ANALYSIS OF DATA FROM BLUEPRINT FOREX APP

By Wofai Alfred Eyong

Data Analyst; Blueprint Fintech Solutions ltd.

Introduction

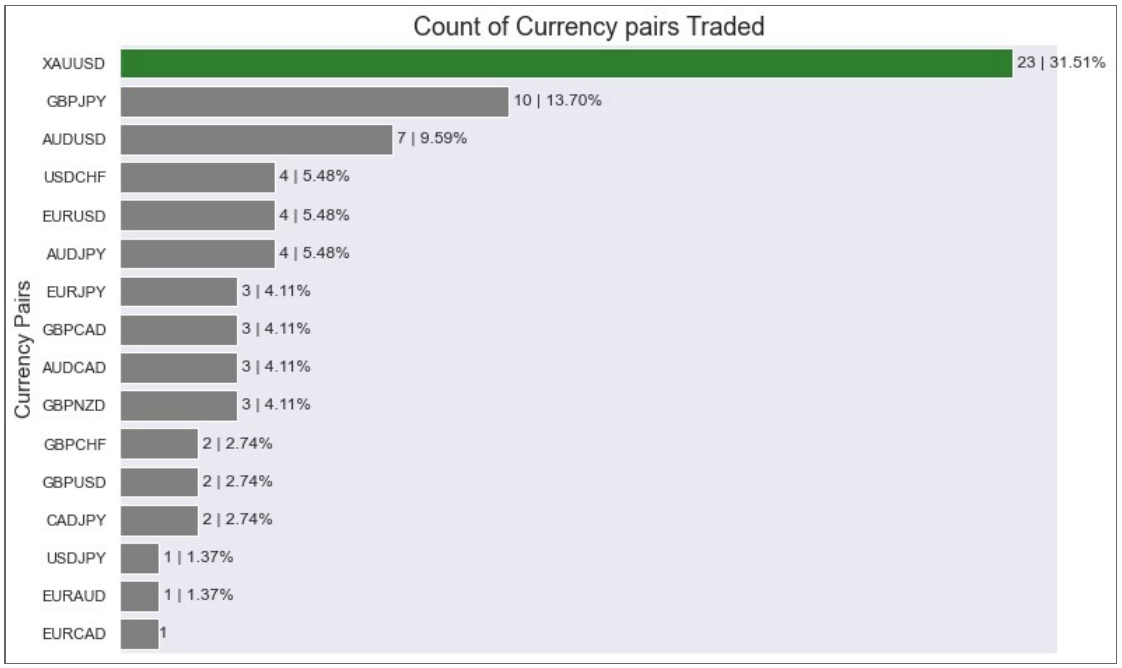
Blueprint Fintech Solutions ltd is a Lagos, Nigeria-based company in the foreign exchange market; a global marketplace where banks, institutions and investors, place trades and calls on different currency pairs. This company created its first software application: THE BLUEPRINT FOREX APP, which is a place where subscribers can receive trading calls, signals and information to aid trading the financial market. With over 300 subscribers after the app launch, trade calls were given over an 80 day period. All generated information from the company spanning across several variables was collated to curate the 2 datasets which were merged and analysed. The dataset contains information on about 15 variables, all of which are focused on the trade calls given from the app and their outcomes. The variables analysed include:

Date: Date of record creation in table 1. It corresponds to the open date.
Pairs: Currency pairs traded.
Trade: Trade calls (Buy or Sell).
Open: Date trade was opened.
Close: Date trade was closed.
result: Trade outcome (Successful or Unsuccessful).

lot_size: Lot size used for trade.
no_of_pips_won: Number of pips won after trade was closed.
no_of_pips_lost: Number of pips lost after trade was closed.
amt_won: Amount in dollars won after trade was closed.
amt_lost: Amount in dollars lost after trade was closed.
Index_day: Trade day count (From monday to friday only)
Date: Date of record creation in table 2.
no_of_trades_entered: Number of trades entered on a particular day.
no_of_trades_closed: Number of trades closed on a particular day.

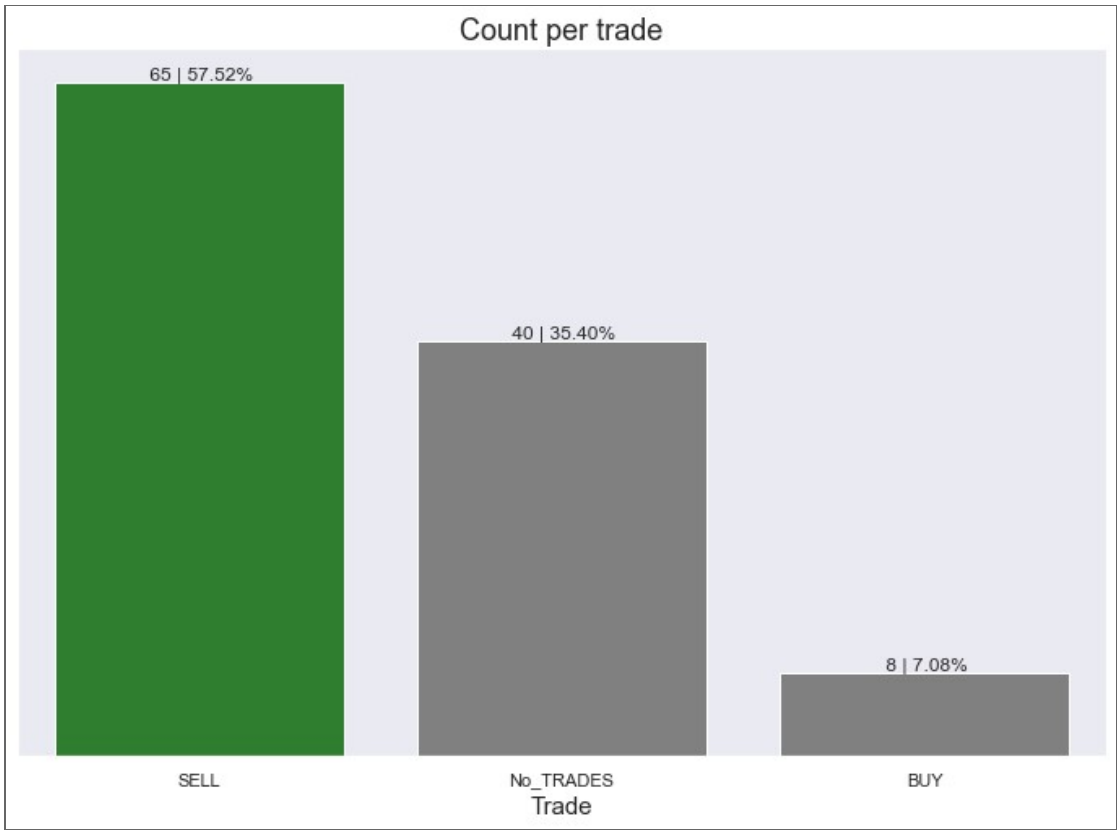
ANALYSIS AND VISUALIZATION

What currency pair was most traded?


Count of Currency pairs Traded
Currency Pairs
XAUUSD
GBPJPY
AUDUSD
USDCHF
EURUSD
AUDJPY
EURJPY
GBPCAD
AUDCAD
GBPNZD
GBPCHF
GBPUSD
CADJPY
USDJPY
EURAUD
EURCAD
23 | 31.51%
10 | 13.70%
7 | 9.59%
4 | 5.48%
4 | 5.48%
4 | 5.48%
3 | 4.11%
3 | 4.11%
3 | 4.11%
3 | 4.11%
2 | 2.74%
2 | 2.74%
2 | 2.74%
1 | 1.37%
1 | 1.37%
1

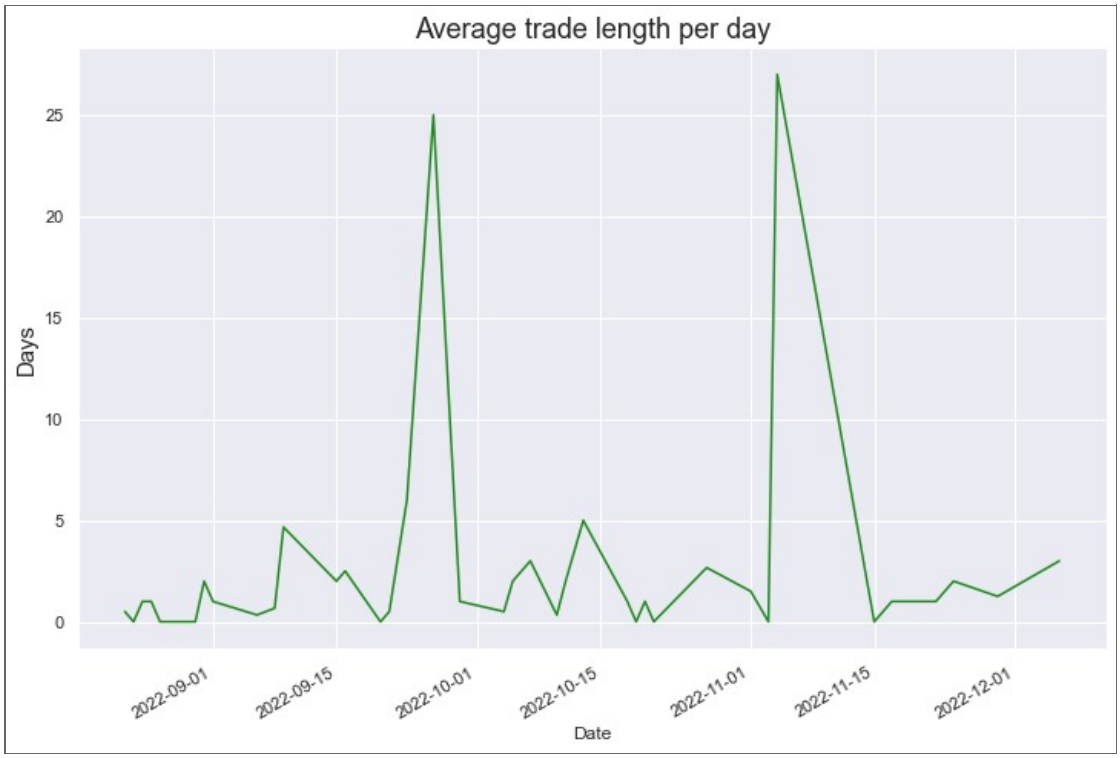
The XAUUSD currency pair was most traded during the 80-days trade period. It accounted for 31.5% of all trades or 23 trades. The GBPJPY pair was next at 13.7% or 10 trades. This is over 50 percent less that the most traded pair.

