

Q1.

The average daily profit for the SPY stock is 0.03%

The average daily profit for my stock NVDA is 0.09%

```
✓ #getting mean of Daily Profit for SPY ...  
  
Average Daily Profit Percentage of SPY stock is: 0.03%  
  
✓ #getting mean of Daily Profit for NVDA ...  
  
Average Daily Profit Percentage of NVDA stock is: 0.09%
```

+ Code + Markdown

Q2.

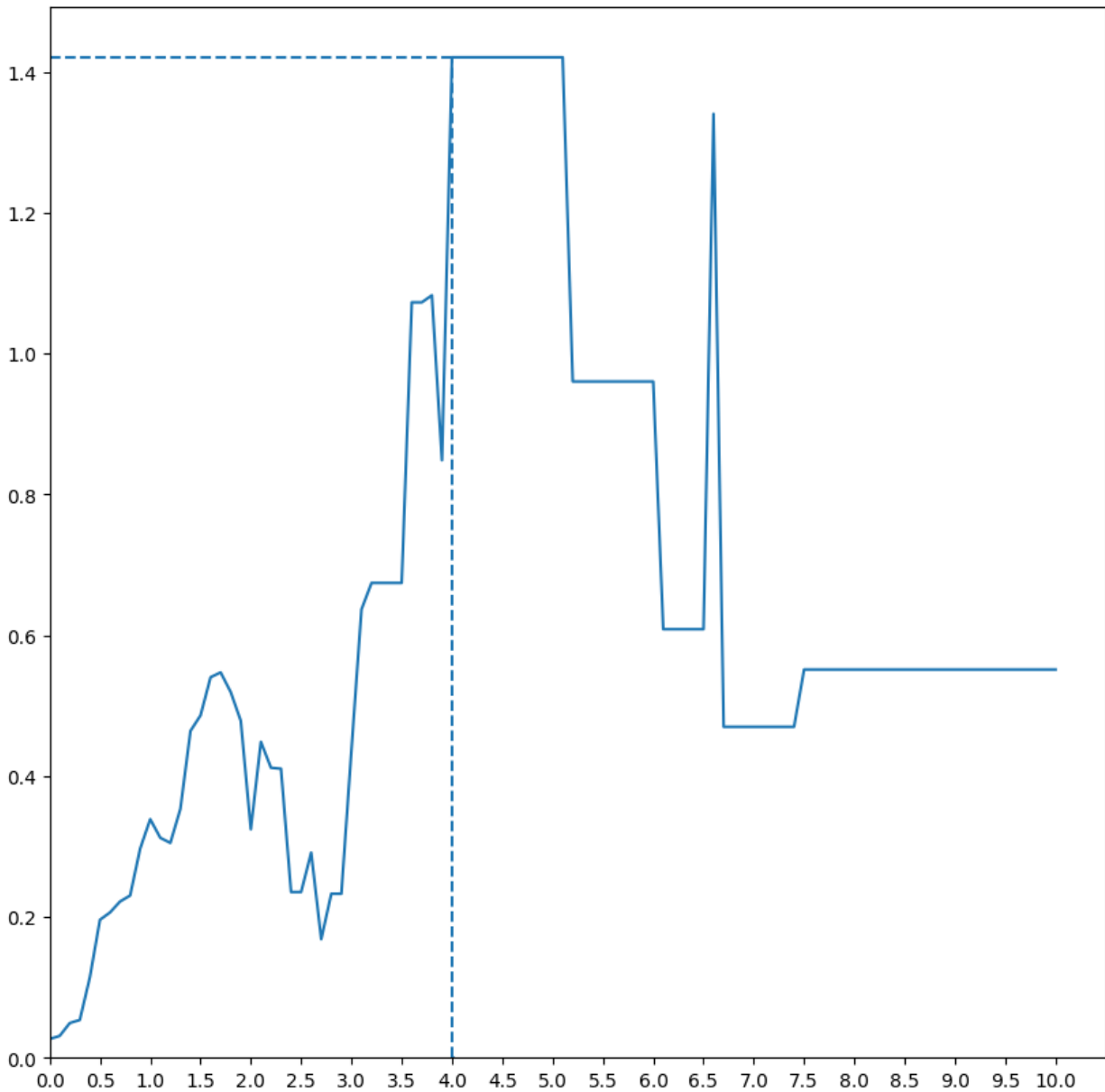
```
Average Daily Profit of SPY stock by selling short is: -0.003%  
Average Daily Profit of SPY stock by buying long is: 0.05%
```

```
Average Daily Profit of NVDA stock by selling short is: -0.02%  
Average Daily Profit of NVDA stock by buying long is: 0.16%
```

The long positions gave a better result as compared to the short positions for both the SPY and the NVDA stock.

