Mid term Exam for Financial Econometrics with Python

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Contents

1 Introduction

For the midterm assignment, we composed a group of 4 with Gavini Charles; Fournier Justin; Prat Paul and Blanc Mathieu. This document contains all the results of our assignment, including tables, figures, and calculations. It is composed by X parts, first, importing the good python libraries,

2 Preliminary

First, importing the Nvidia stock with yfinance, then display the pandas table

2.1 Data Table

The data printed here, is the preview of the Nvidia stock extraction from yahoo fiannce:

Date	Open	High	Low	Close	Adj Close	Volume
1999-01-22	0.043750	0.048828	0.038802	0.041016	0.037618	2714688000
1999-01-25	0.044271	0.045833	0.041016	0.045313	0.041559	510480000
1999-01-26	0.045833	0.046745	0.041146	0.041797	0.038334	343200000
1999-01-27	0.041927	0.042969	0.039583	0.041667	0.038215	244368000
1999-01-28	0.041667	0.041927	0.041276	0.041536	0.038095	227520000

Table 1: Preview of Nvidia Stock Data from Yahoo Finance

2.2 Checking the 25 year range condition

We have to check that the data is correctly displayed over a 25years range, hopefully, the introduction from Nvidia is from january 1999, so it we should be able to find a 25 year range of data of the Nvidia stock. To check that we can compute a python code to count the gaps and visualize the dates of gaps in order to see for any huge gap that would be problematic for analyzing data.

A Appendix: Python Code

Below is the Python code used in this analysis.

```python
# Python code example
import numpy as np
import pandas as pd

def analyze_data(data):
    mean = np.mean(data)
    std_dev = np.std(data)
    return mean, std_dev

data = [1, 2, 3, 4, 5]
```

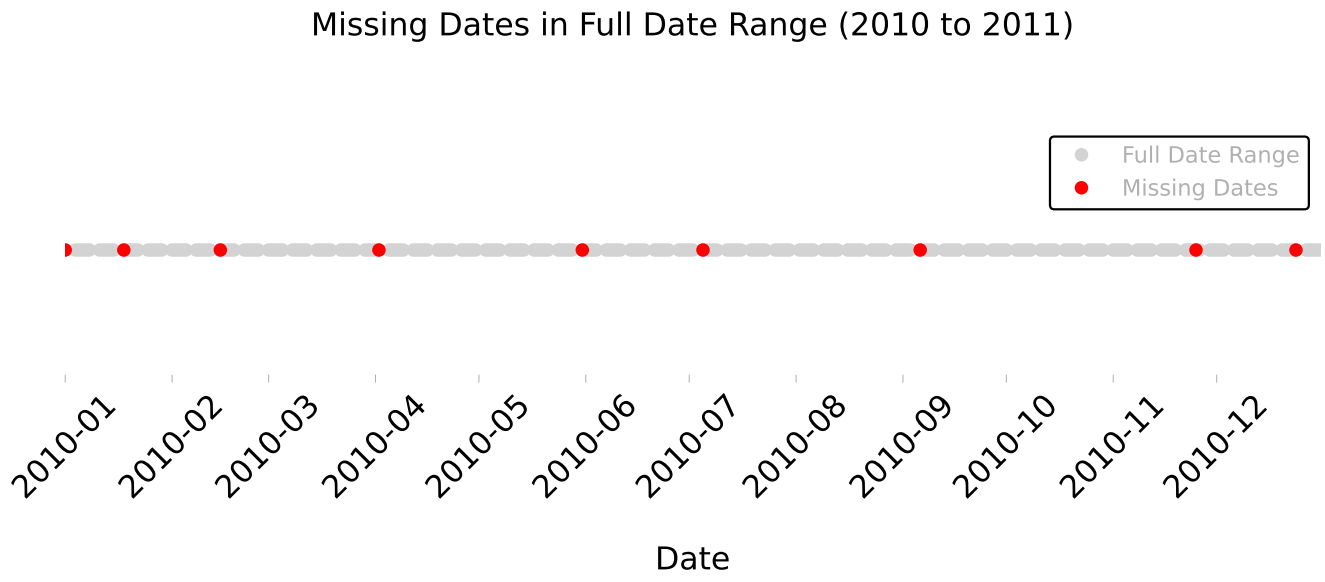

Figure 1: Missing Dates in Full Date Range (2010 to 2011)

```
mean, std_dev = analyze_data(data)
print(f"Mean: {mean}, Standard Deviation: {std_dev}")
```

Listing 1: Python Code for Analysis