What trades were most entered: Buys or sells?


Count per trade
65 | 57.52%
40 | 35.40%
8 | 7.08%
SELL
No_TRADES
BUY
Trade

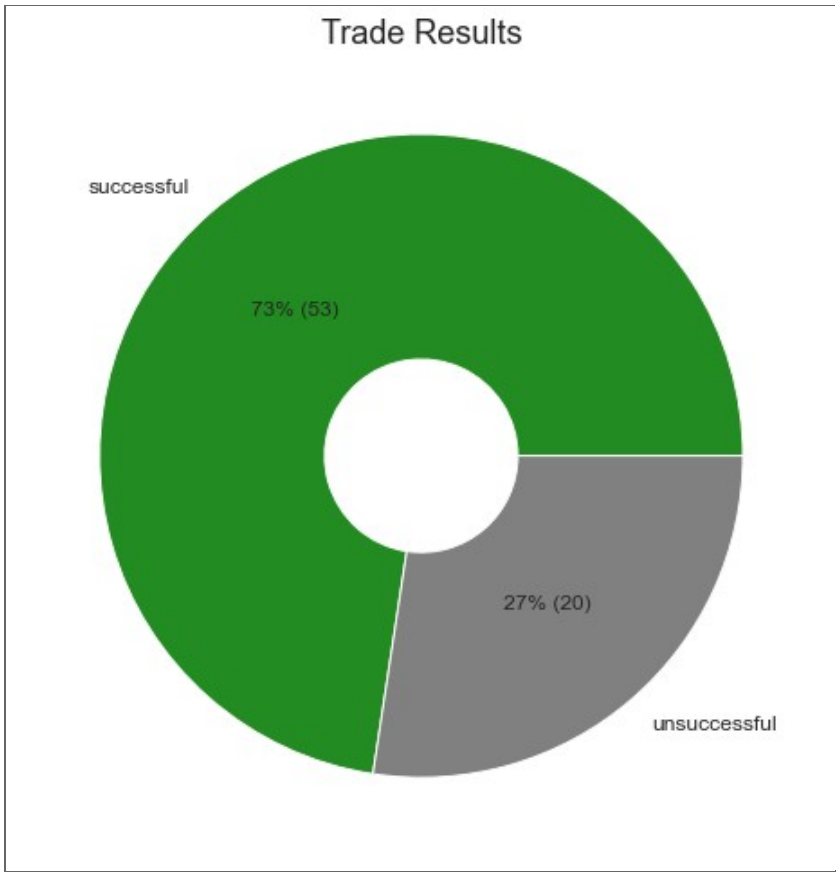
Over 57% of trades called were sell trades. About 35% of the time, trades were not called. Buy trades were called only 7% of the whole time.

What was the average trade length per day?


Average trade length per day
Days
25
20
15
10
5
0
2022-09-01
2022-09-15
2022-10-01
2022-10-15
2022-11-01
2022-11-15
2022-12-01
Date

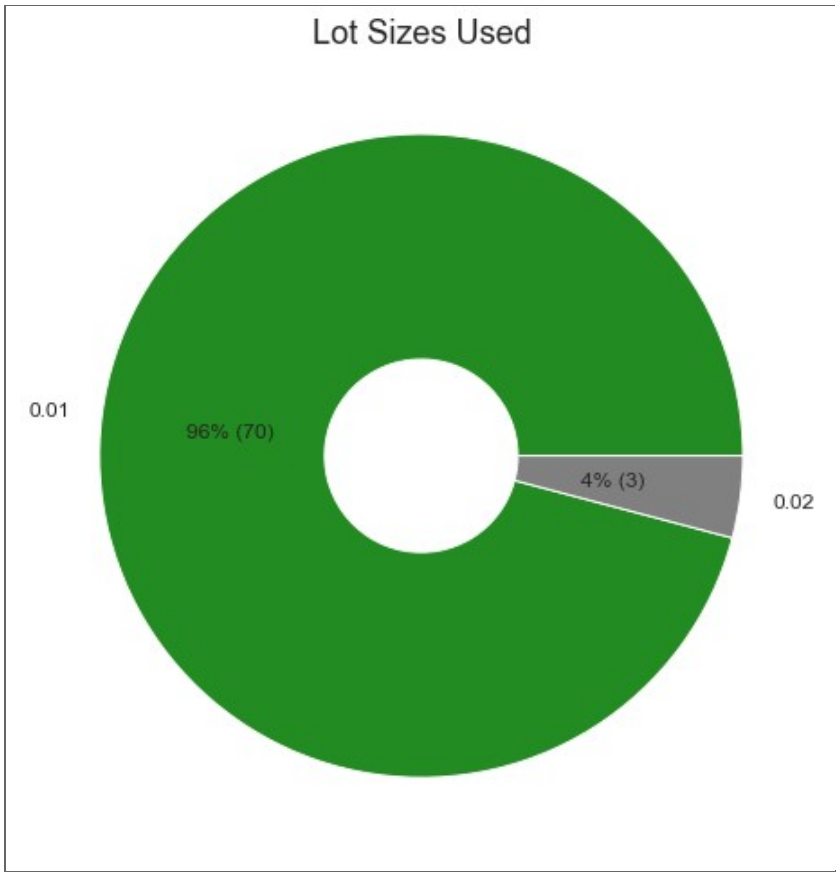
Generally, an average trade length of 2 days was observed during the 80 days trade period. Upon further analysis, i observed that although the 'in-a-trade' duration ranged between 0 and 5, two spikes showed two trades which were drawn out for about 25-30days.

What percentage of trades were successful?


Trade Results
successful
73% (53)
27% (20)
unsuccessful

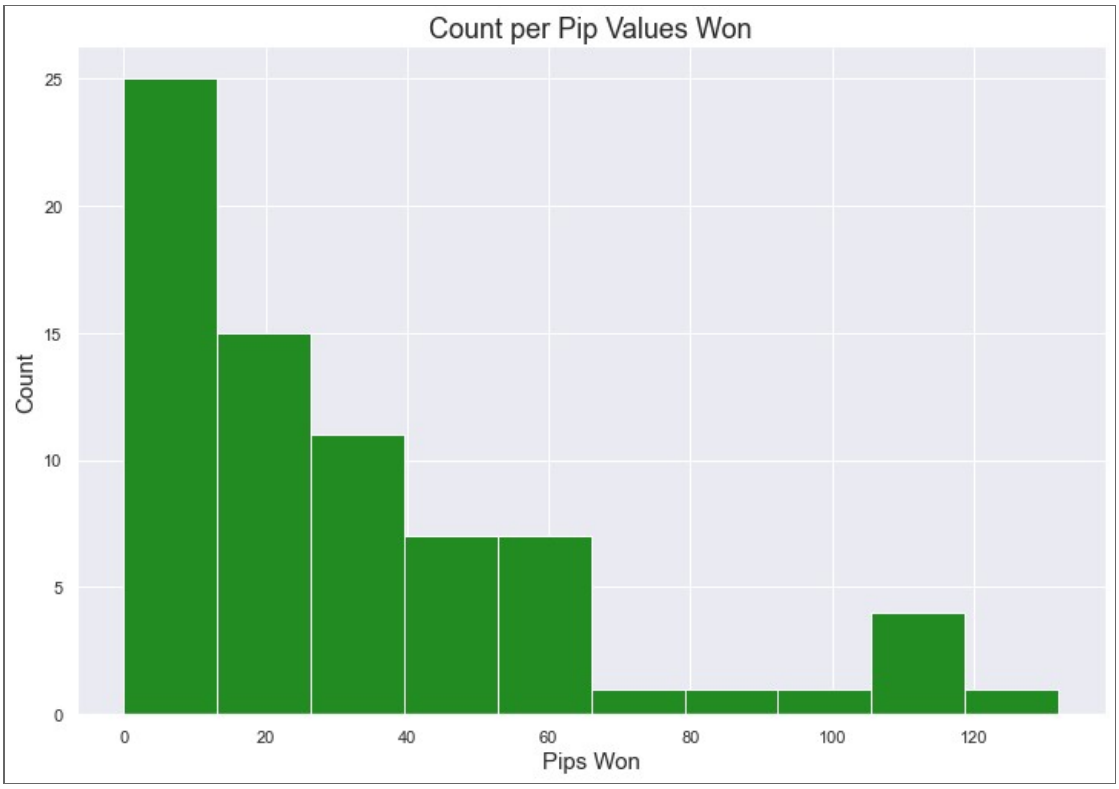
73% of trades called were successful, while 27% of trades were unsuccessful. This shows an accuracy of about 73% on closed trades.