Q3.

Graph for SPY below:

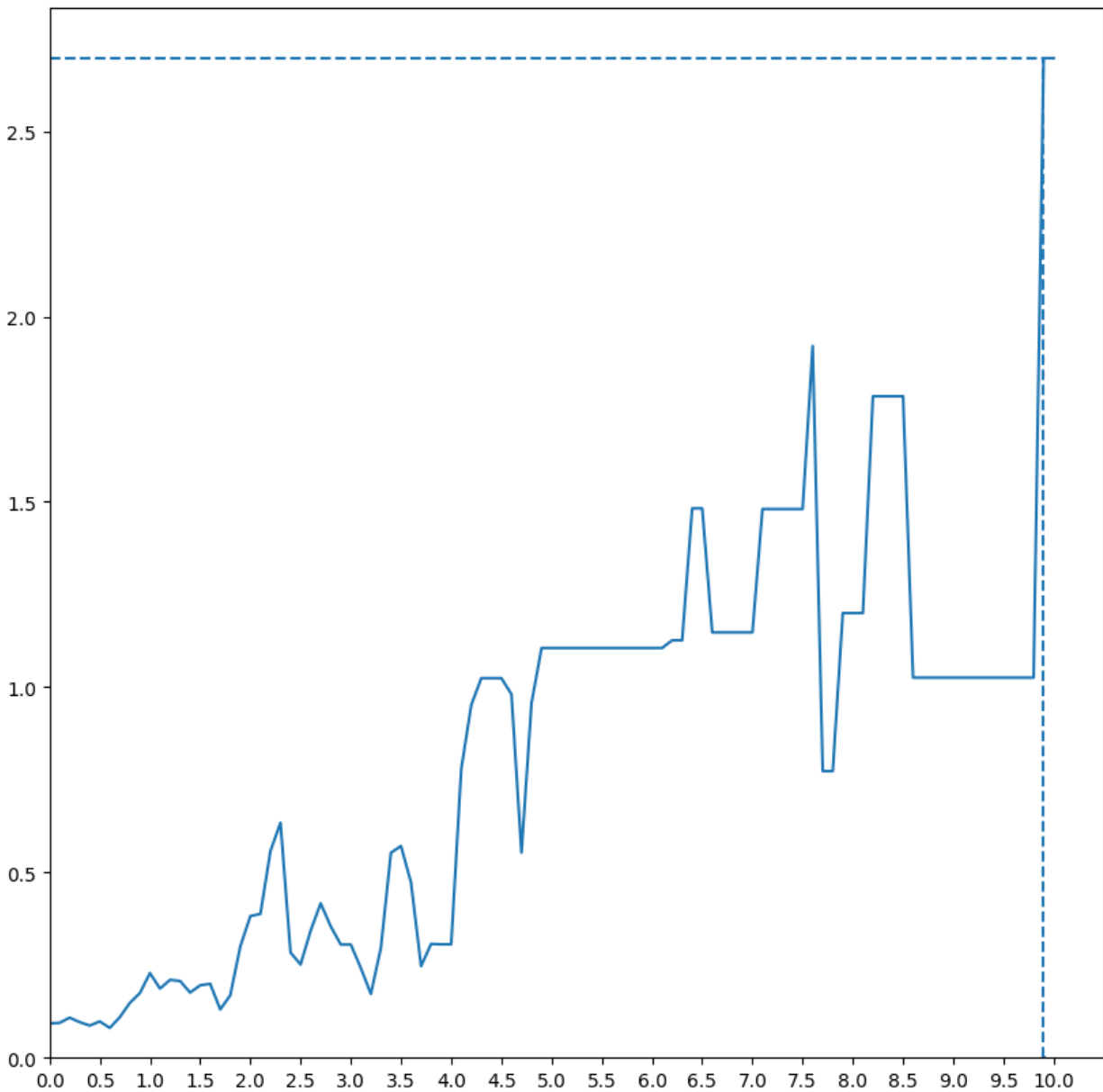


The maximum average profit per trade was observed to be 1.42% for a threshold value of 4.0%.

