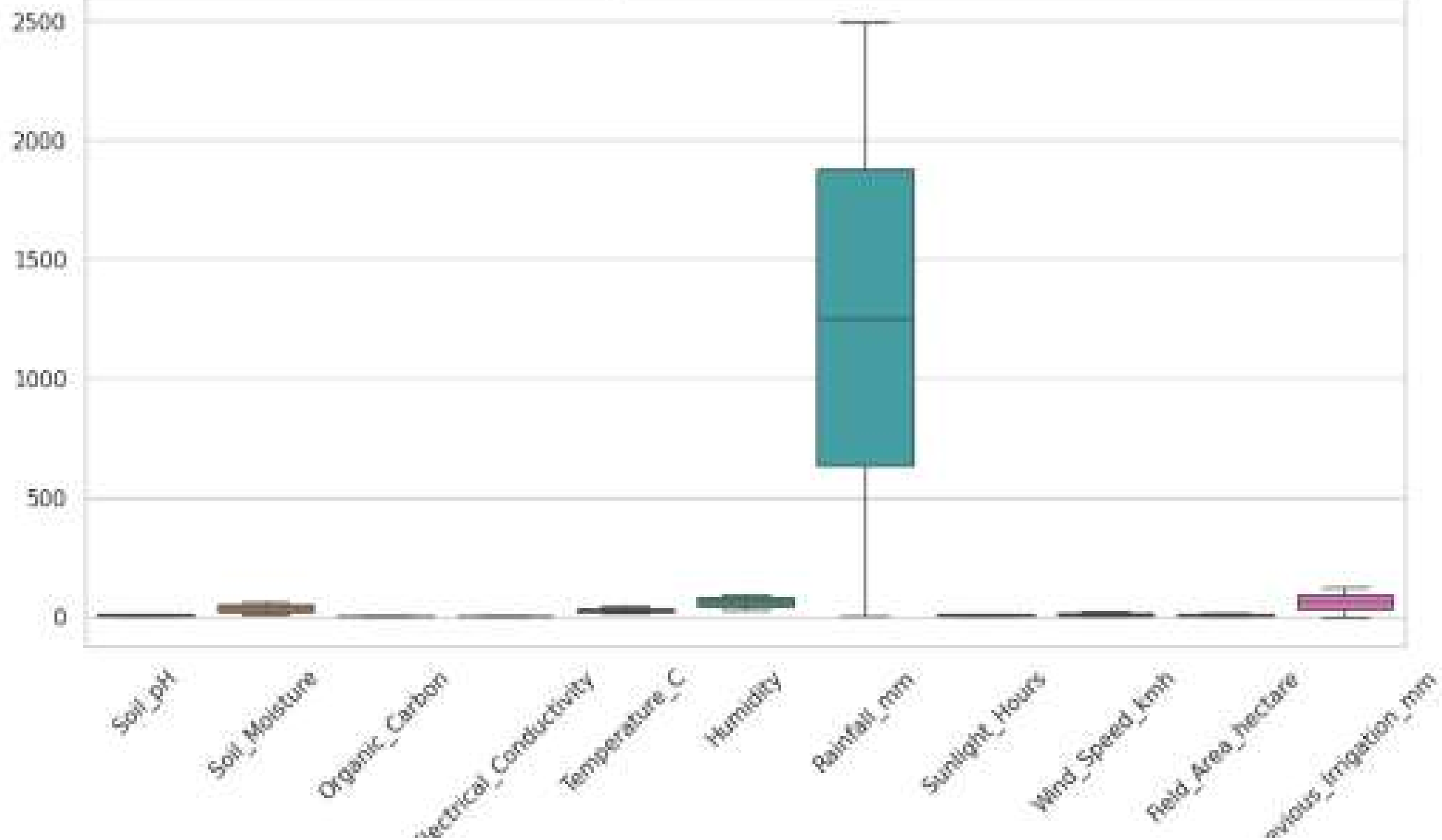
Model Accuracy Comparison



```
sns.boxplot(data=df_numeric)
plt.xticks(rotation=45)
plt.title("Boxplot of Numerical Features")
plt.show()
```

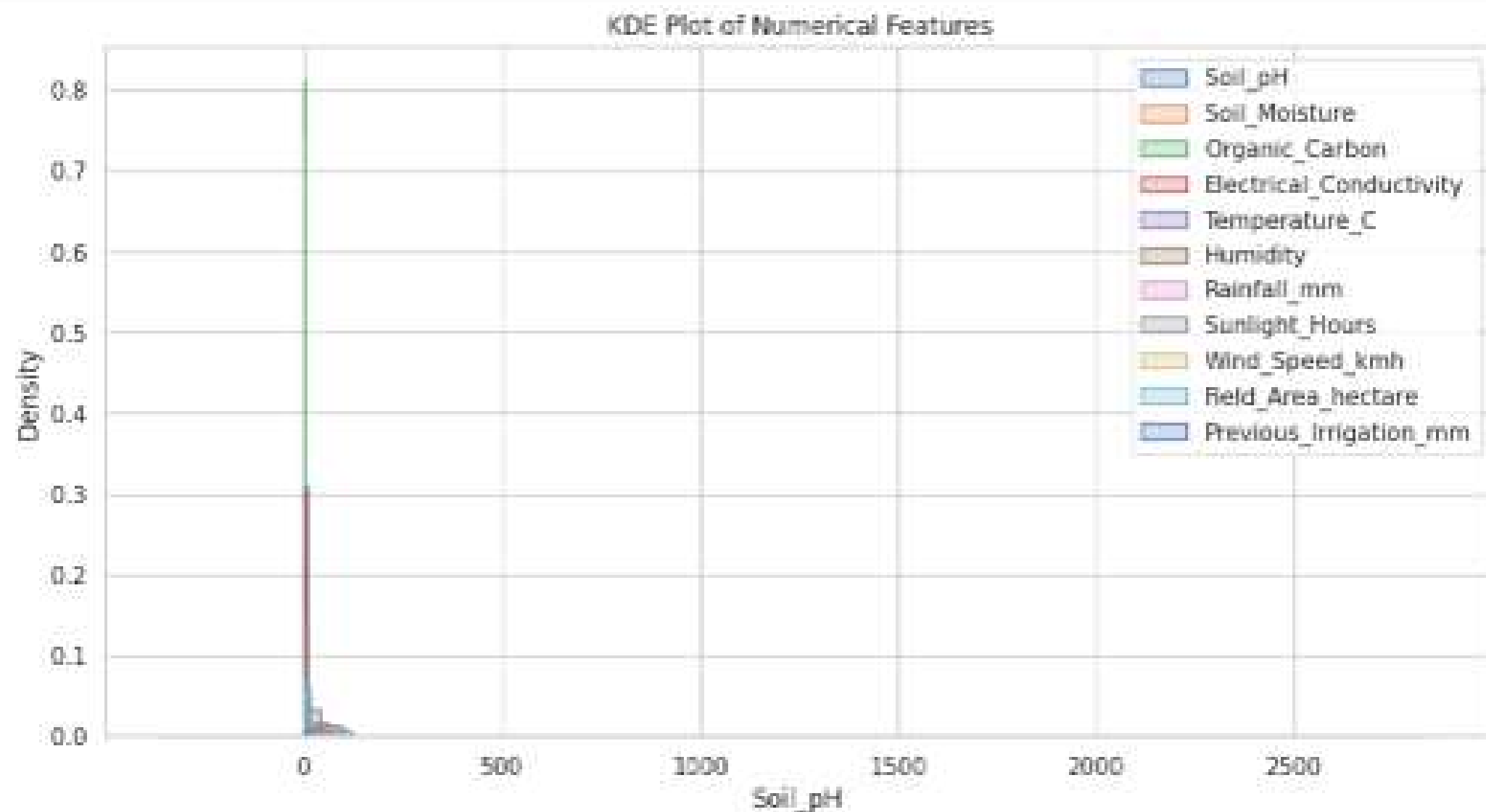
100

Boxplot of Numerical Features

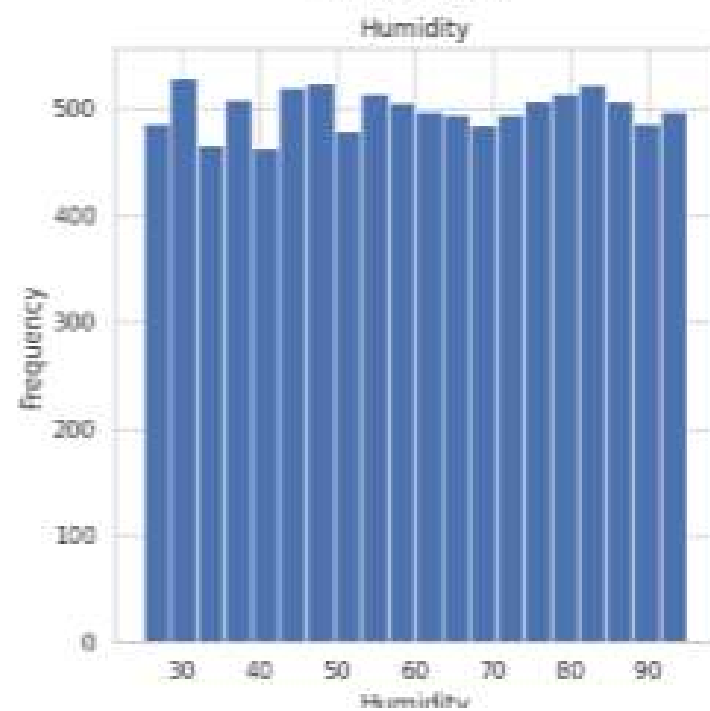