What lot size was most used?


Lot Sizes Used
0.01
96% (70)
4% (3)
0.02

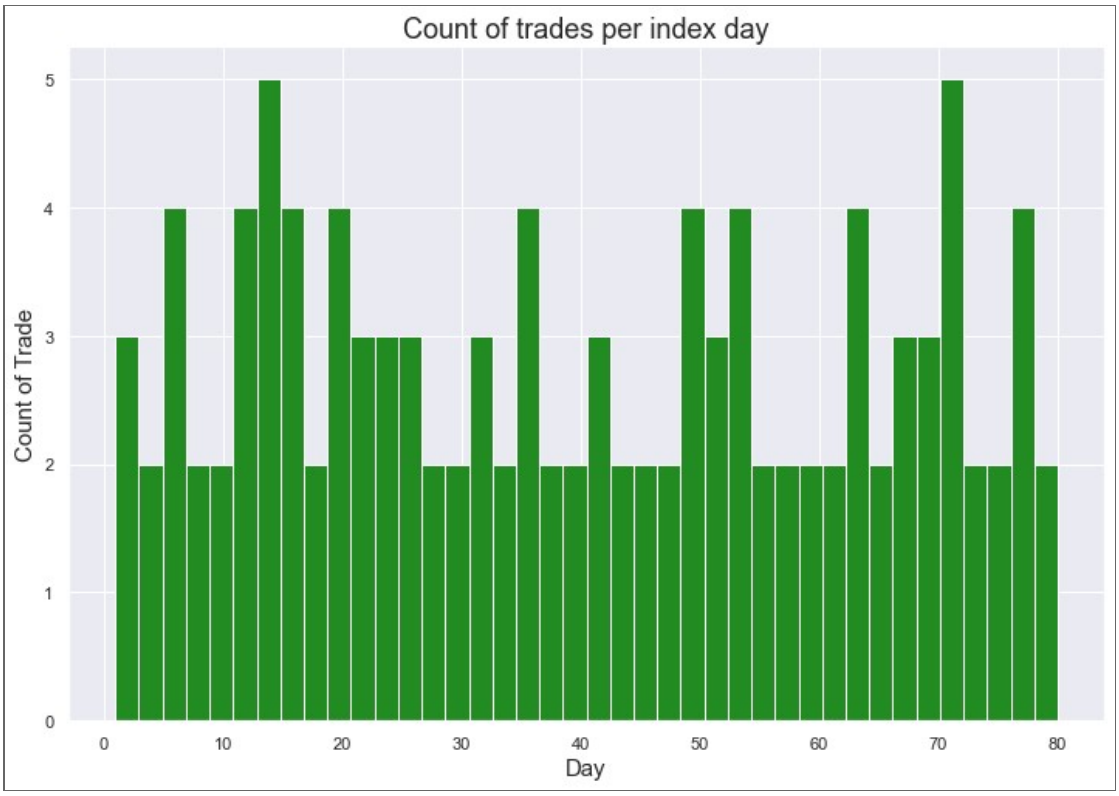
96% of the time, the 0.01 lot size was used. This was because the model account was 200 dollar account.

What distribution of pip value was observed ?


Count per Pip Values Won
Count
Pips Won
0
5
10
15
20
25
0
20
40
60
80
100
120

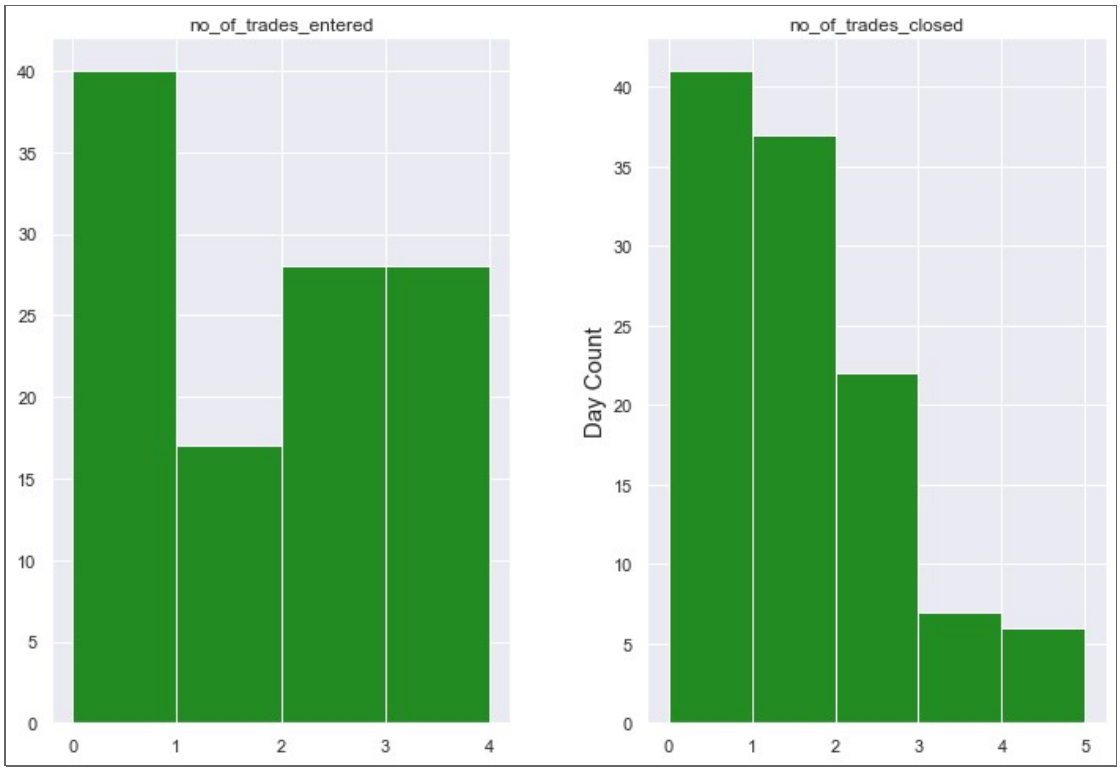
This histogram is right skewed, infering that more often than not, pip values of less than 70 were observed, compared to higher values above 70. A spike is also observed at the 110 pip value. This indicates a hiigher count at that level, compared to other larger values.

What number of trades were observed throughout the index days?


Count of trades per index day
Count of Trade
Day
0
1
2
3
4
5
0
10
20
30
40
50
60
70
80

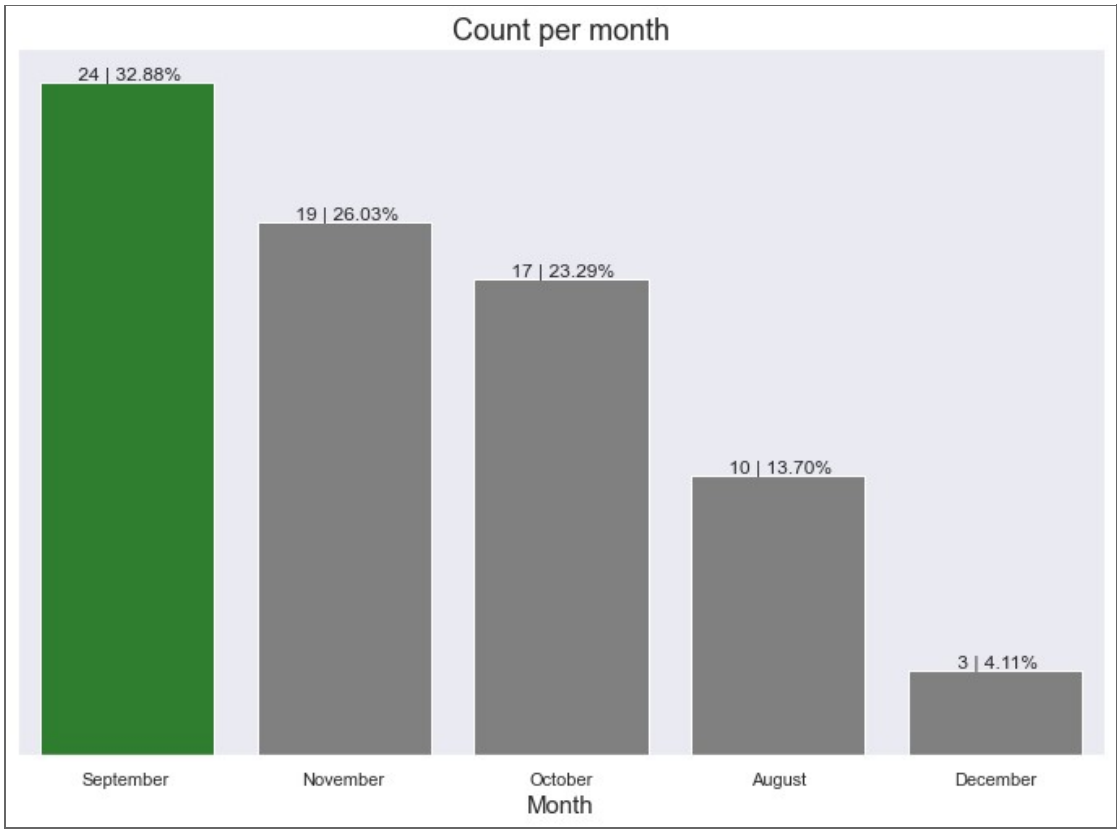
A multimodal histogram is observed. Ths shows the maximum trades entered n a day was 5. More frequent was the 4 trade count in a day. The 2 trades a day level also had a significant number of mode values.