✓ #making the above output cleaner ...

The maximum average profit per trade is : 1.42
For which the threshold is required to be at : 4.0

Graph for NVDA below:



The maximum average profit per trade was observed to be 2.7% for a threshold value of 9.9%.

```
✓ #making the above output cleaner ...
```

```
The maximum average profit per trade is : 2.7  
For which the threshold is required to be at : 9.9
```

There were as such no observable patterns.

Q4.

The results of my analysis are summarized in the form of optimal values for threshold which give max average profit per trade in the table below:

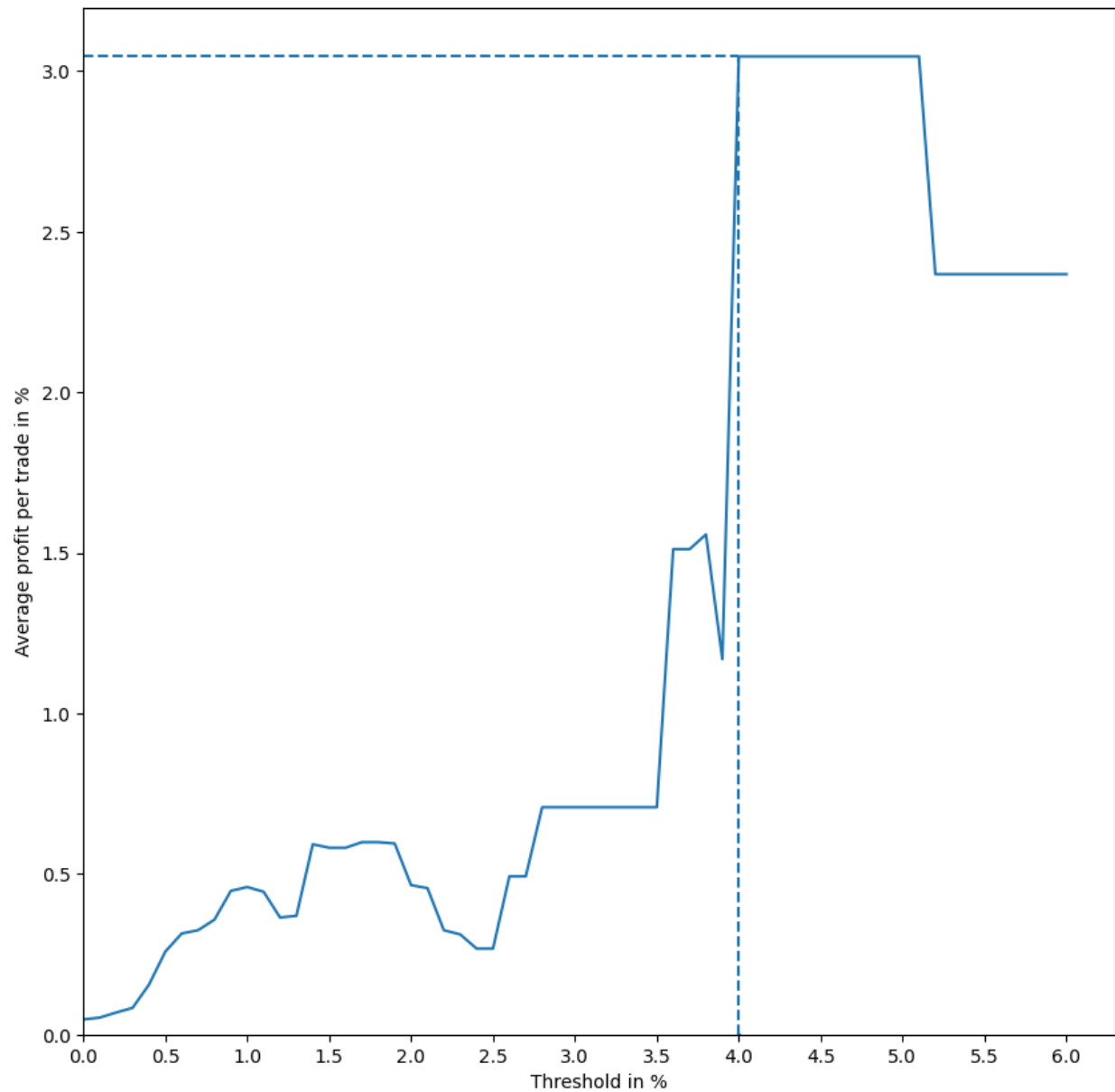
Strategy	Stock	Threshold (%)	Max Average Profit per Trade (%)
Long	SPY	4.0%	3.05%
Long	NVDA	7.6%	3.33%
Short	SPY	6.6%	1.34%
Short	NVDA	9.9%	7.53%