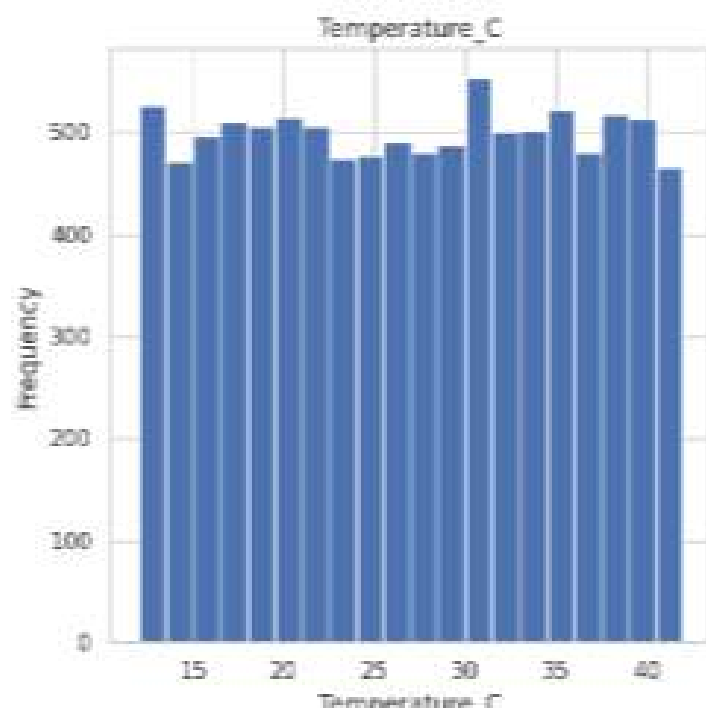
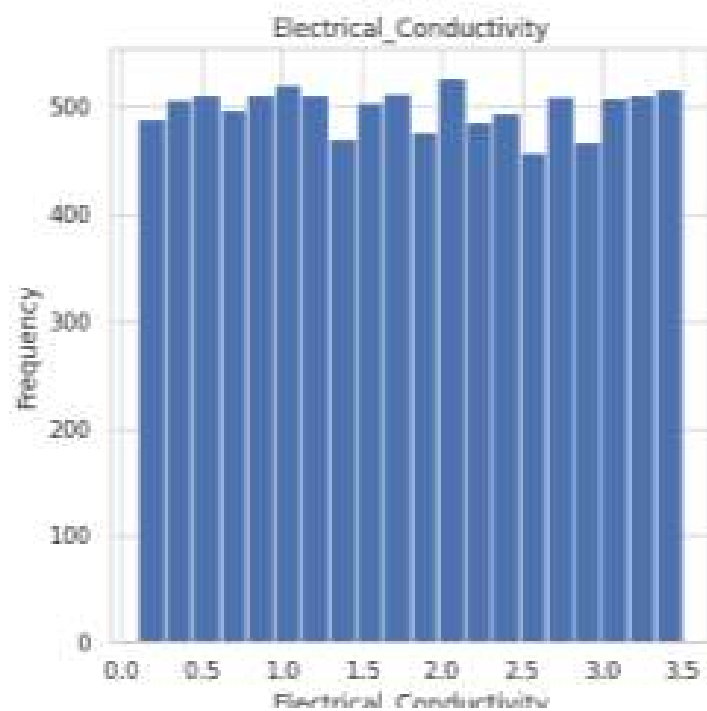
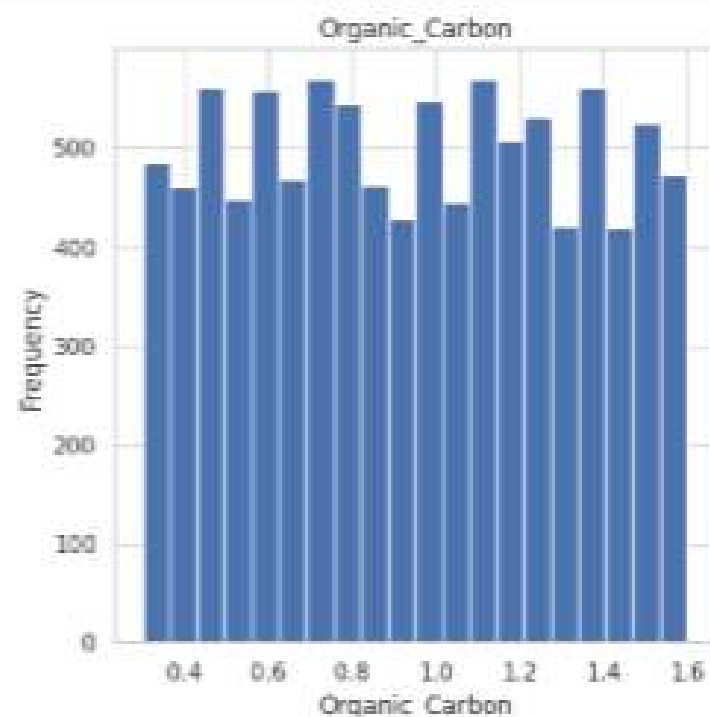
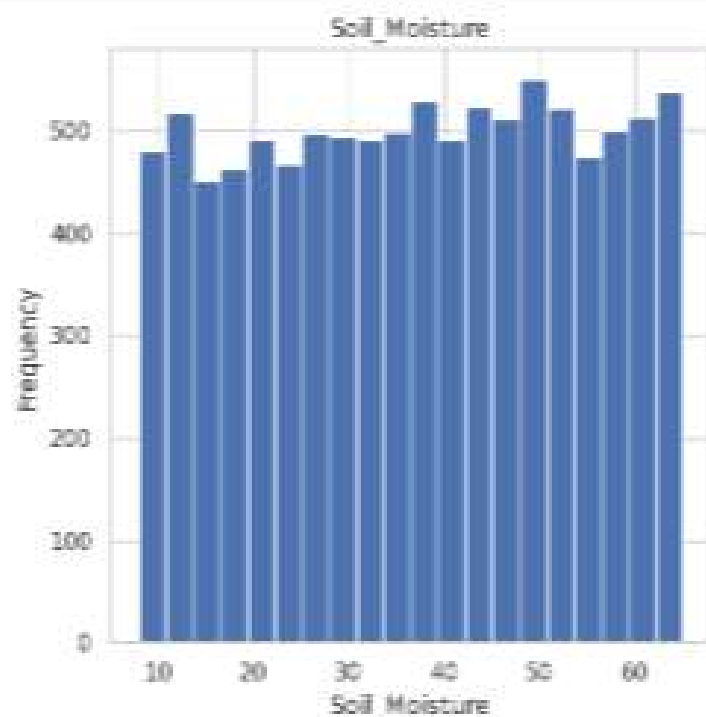
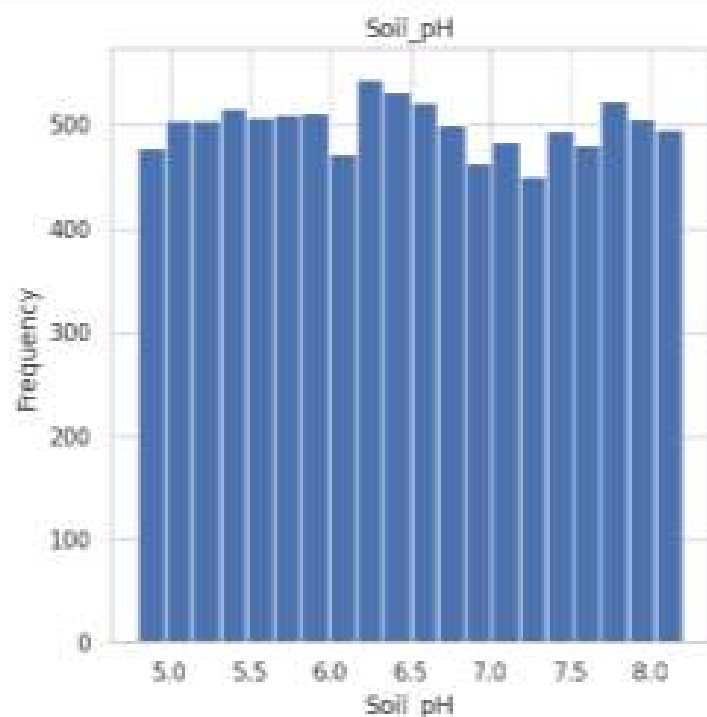


+ Code + Text ▶ Run all

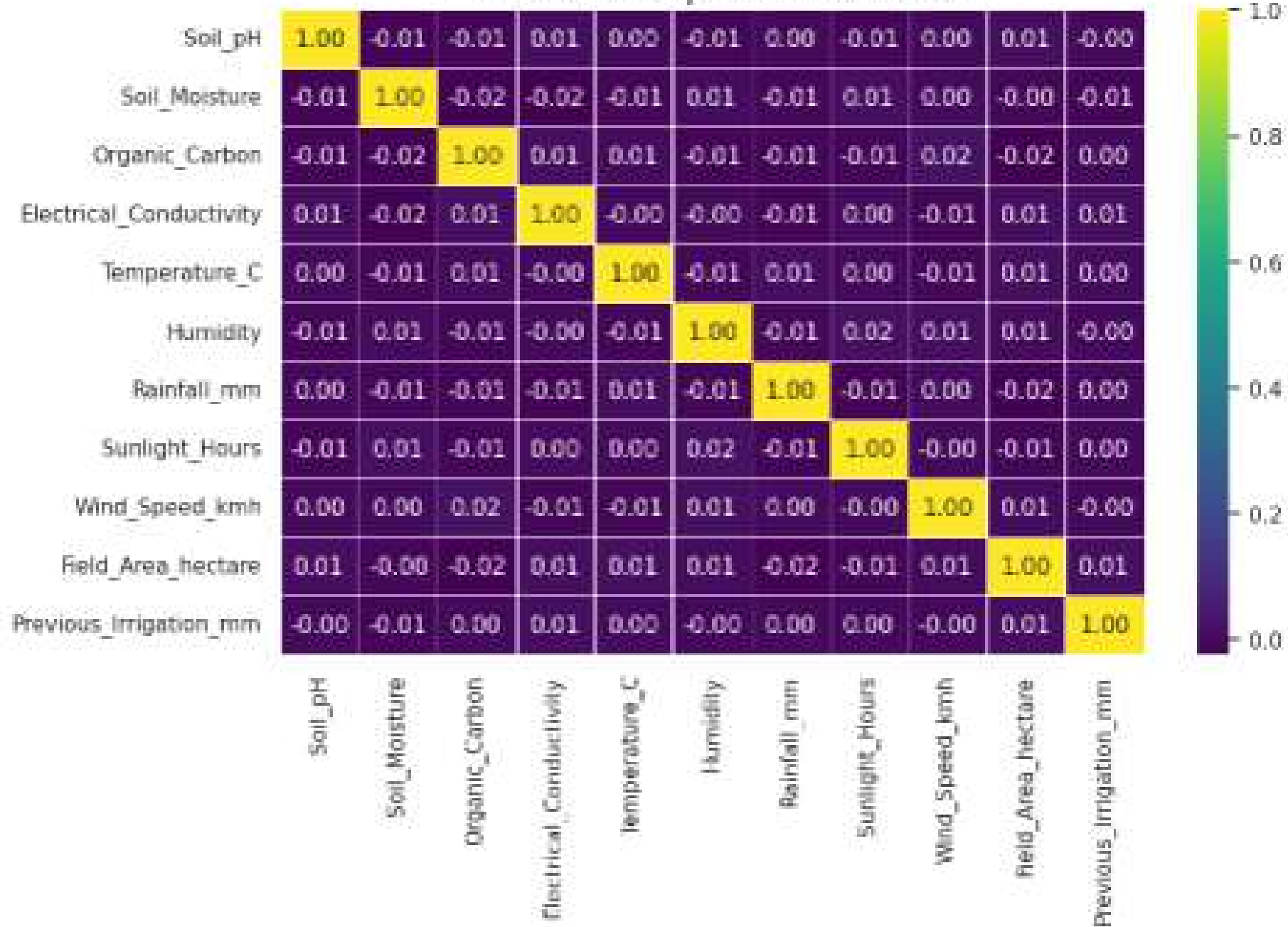