Is there any similarity or difference between the number of trades entered and closed?


no_of_trades_entered
no_of_trades_closed
Day Count
0
5
10
15
20
25
30
35
40
0
1
2
3
4
5

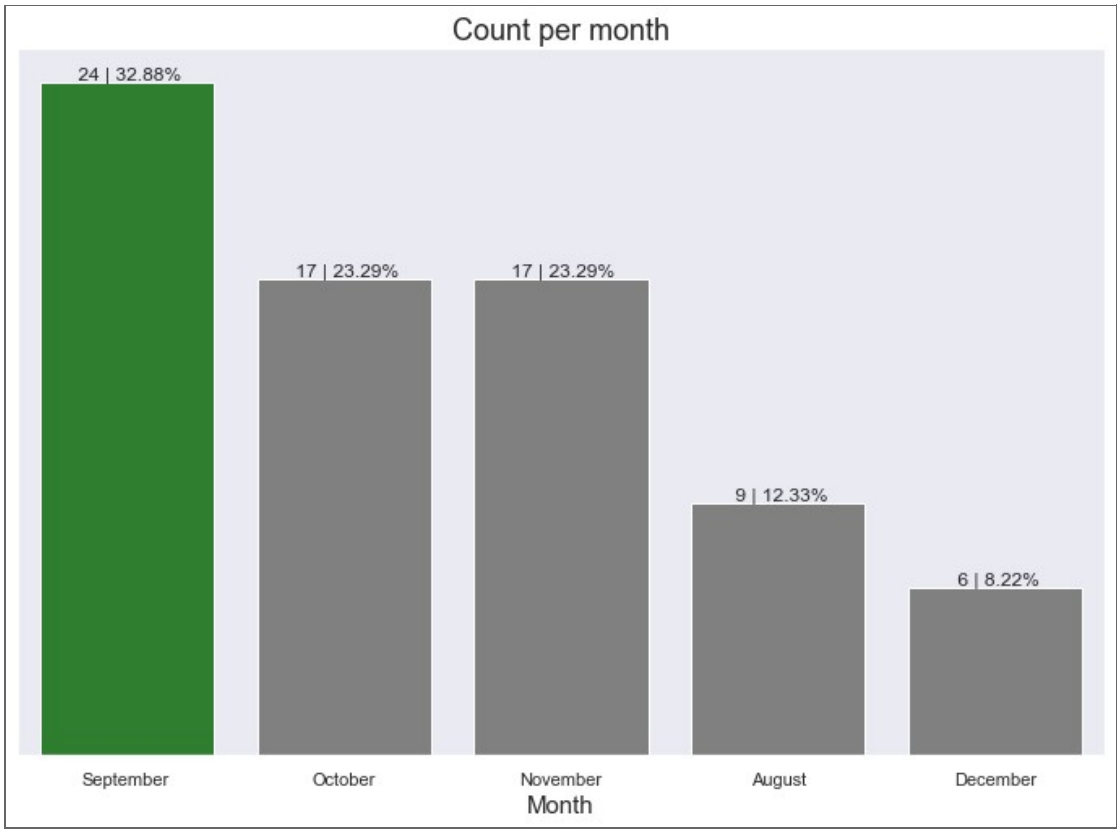
We can observe higher chances of opening 3 and 4 trades in a day, compared to closing above 3 trades in a day. A decline is observed when closing from 3 trades and above.

What month had the highest opened trades?


Count per month
24 | 32.88%
19 | 26.03%
17 | 23.29%
10 | 13.70%
3 | 4.11%
September
November
October
August
December
Month

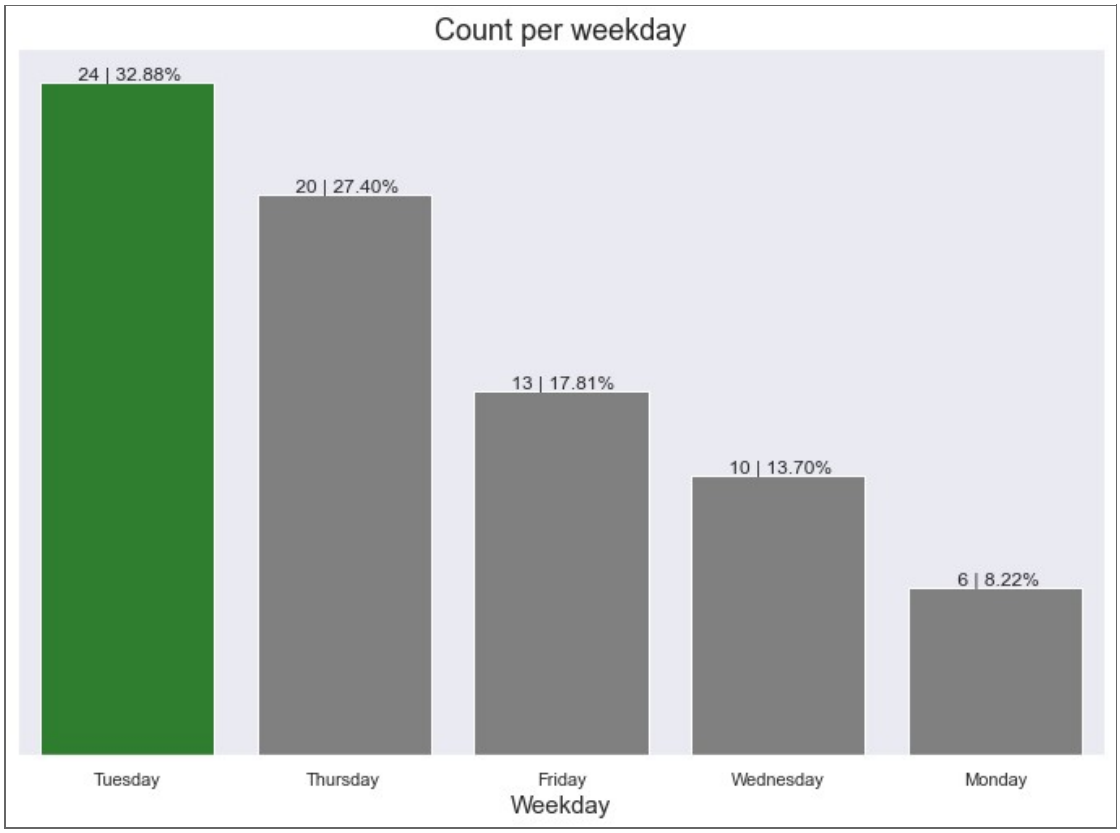
September recorded the highest number of opened trades

What month had the highest closed trades?

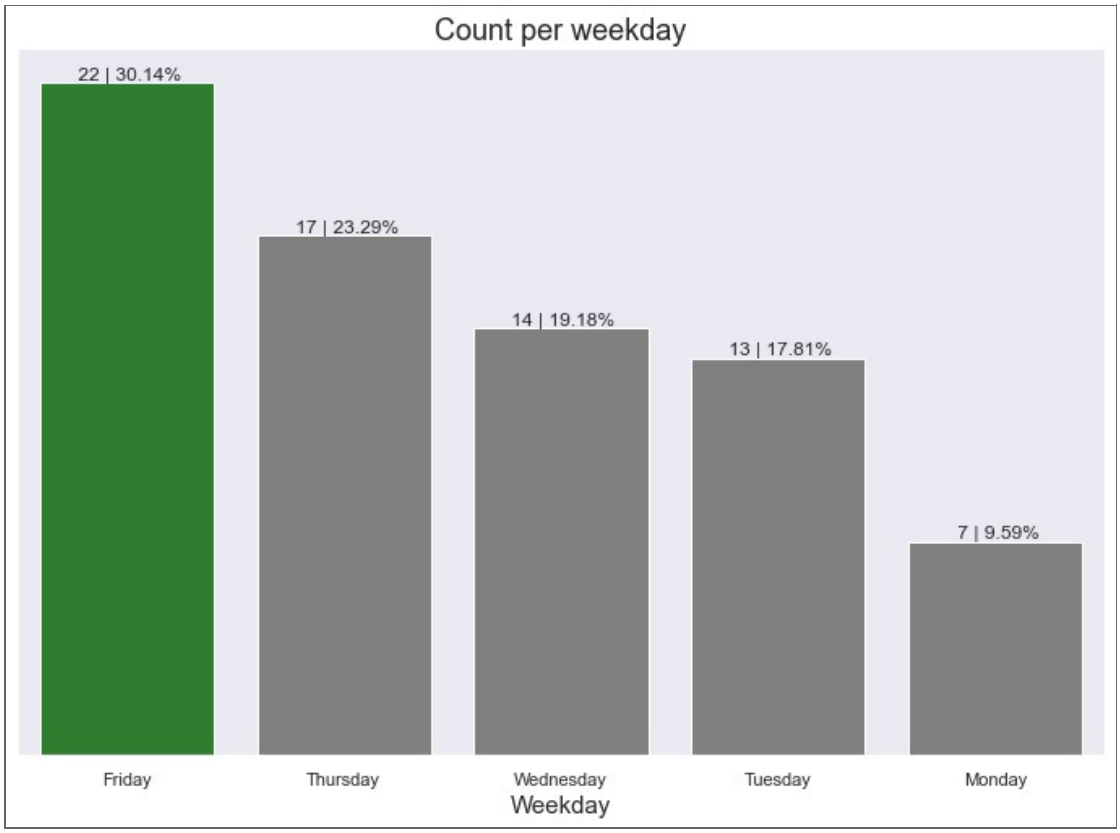

Count per month
24 | 32.88%
17 | 23.29%
17 | 23.29%
9 | 12.33%
6 | 8.22%
September
October
November
August
December
Month

As expected, most opened trades had an average trade length of 0-5 days. This is why september also recorded the highest number of closed trades as well.