The long position works in favor of the SPY stock.

This is in contrast with the NVDA stock which does better in the short position.

Screenshots for Long position analysis:

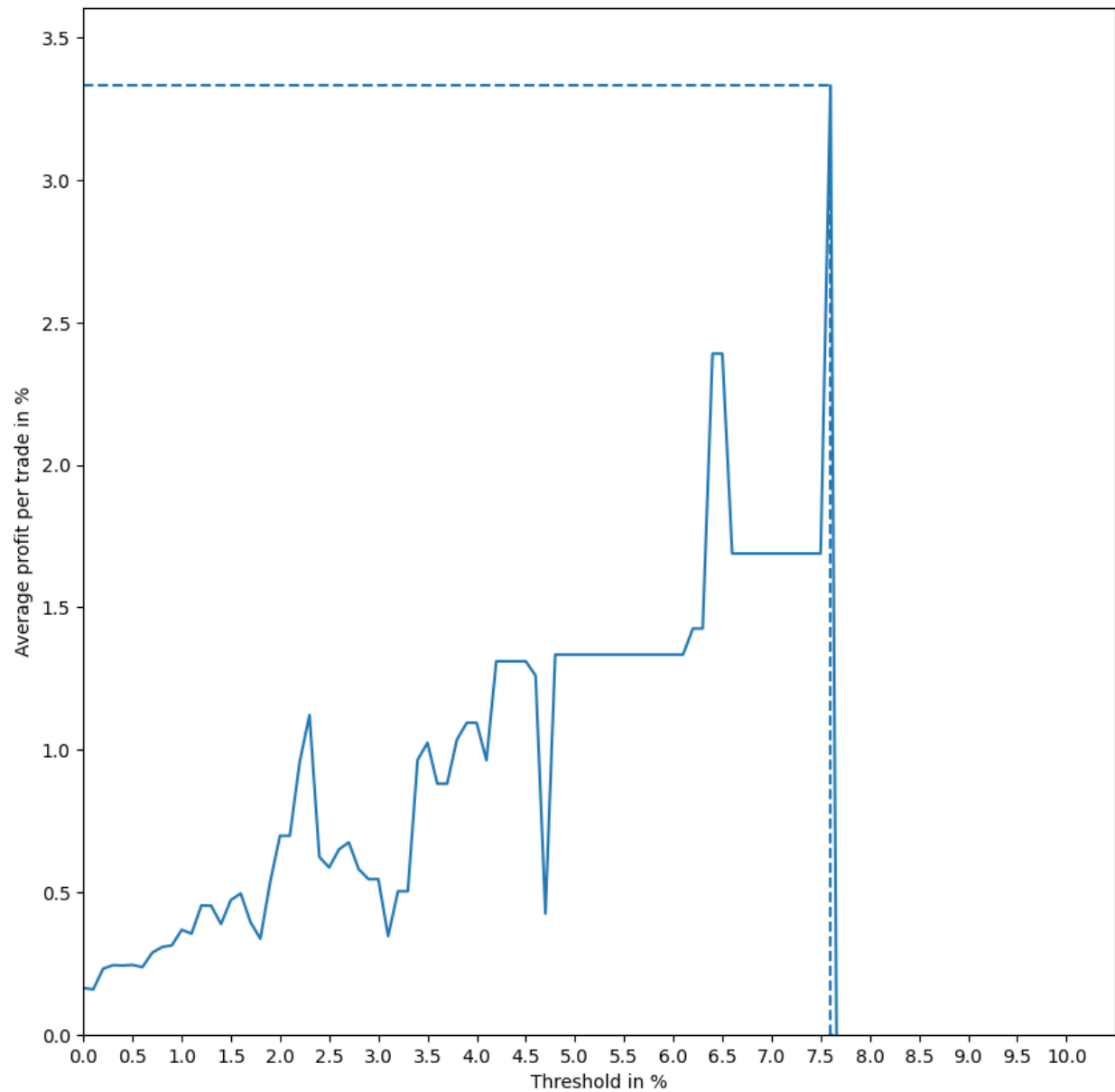
1. SPY Stock:



✓ #making the above output cleaner ...