```
plt.figure(figsize=(12,8))  
for col in df_numeric.columns:  
    sns.kdeplot(df_numeric[col], label=col, fill=True)  
plt.title("KDE Plot of Numerical Features")  
plt.legend()  
plt.show()
```

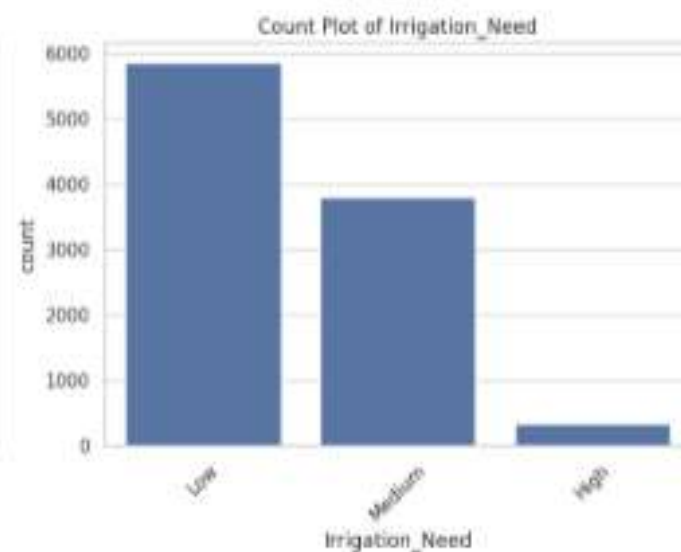
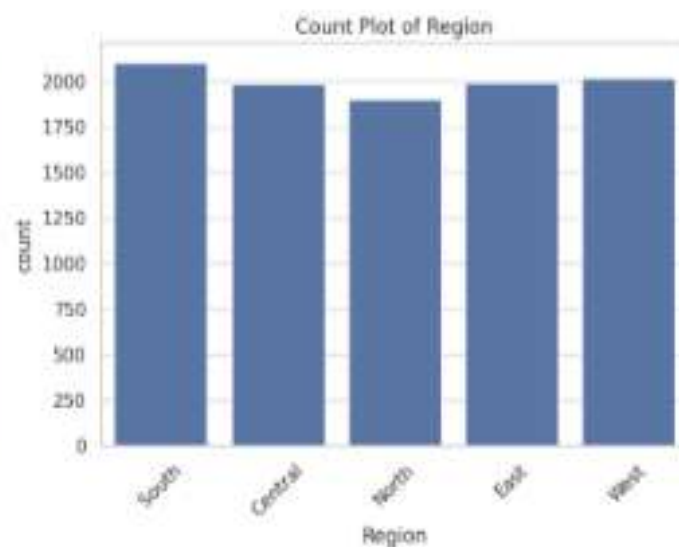