What weekday had the highest trades?

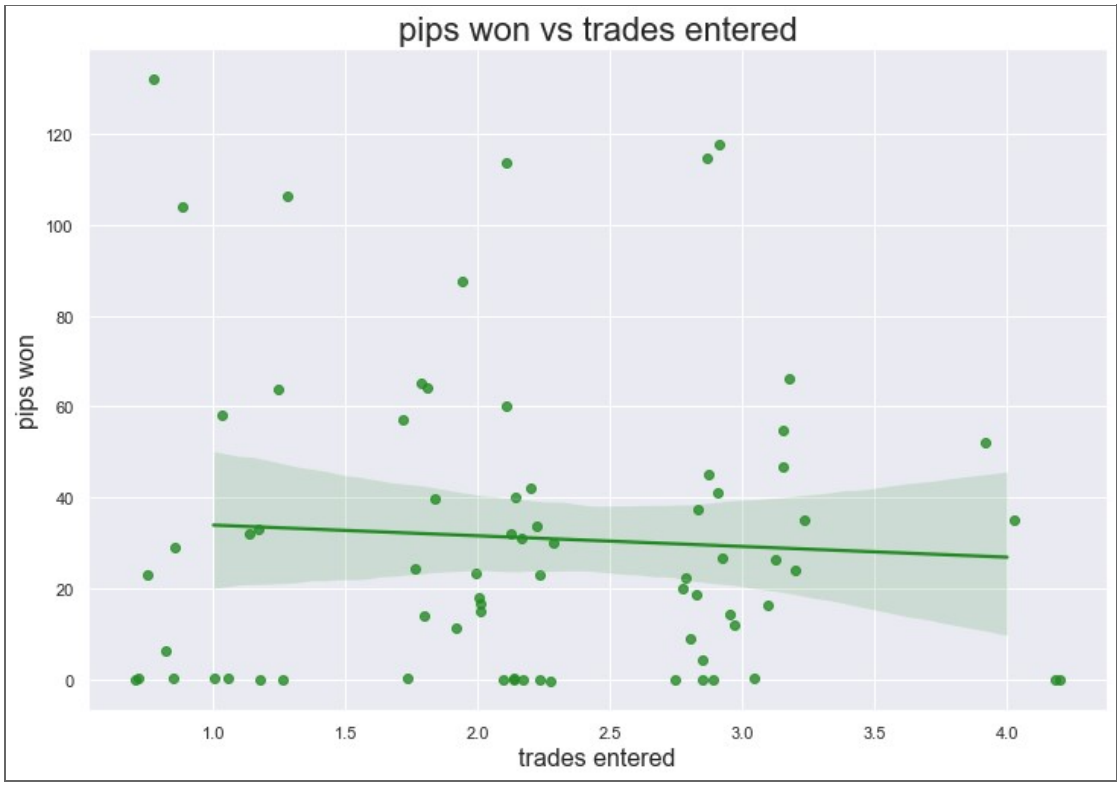

Count per weekday
24 | 32.88%
20 | 27.40%
13 | 17.81%
10 | 13.70%
6 | 8.22%
Tuesday
Thursday
Friday
Wednesday
Monday
Weekday

About 32% of all trades were opened on tuesday. This was the highest, compared to other weekdays. This is due to the fact that mondays were usually used to study the trends of the market for the week.


Count per weekday
22 | 30.14%
17 | 23.29%
14 | 19.18%
13 | 17.81%
7 | 9.59%
Friday
Thursday
Wednesday
Tuesday
Monday
Weekday

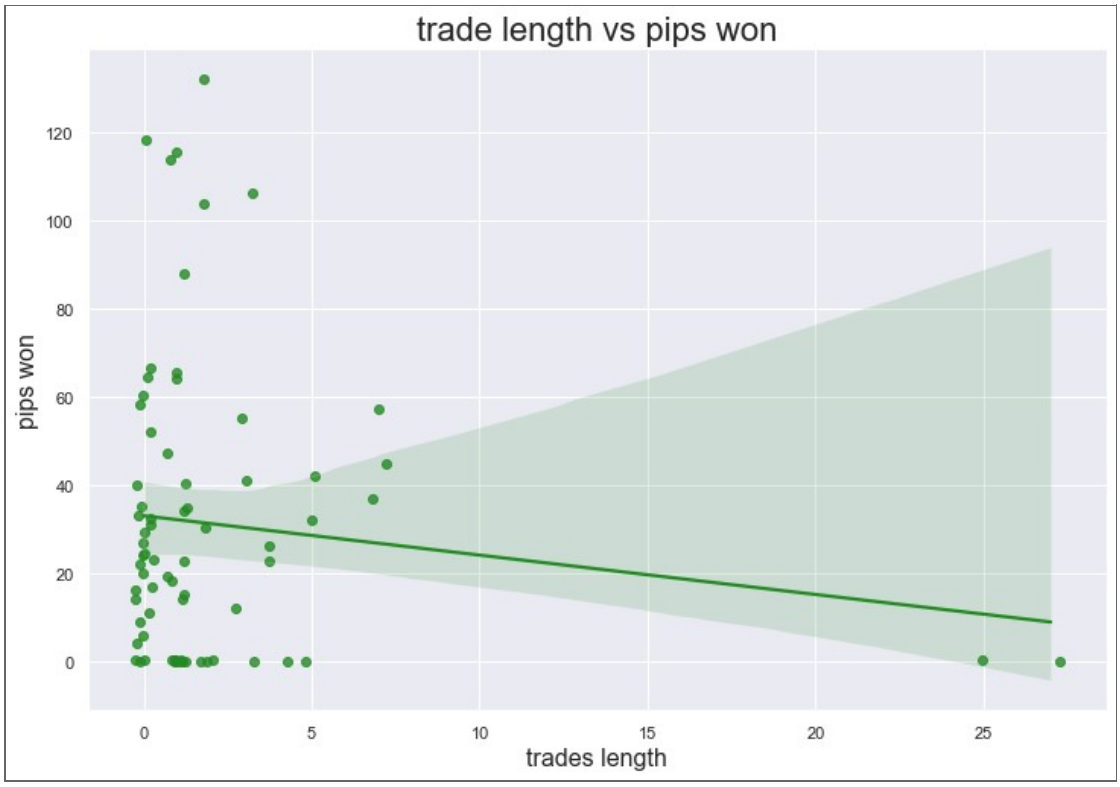
Most trades were closed on fridays, which marks the end of the trading week. There is no currency pair trading during the weekend. Trading usually resumes on sunday evening.

Is there any relationship between the number of pips won and the number of trades entered?


pips won vs trades entered
pips won
trades entered
0
20
40
60
80
100
120
1.0
1.5
2.0
2.5
3.0
3.5
4.0

No significant relationship was observed between the number of pips won and the number of trades entered