The maximum average profit per trade is : 3.05
For which the threshold is required to be at : 4.0

2. NVDA Stock:

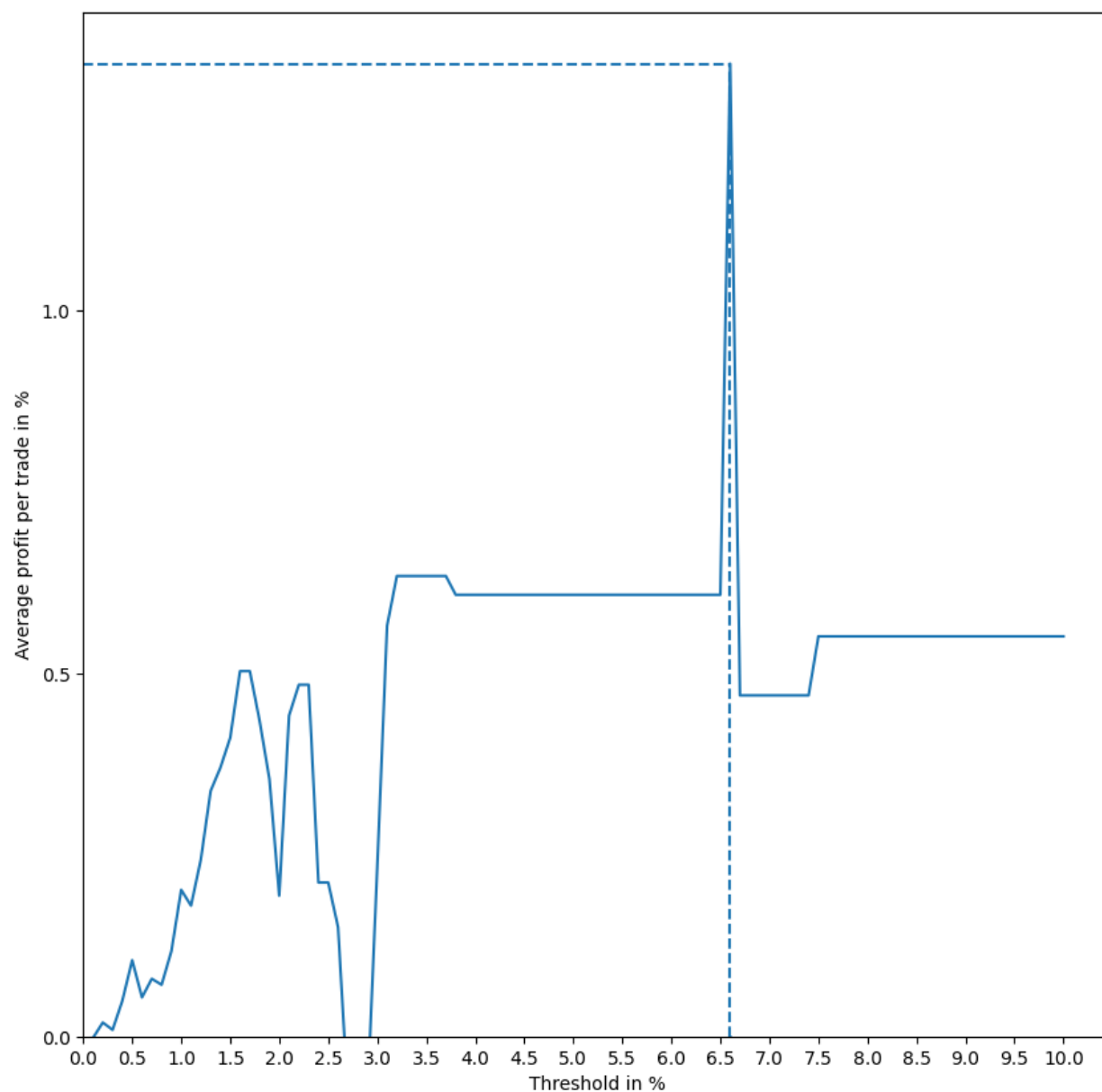


✓ #making the above output cleaner ...