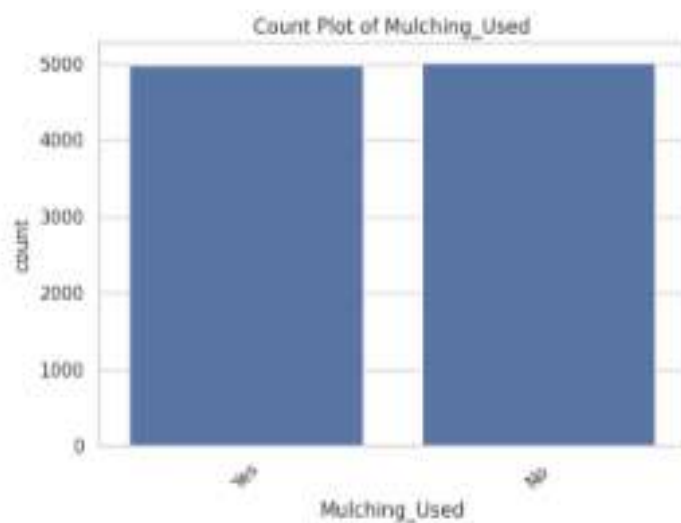
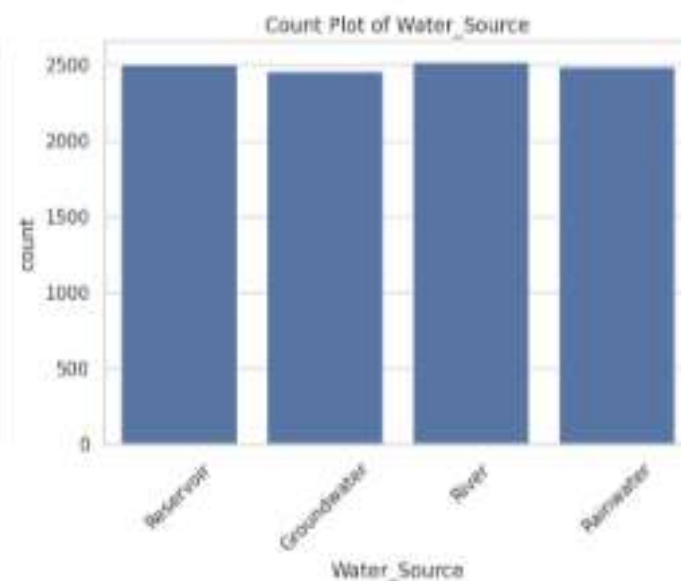
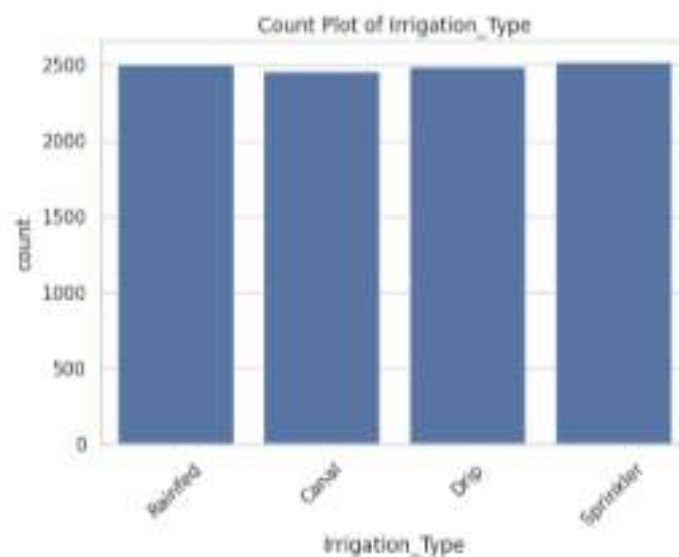
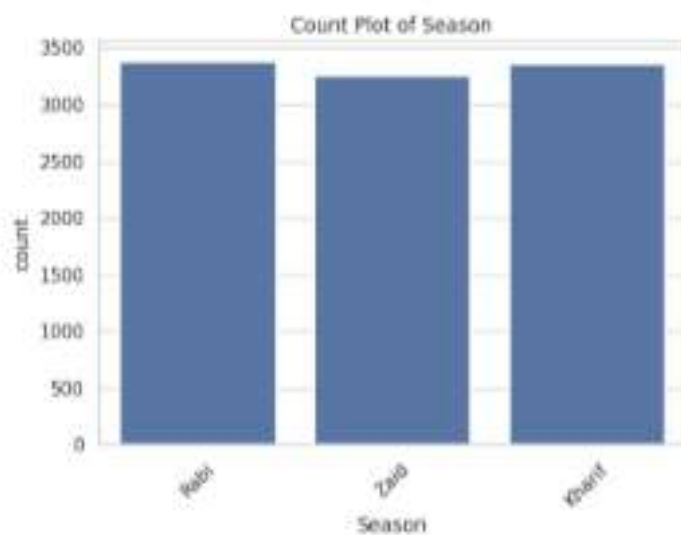


```
plt.show()
```



Correlation Heatmap of Numerical Features

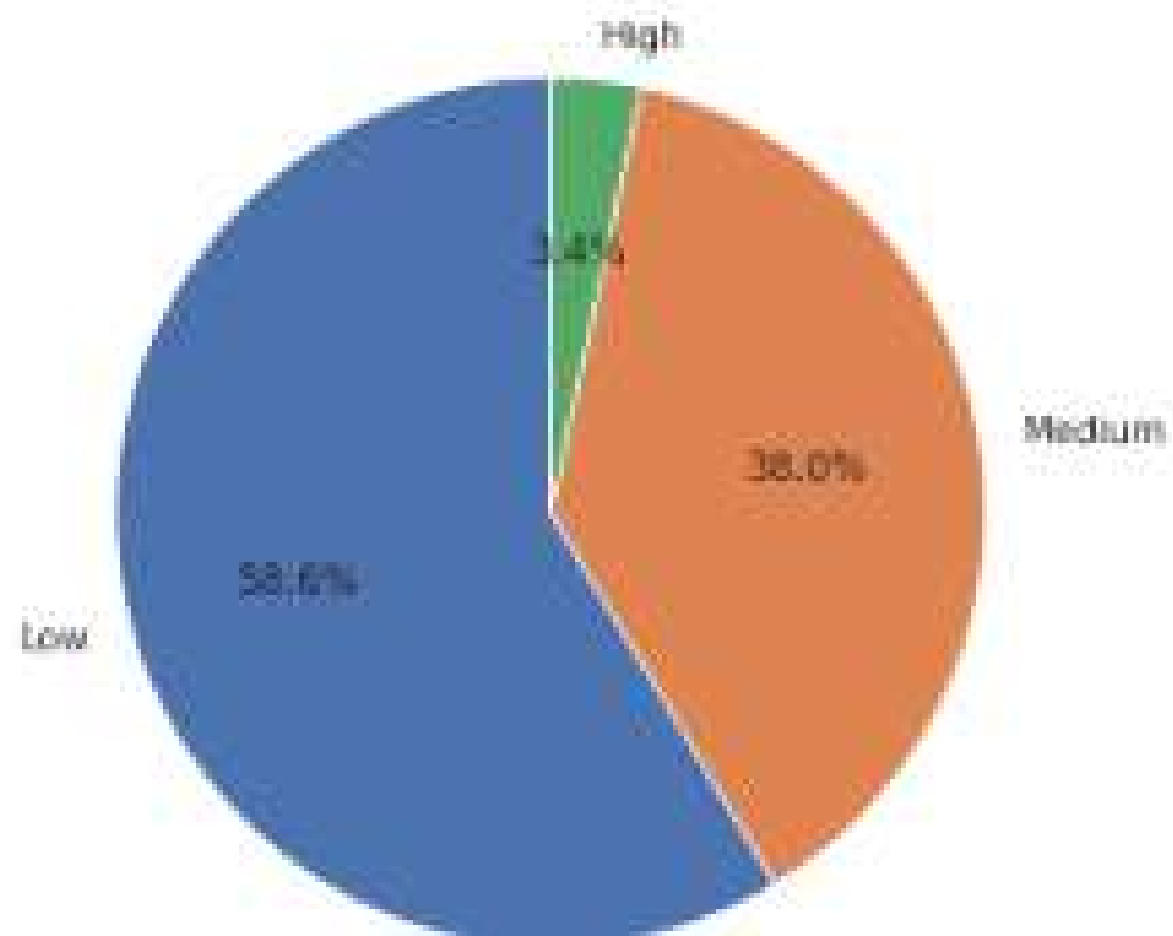





```
