labmentix.py - C:\Users\hv364\OneDrive\เอกสาร\labmentix.py (3.13.3)

File Edit Format Run Options Window Help

```python
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Load CSV
file_path = r"C:\Users\hv364\Downloads\data_YesBank_StockPrices.csv"
df = pd.read_csv(file_path)

# Correct date format: Month-Year (e.g., Jul-05)
df['Date'] = pd.to_datetime(df['Date'], format='%b-%y', errors='coerce')
df.dropna(subset=['Date'], inplace=True)

# Convert numeric columns
for col in ['Open', 'High', 'Low', 'Close']:
    df[col] = pd.to_numeric(df[col], errors='coerce')

# Drop rows with missing prices
df.dropna(subset=['Open', 'High', 'Low', 'Close'], inplace=True)

# Set date index and sort
df.sort_values('Date', inplace=True)
df.set_index('Date', inplace=True)

# Calculate moving averages and returns
df['MA20'] = df['Close'].rolling(window=20).mean()
df['MA50'] = df['Close'].rolling(window=50).mean()
df['Daily Return (%)'] = df['Close'].pct_change() * 100

# Show descriptive statistics
print("\n Descriptive Statistics:")
print(df.describe())

# Plot closing price
plt.figure()
df['Close'].plot(title='Yes Bank Closing Price')
plt.xlabel("Date")
plt.ylabel("Price (INR)")
plt.grid(True)
plt.show()
```

```
# Plot moving averages
plt.figure()
df[['Close', 'MA20', 'MA50']].plot(title='Yes Bank - Moving Averages')
plt.xlabel("Date")
plt.ylabel("Price (INR)")
plt.grid(True)
plt.show()

# Plot daily return distribution
plt.figure()
df['Daily Return (%)'].plot(kind='hist', bins=50, title='Daily Return Distribution')
plt.xlabel("Daily Return (%)")
plt.grid(True)
plt.show()

# Correlation heatmap
plt.figure()
sns.heatmap(df[['Open', 'High', 'Low', 'Close']].corr(), annot=True, cmap='coolwarm')
plt.title("Feature Correlation Heatmap")
plt.show()
```