The maximum average profit per trade is : 3.33
For which the threshold is required to be at : 7.6

Screenshots for Short position analysis:

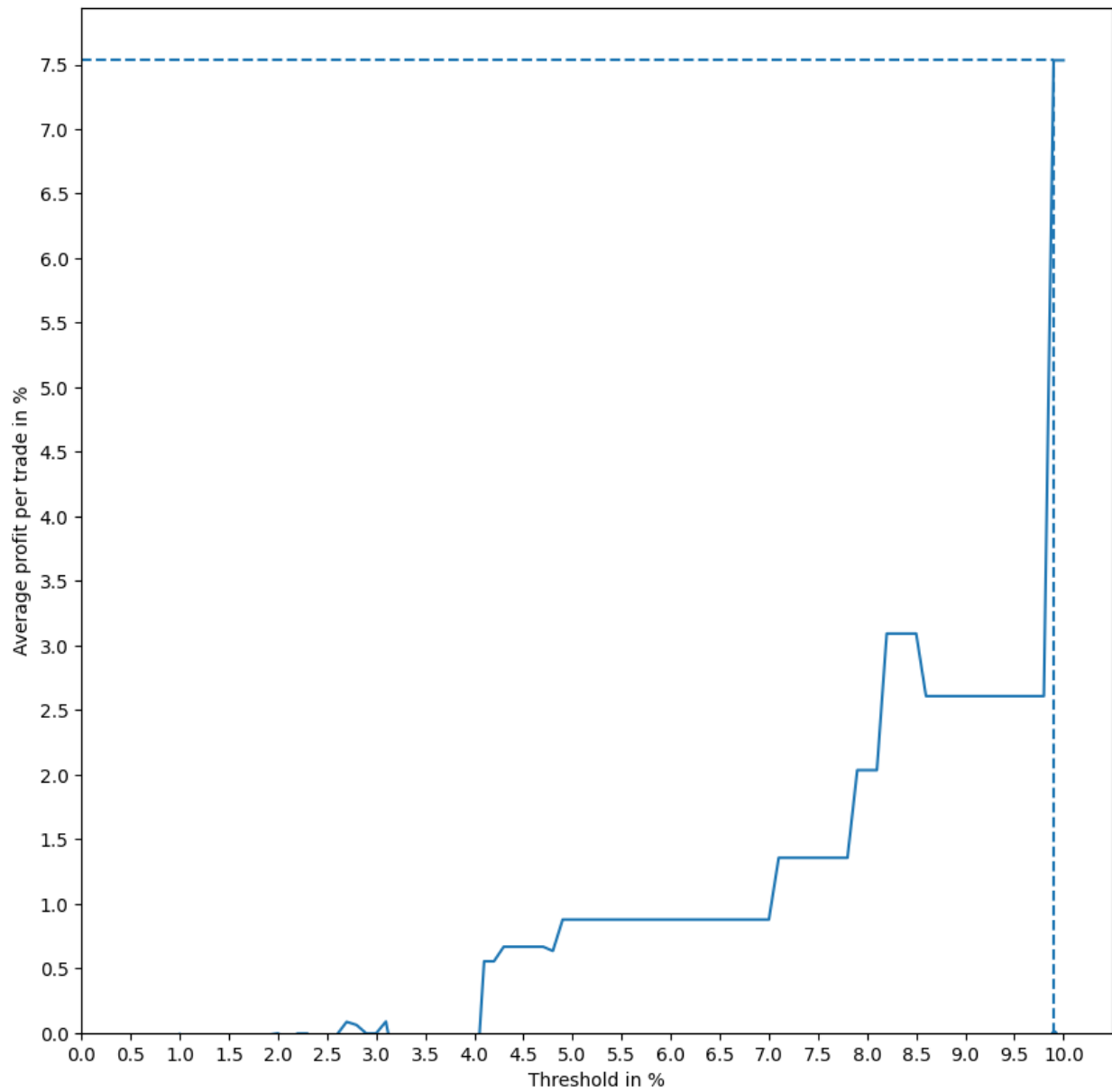
1. SPY Stock:



✓ #making the above output cleaner ...