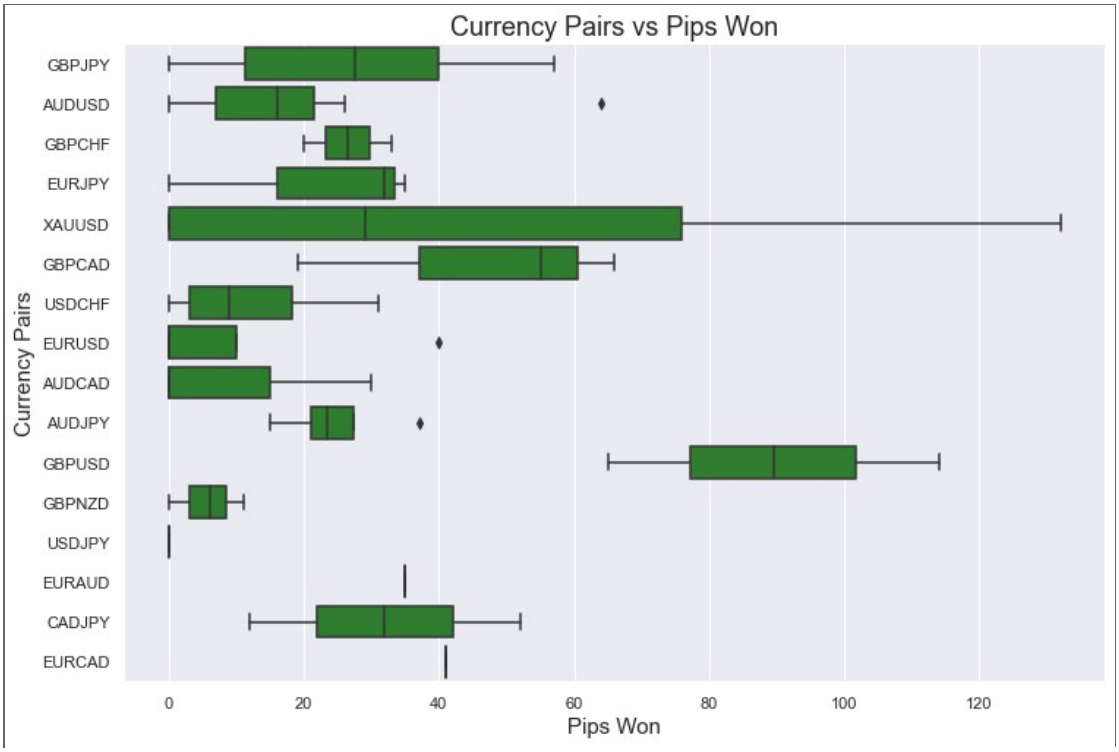
Is there any relationship between the trade length and the number of pips won?


trade length vs pips won
pips won
trades length
120
100
80
60
40
20
0
0
5
10
15
20
25

A negative correlation was observed between the trade length and the number of pips won. This means, the longer the trade length, the lower the number of pips to be won. Longer trade days often led to lower pips, and losses in some cases.

What currency pair gave the highest number of pips won?

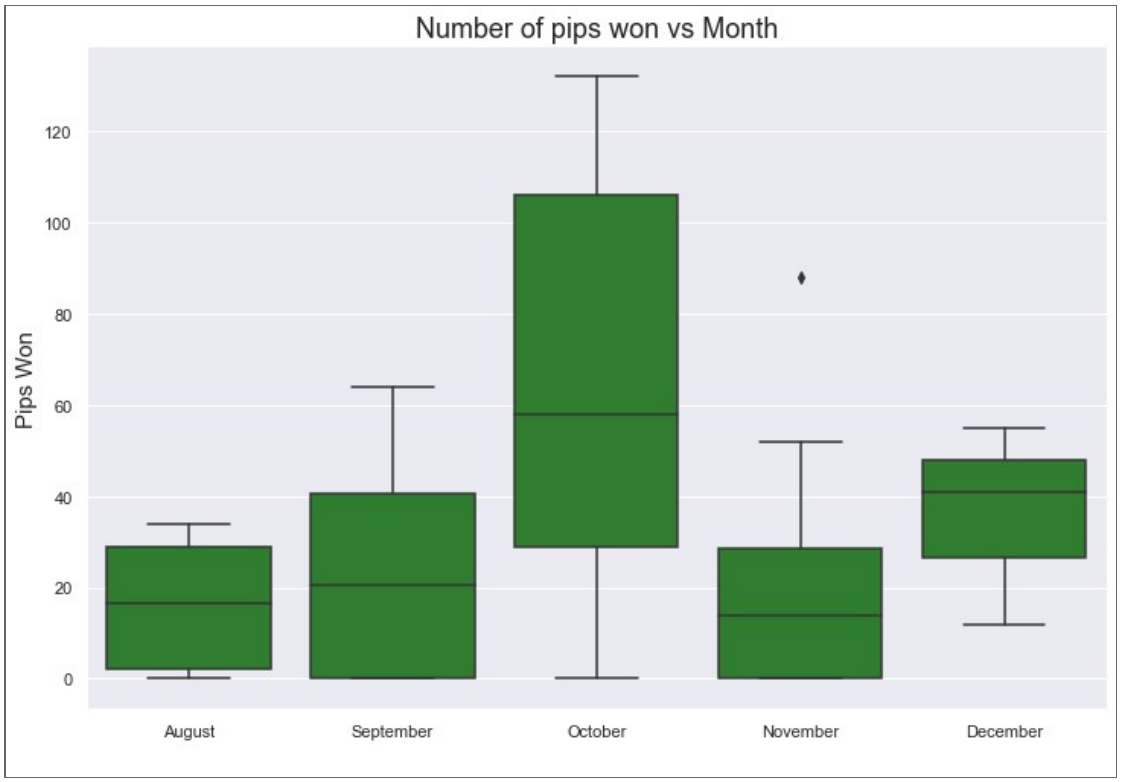
```
Text(0.5, 0, 'Pips Won')
```



XAUUSD won the highest number of pips overall, however, the top 75% of all GBPUSD trades gave higher pips than the lower 75% of all XAUUSD trades. The median GBPUSD trade is higher than the median XAUUSD trade, but the top 25% of XAUUSD trades puts it in the lead. USDJPY recorded the least number of pips won overall.

What month recorded the highest number of pips won?

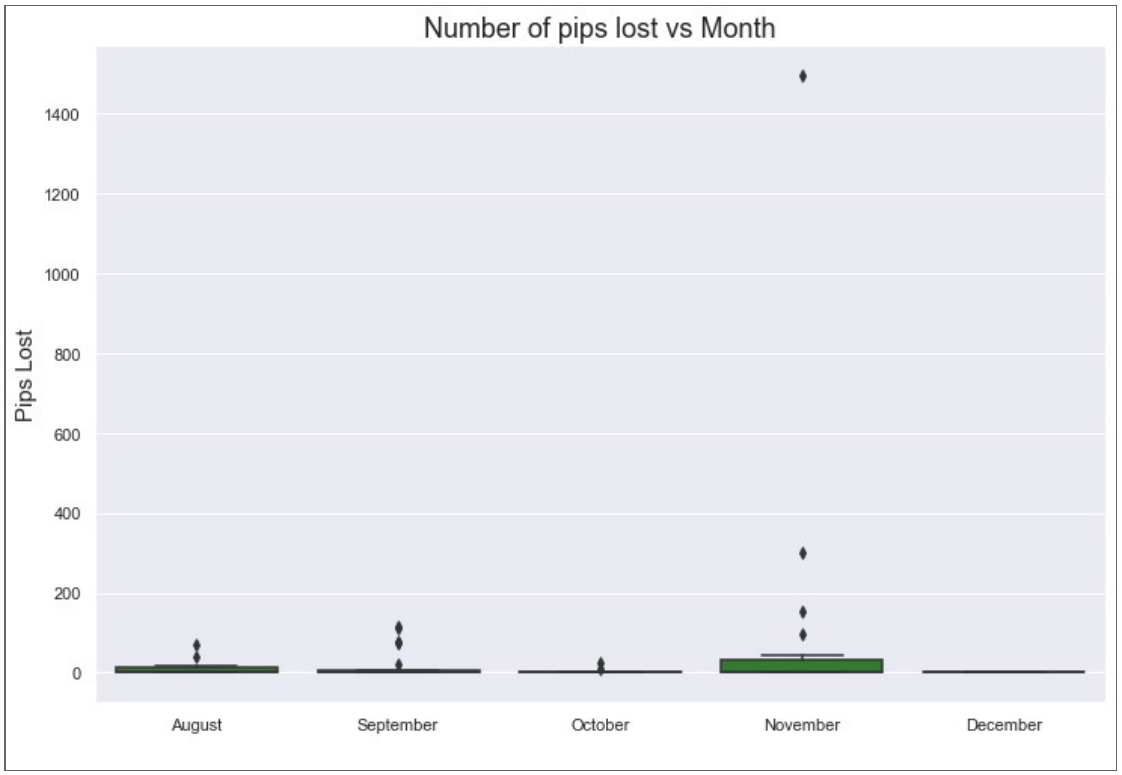
```
Text(0.5, 0, ' ')
```


Number of pips won vs Month
Pips Won
120
100
80
60
40
20
0
August
September
October
November
December

October recorded the highest number of pips won. **2271.2** pips were won throughout the 80 day trade period

What month recorded the highest number of pips lost?

