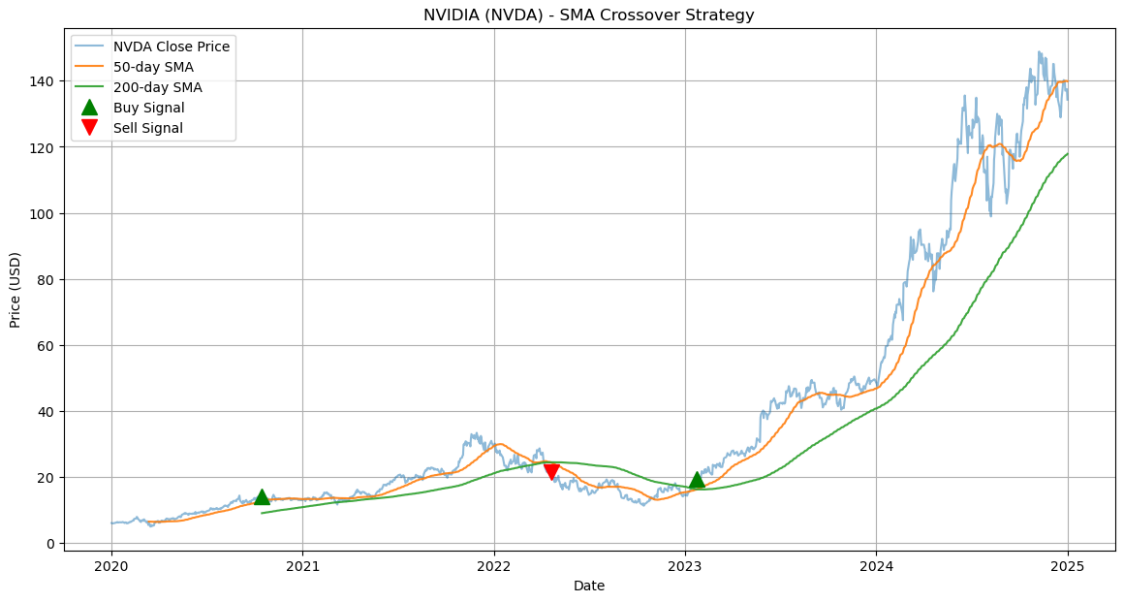
TradersSMANVIDIA

April 29, 2025

[12]:
```
import pandas as pd
import yfinance as yf
import matplotlib.pyplot as plt
import numpy as np

# Download data
ticker = "NVDA"
data = yf.download(ticker, start="2020-01-01", end="2025-01-01")
data = data[['Close']]

# Calculate SMAs
data['SMA_50'] = data['Close'].rolling(window=50).mean()
data['SMA_200'] = data['Close'].rolling(window=200).mean()

# Generate signals
data['Signal'] = np.where(data['SMA_50'] > data['SMA_200'], 1, 0)
data['Position'] = data['Signal'].diff()

# Plotting
plt.figure(figsize=(14,7))
plt.plot(data['Close'], label='NVDA Close Price', alpha=0.5)
plt.plot(data['SMA_50'], label='50-day SMA', alpha=0.9)
plt.plot(data['SMA_200'], label='200-day SMA', alpha=0.9)

# Buy signals
plt.plot(data[data['Position'] == 1].index,
         data['Close'][data['Position'] == 1],
         '^', markersize=12, color='g', label='Buy Signal')

# Sell signals
plt.plot(data[data['Position'] == -1].index,
         data['Close'][data['Position'] == -1],
         'v', markersize=12, color='r', label='Sell Signal')

plt.title('NVIDIA (NVDA) - SMA Crossover Strategy')
plt.xlabel('Date')
plt.ylabel('Price (USD)')
```

```
plt.legend()
plt.grid()
plt.show()
```

```
[**********************100%**********************]  1 of 1 completed
```



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    712 if isinstance(key, range):
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