The maximum average profit per trade is : 1.34
For which the threshold is required to be at : 6.6

2. NVDA Stock:

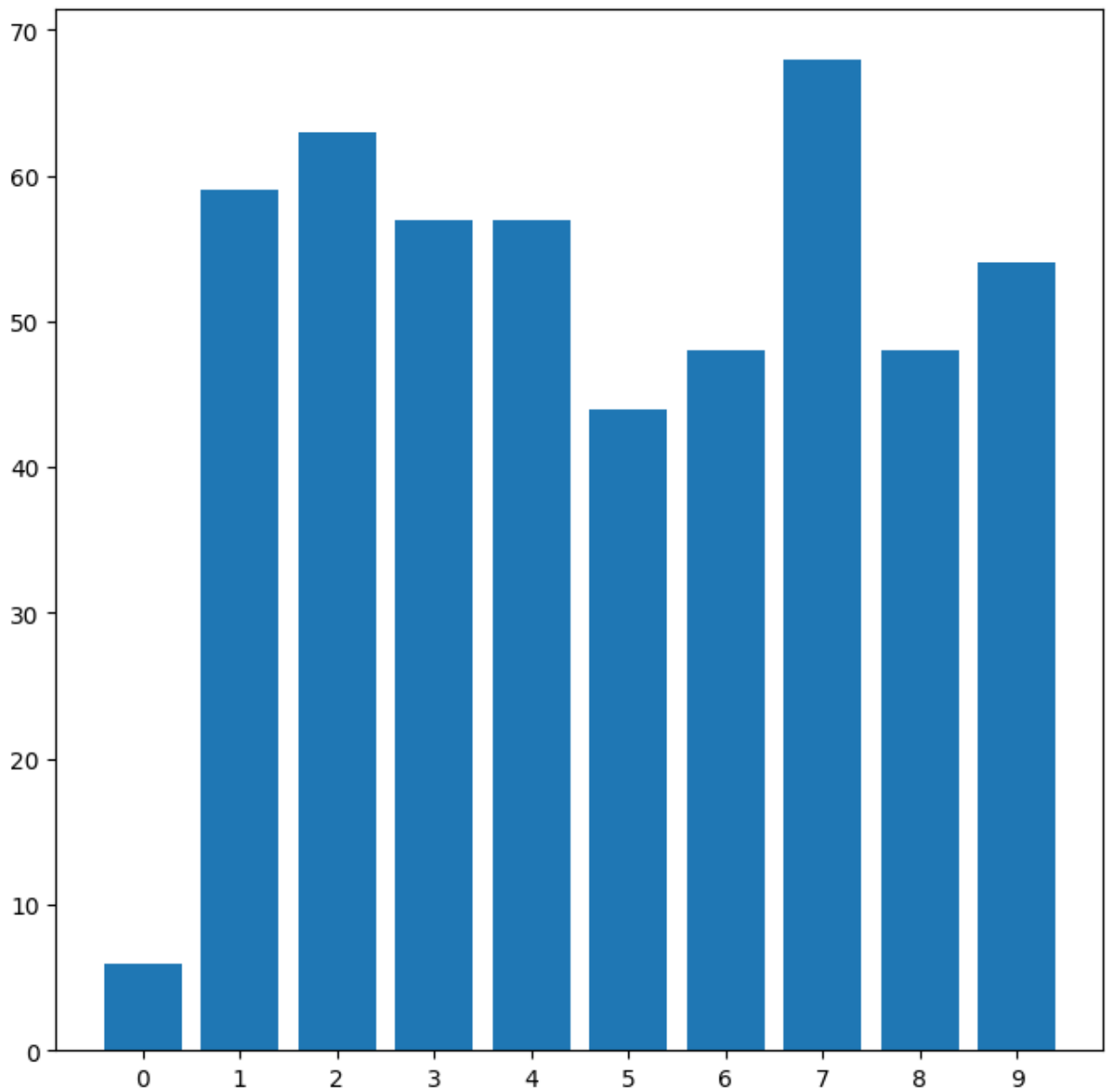


✓ #making the above output cleaner ...