Figure 1

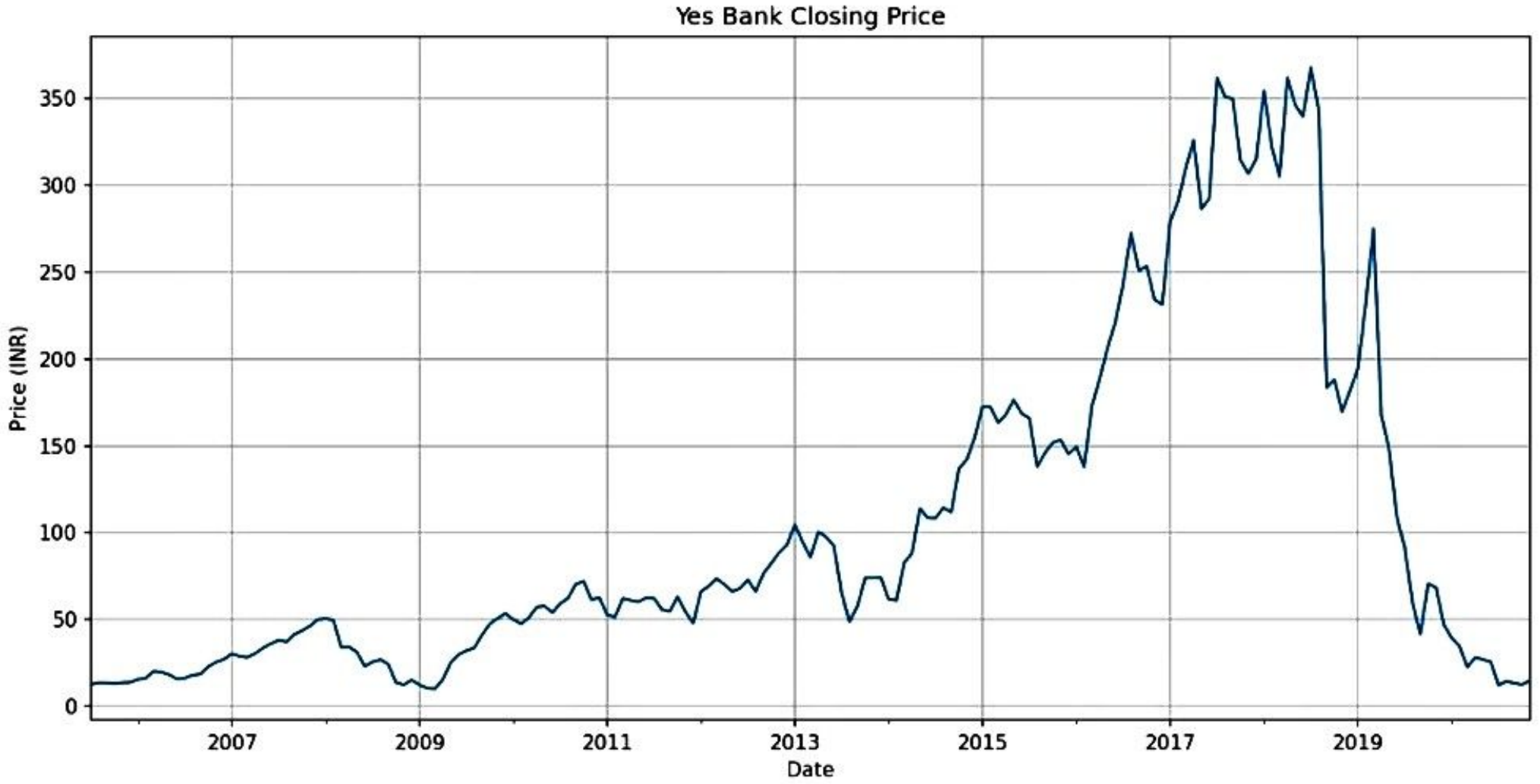
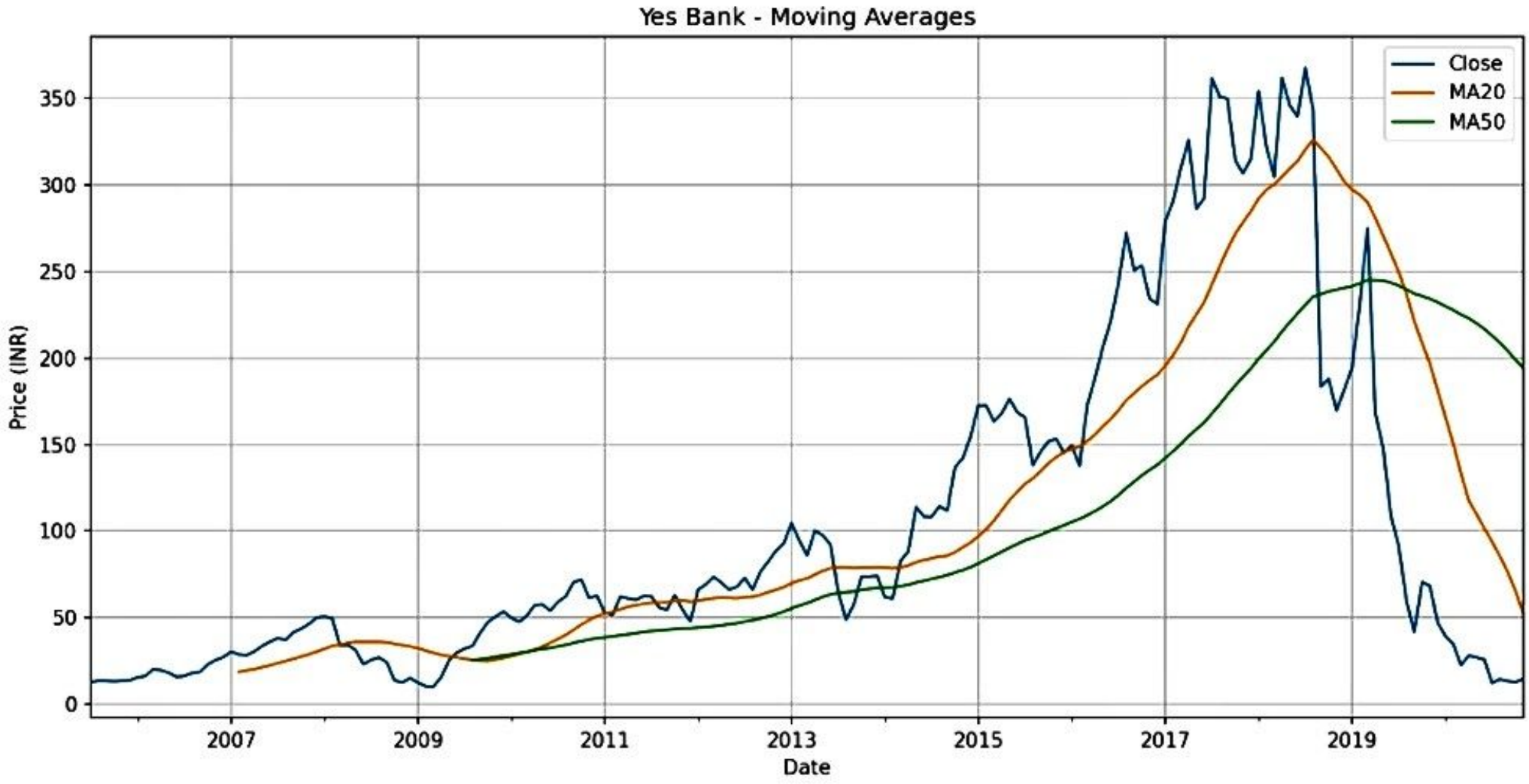

Yes Bank Closing Price
Price (INR)
0
50
100
150
200
250
300
350
2007
2009
2011
2013
2015
2017
2019
Date

Figure 2


Yes Bank - Moving Averages
Close
MA20
MA50
Price (INR)
0
50
100
150
200
250
300
350
2007
2009
2011
2013
2015
2017
2019
Date