Untitled8

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Code

JupyterLab Python 3 (ipykernel)

[2]:
```
import pandas as pd
import matplotlib.pyplot as plt

# Sample data
data = {
    'Date': pd.date_range(start='2025-04-01', periods=10, freq='D'),
    'Units_Produced': [1000, 980, 1020, 990, 1005, 1015, 1000, 970, 985, 995],
    'Good_Units':     [950, 960, 1000, 970, 990, 995, 985, 940, 960, 980]
}

df = pd.DataFrame(data)

# Calculate Yield
df['Yield (%)'] = (df['Good_Units'] / df['Units_Produced']) * 100

# Set yield threshold
threshold = 95

# Find days with low yield
low_yield_days = df[df['Yield (%)'] < threshold]

# Print alerts
if not low_yield_days.empty:
    print(" Alert: Yield dropped below 95% on the following days:\n")
    print(low_yield_days[['Date', 'Yield (%)']])
else:
    print(" All days met the yield target.")

# Plot yield over time
plt.figure(figsize=(10, 6))
plt.plot(df['Date'], df['Yield (%)'], marker='o', linestyle='-', color='green', label='Yield')
plt.axhline(y=threshold, color='red', linestyle='--', label=f'Target Yield ({threshold}%)')
```

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Code

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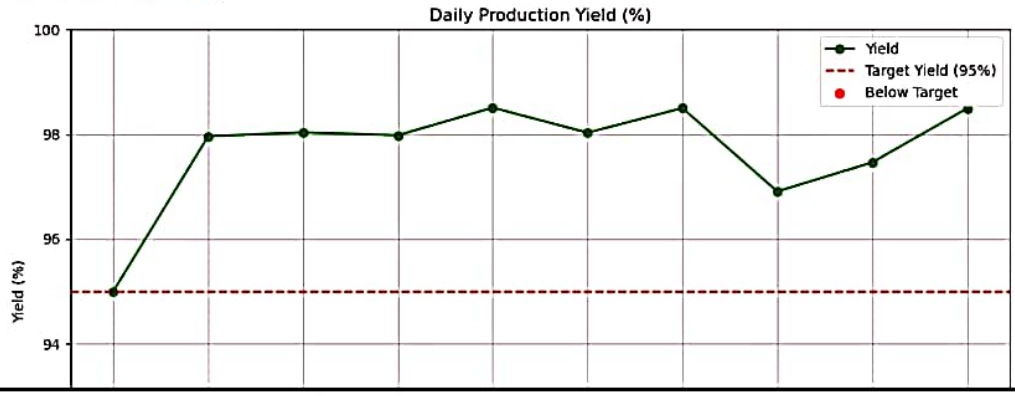
```
# Highlight low-yield points
plt.scatter(low_yield_days['Date'], low_yield_days['Yield (%)'], color='red', zorder=5, label='Below Target')

plt.title('Daily Production Yield (%)')
plt.xlabel('Date')
plt.ylabel('Yield (%)')
plt.ylim(90, 100)
plt.grid(True)
plt.legend()
plt.tight_layout()
plt.show()
```

```
All days met the yield target.
```



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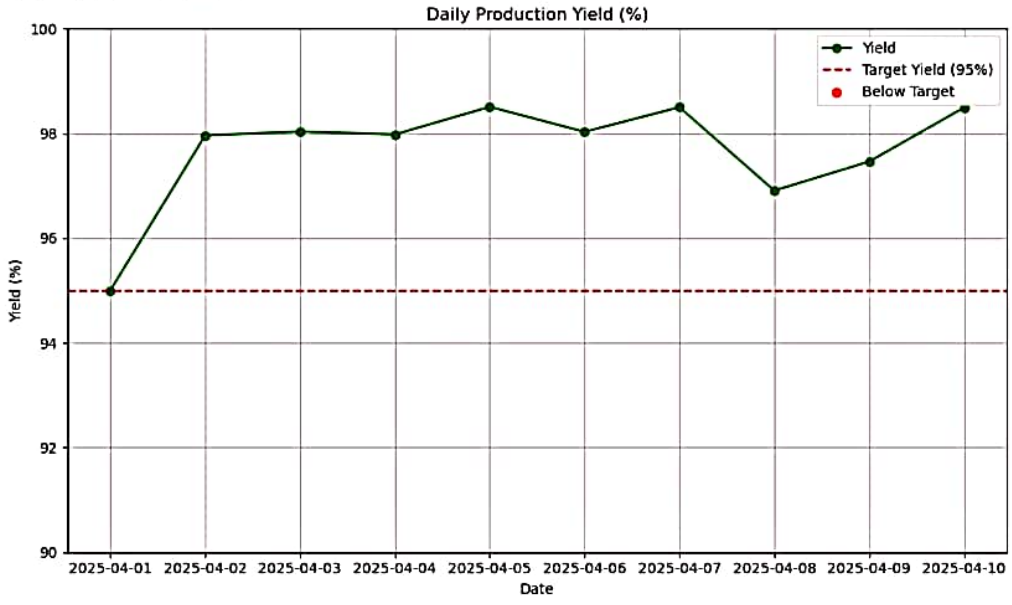
Code

JupyterLab Python 3 (ipykernel)

```
All days met the yield target.
```



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