The maximum average profit per trade is : 7.53
For which the threshold is required to be at : 9.9

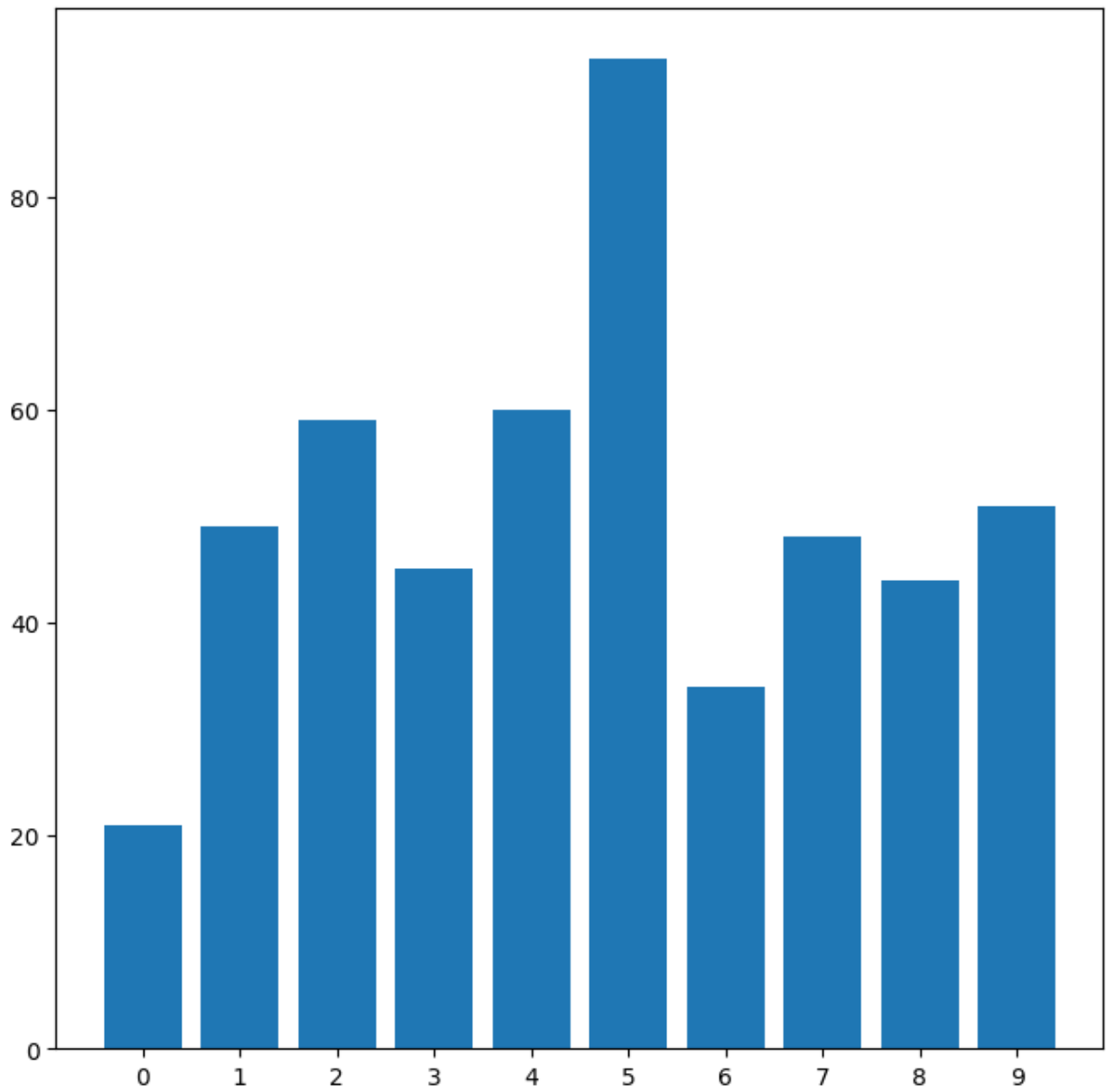
Q5.

Bar Graph for SPY stock indicating frequency of digit at cents/ hundredths place:



In the above graph we can see that 0 has the lowest frequency and 7 has the highest frequency.

Bar Graph for NVDA stock indicating frequency of digit at cents/ hundredths place:



In the above graph we can see that 0 again has the lowest frequency and 5 has the highest frequency.