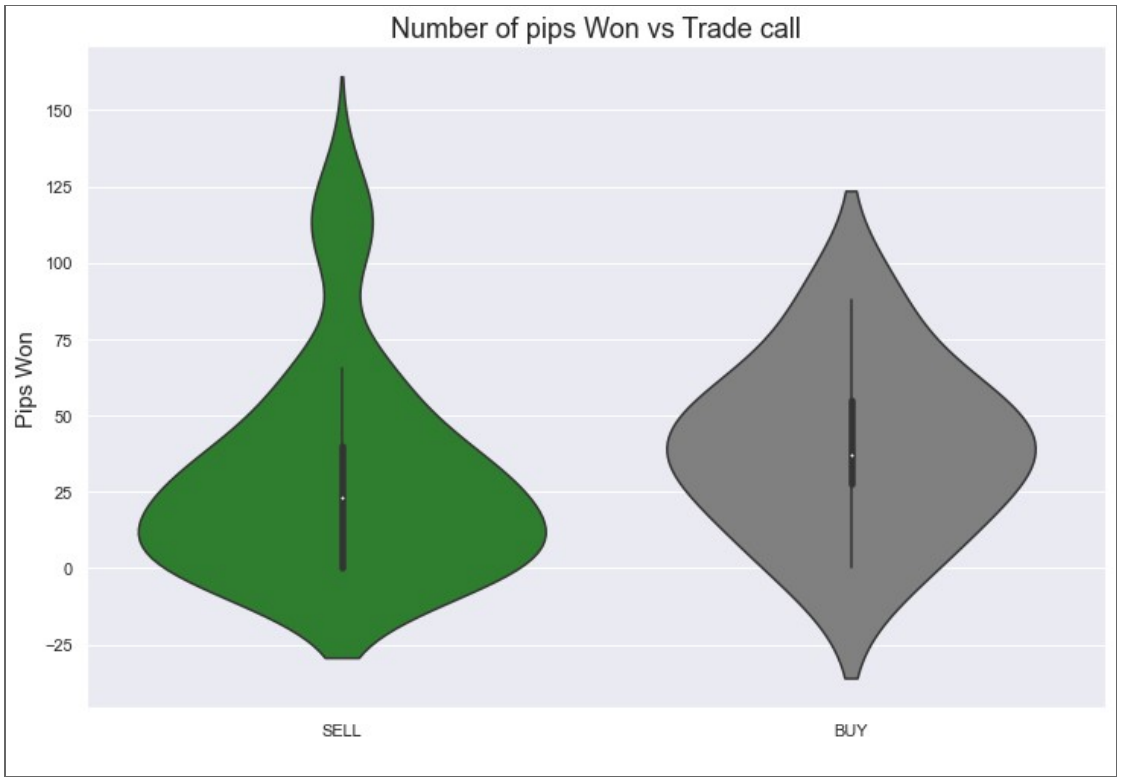
```
Text(0.5, 0, ' ')
```


Number of pips lost vs Month
Pips Lost
1400
1200
1000
800
600
400
200
0
August
September
October
November
December

November recorded the highest number of pips lost. **2702** pips were lost throughout the 80 day trade period.

What trade call (Buy or Sell) gave better pip returns?

```
Text(0.5, 0, ' ')
```


Number of pips Won vs Trade call
Pips Won
150
125
100
75
50
25
0
−25
SELL
BUY

The sell call is multimodal, meaning the data distribution has more than one data cluster, compared to the buy call which is unimodal. The sell call has values with higher pips won compared to the buy call but this may be due to the fact that sell calls were significantly more than buy calls. However, i noticed that the median buy call was higher than the median sell call. This means that relatively, half of pips won from the buy call had higher values than half of pips won from the sell call.

What results were observed within the buy and sell trade calls?

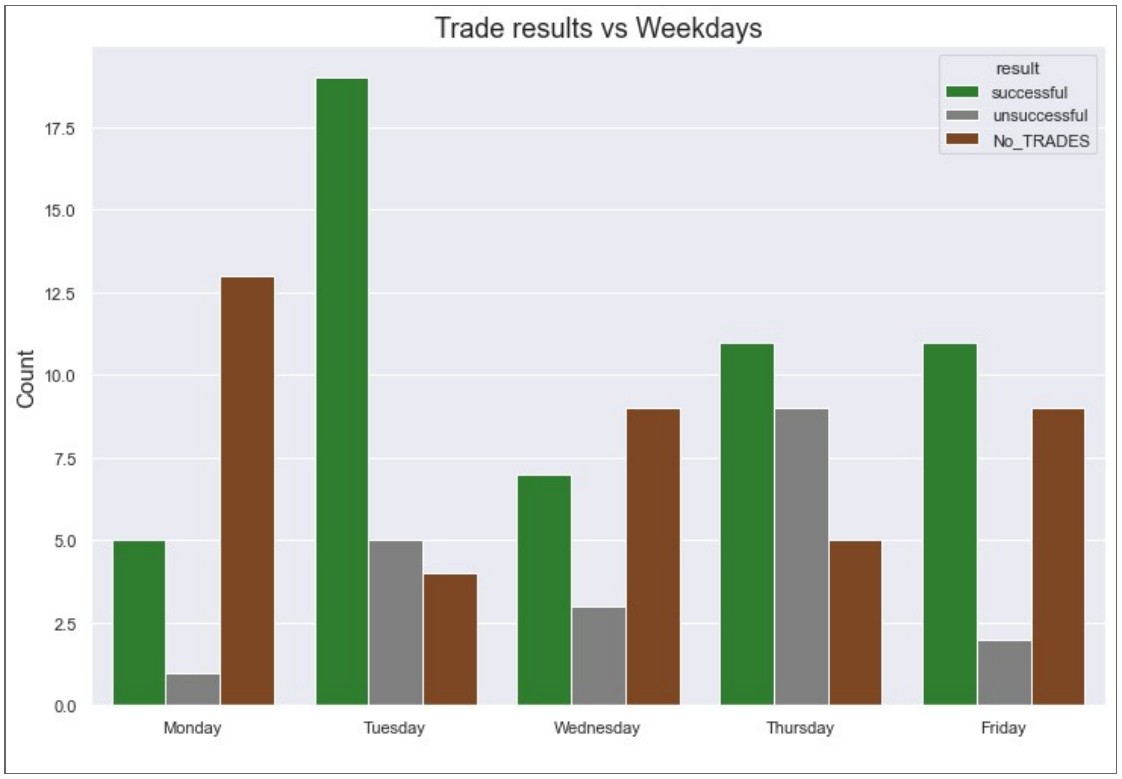
```
result  successful  unsuccessful
Trade
BUY              7             1
SELL            46            19
```

```
Text(0.5, 0, ' ')
```

For both buy and sell trade calls, a higher number of successful trades were observed, compared to the unsuccessful ones.

What is the distribution of trade results, across weekdays?

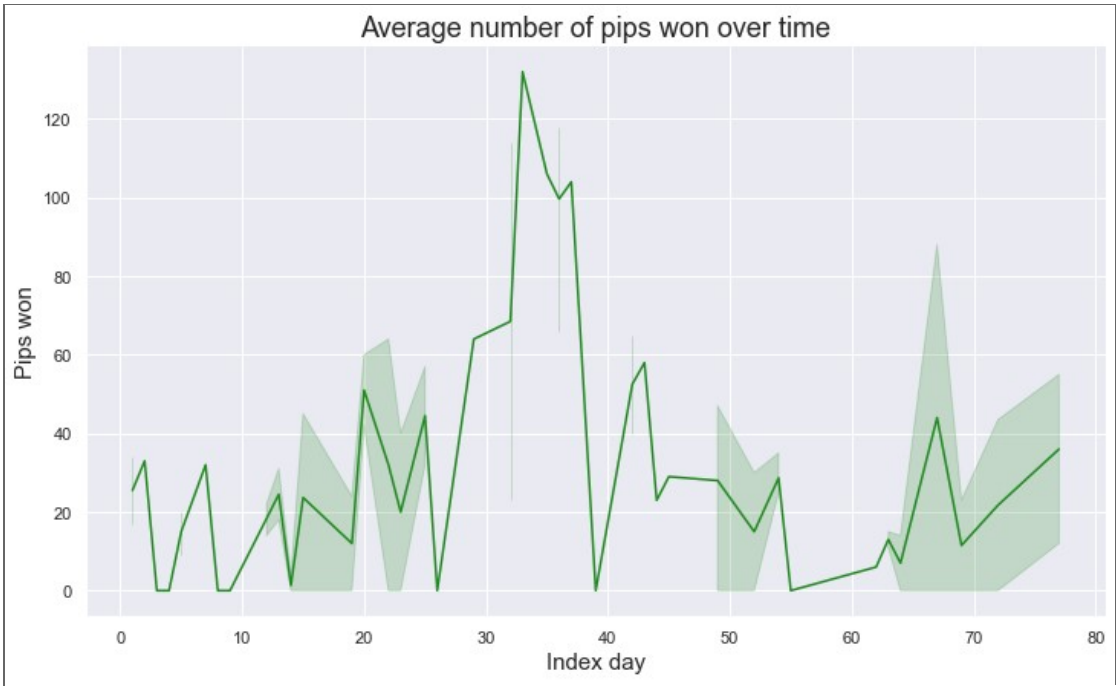
```
Text(0.5, 0, ' ')
```


Trade results vs Weekdays
result
successful
unsuccessful
No_TRADES
Count
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
Monday
Tuesday
Wednesday
Thursday
Friday

Across all weekdays, except on mondays and wednesdays, successful trades were higher than unsuccessful ones. On mondays and wednesdays, no trades were higher than both the successful and unsuccessful. On mondays, the sum of both the successful and unsuccessful bars did not get to the no trades bar. This confirms that less trades were placed on mondays

What trends can be observed in relation to pips won over the 80 day trade period?