plt.figure(figsize=(6, 6))
df_category[col].value_counts().plot(
    kind='pie',
    autopct='%1.1f%%',
    startangle=90
)

plt.title(f'Pie Chart of {col}')
plt.ylabel('') # remove y-label
plt.show()
```

Pie Chart of Irrigation_Need



```
plt.show()
```

```
/tmp/ipython-input-2797911311.py:23: UserWarning: set_ticklabels() should only be used with a fixed number of ticks, i.e. after set_ticks() or using a FixedLocator.  
  ax.set_ticklabels(models, rotation=45)  
/tmp/ipython-input-2797911311.py:23: UserWarning: set_ticklabels() should only be used with a fixed number of ticks, i.e. after set_ticks() or using a FixedLocator.  
  ax.set_ticklabels(models, rotation=45)  
/tmp/ipython-input-2797911311.py:23: UserWarning: set_ticklabels() should only be used with a fixed number of ticks, i.e. after set_ticks() or using a FixedLocator.  
  ax.set_ticklabels(models, rotation=45)  
/tmp/ipython-input-2797911311.py:23: UserWarning: set_ticklabels() should only be used with a fixed number of ticks, i.e. after set_ticks() or using a FixedLocator.  
  ax.set_ticklabels(models, rotation=45)
```

Model Comparison Across Evaluation Metrics