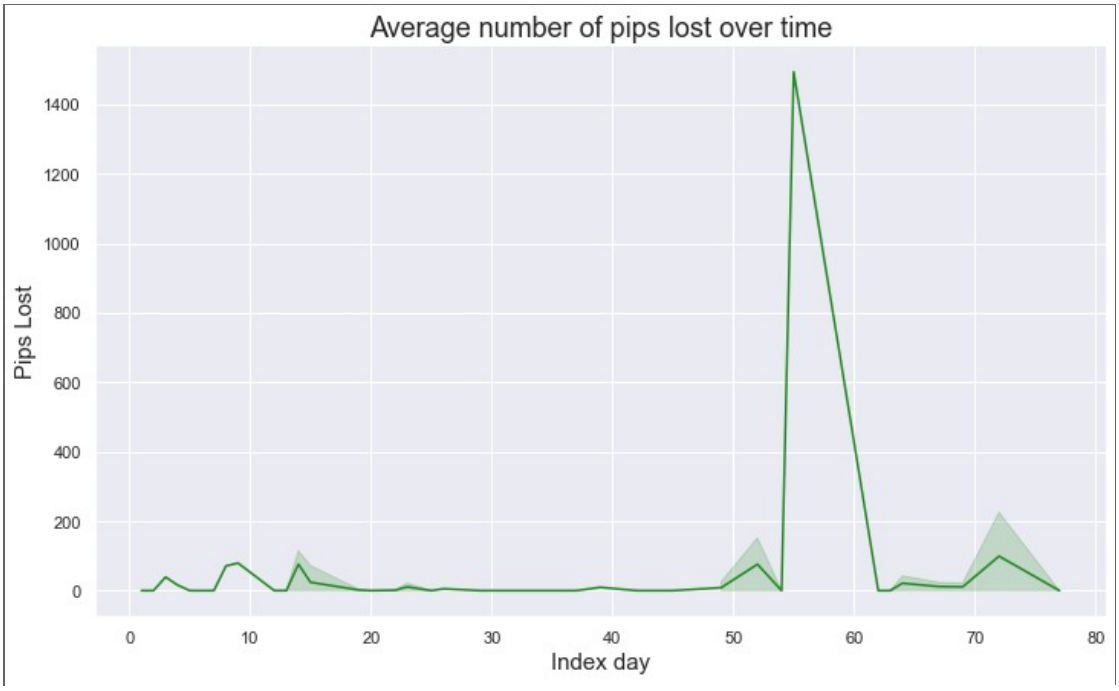
```
Text(0.5, 8.959999999999994, 'Index day')
```



There were several wins but the highest spike was observed between day 30 and day 40. This period corresponds with the last few days of september and continues till mid-october.

What trends can be observed in relation to pips lost over the 80 day trade period?

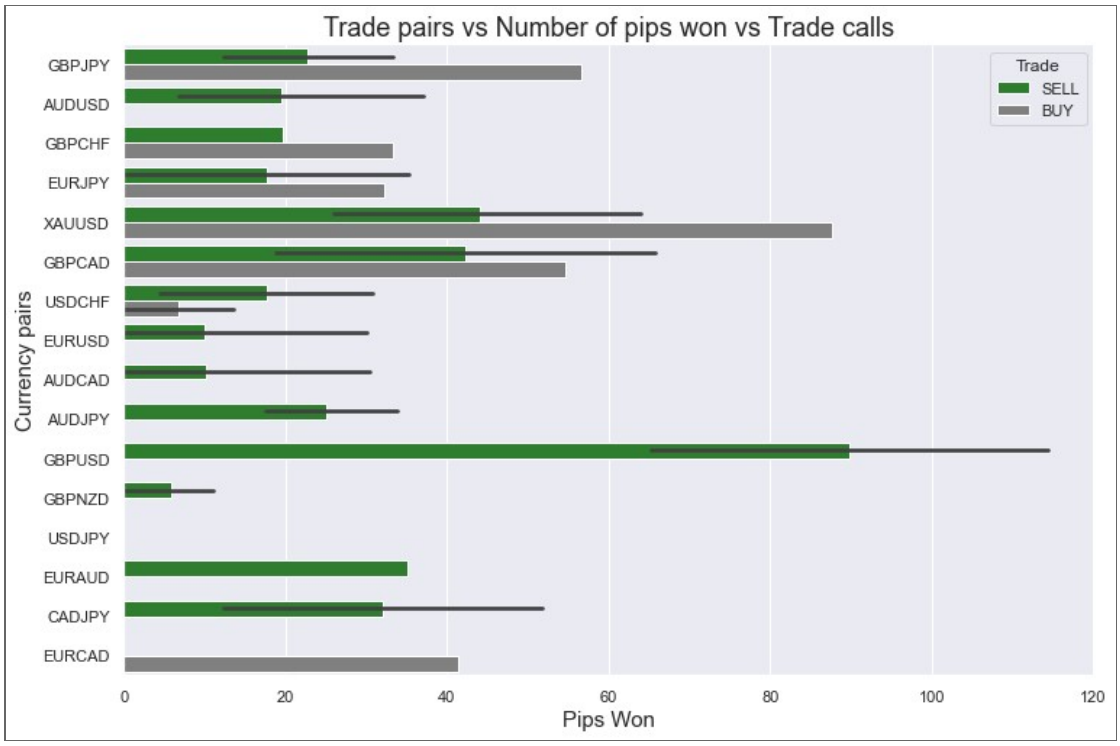
```
Text(0.5, 8.959999999999994, 'Index day')
```



One significant spike in pip loss was observed, however, the loss was of great magnitude. This was due to the unexpected, significant dollar drop in the market that occurred in the 2022 year end.

What relationship can be observed between trade pairs, number of pips won and trade calls?

```
Text(0.5, 0, 'Pips Won')
```



Interestingly, XAUUSD has more buy pips won than sells. GBPUSD sell pips won are significantly higher than the sell pips of all other currency pairs' EURCAD pips won were only generated from buy trade calls only, while EURUSD, AUDCAD, AUDJPY, GBPUSD, GBPNZD, EURAUD AND CADJPY generated pips from sell trade calls only.

Conclusions

I analysed the prosper loan dataset and discovered the following insights:

- The XAUUSD currency pair was most traded during the 80-days trade period. It accounted for 31.5% of all trades or 23 trades. The GBPJPY pair was next at 13.7% or 10 trades. This is over 50 percent less that the most traded pair.
- Over 57% of trades called were sell trades. About 35% of the time, trades were not called. Buy trades were called only 7% of the whole time.
- Generally, an average trade length of 2 days was observed during the 80 days trade period. Upon further analysis, i observed that although the 'in-a-trade' duration ranged between 0 and 5, two spikes showed two trades which were drawn out for about 25-30days.
- 73% of trades called were successful, while 27% of trades were unsuccessful. This shows an accuracy of about 73% on closed trades.
- 96% of the time, the 0.01 lot size was used. This was because the model account was 200 dollar account.
- This histogram is right skewed, infering that more often than not, pip values of less than 70 were observed, compared to higher values above 70. A spike is also observed at the 110 pip value. This indicates a hiigher count at that level, compared to other larger values.

- A multimodal histogram is observed. Ths shows the maximum trades entered n a day was 5. More frequent was the 4 trade count in a day. The 2 trades a day level also had a significant number of mode values.
- I observed higher chances of opening 3 and 4 trades in a day, compared to closing above 3 trades in a day. A decline is observed when closing from 3 trades and above.
- September recorded the highest number of opened and closed trades. Most opened trades had an average trade length of 0-5 days. This is why september also recorded the highest number of closed trades as well.
- About 32% of all trades were opened on tuesday. This was the highest, compared to other weekdays. This is due to the fact that mondays were usually used to study the trends of the market for the week.
- Most trades were closed on fridays, which marks the end of the trading week. There is no currency pair trading during the weekend. Trading usually resumes on sunday evening.
- No significant relationship was observed between the number of pips won and the number of trades entered

- A negative correlation was observed between the trade length and the number of pips won. This means, the longer the trade length, the lower the number of pips to be won. Longer trade days often led to lower pips, and losses in some cases.
- XAUUSD won the highest number of pips overall, however, the top 75% of all GBPUSD trades gave higher pips than the lower 75% of all XAUUSD trades. The median GBPUSD trade is higher than the median XAUUSD trade, but the top 25% of XAUUSD trades puts it in the lead. USDJPY recorded the least number of pips won overall.
- October recorded the highest number of pips won. 2271.2 pips were won throughout the 80 day trade period
- November recorded the highest number of pips lost. 2702 pips were lost throughout the 80 day trade period.
- The sell call is multimodal, meaning the data distribution has more than one data cluster, compared to the buy call which is unimodal. The sell call has values with higher pips won compared to the buy call but this may be due to the fact that sell calls were significantly more than buy calls. However, i noticed that the median buy call was higher than the median sell call. This means that relatively, half of pips won from the buy call had higher values than half of pips won from the sell call.
- For both buy and sell trade calls, a higher number of successful trades were observed,

compared to the unsuccessful ones.

- Across all weekdays, except on mondays and wednesdays, successful trades were higher than unsuccessful ones. On mondays and wednesdays, no trades were higher than both the successful and unsuccessful. On mondays, the sum of both the successful and unsuccessful bars did not get to the no trades bar. This confirms that less trades were placed on mondays
- There were several wins but the highest spike was observed between day 30 and day 40. This period corresponds with the last few days of september and continues till mid-october.
- One significant spike in pip loss was observed, however, the loss was of great magnitude. This was due to the unexpected, significant dollar drop in the market that occurred in the 2022 year end.
- Interestingly, XAUUSD has more buy pips won than sells. GBPUSD sell pips won are significantly higher than the sell pips of all other currency pairs' EURCAD pips won were only generated from buy trade calls only, while EURUSD, AUDCAD, AUDJPY, GBPUSD, GBPNZD, EURAUD AND CADJPY generated pips from sell trade calls only.