ChatGPT 자동 ~

stats_b0.csv

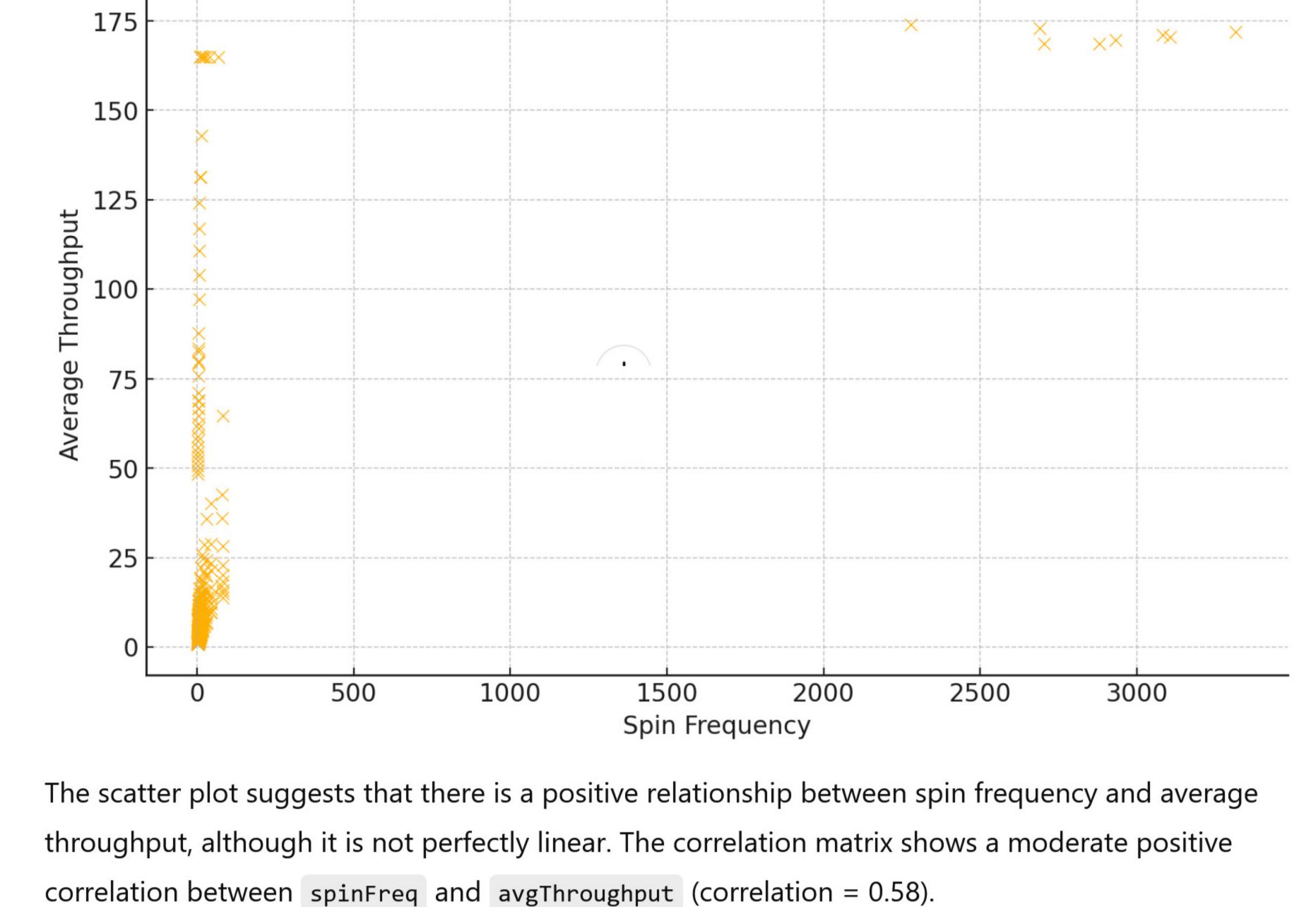
Evaluate this dataset and check if there is some relationship between throughput and spin frequency (including relationship only in some subset)

\$ The dataset contains 6 columns, with the following relevant ones:

- lossRate: Packet loss rate.
- delay : Network delay.
- spinFreq: Spin frequency. avgThroughput : Average throughput.
- numLosses: Number of packet losses. There is an extra column (Unnamed: 1) that contains no data and will be excluded from further
- analysis.

subsets of the data (e.g., based on lossRate or delay). [>-] Scatter Plot: Spin Frequency vs Average Throughput

I'll now proceed to check for relationships between spinFreq and avgThroughput, possibly within



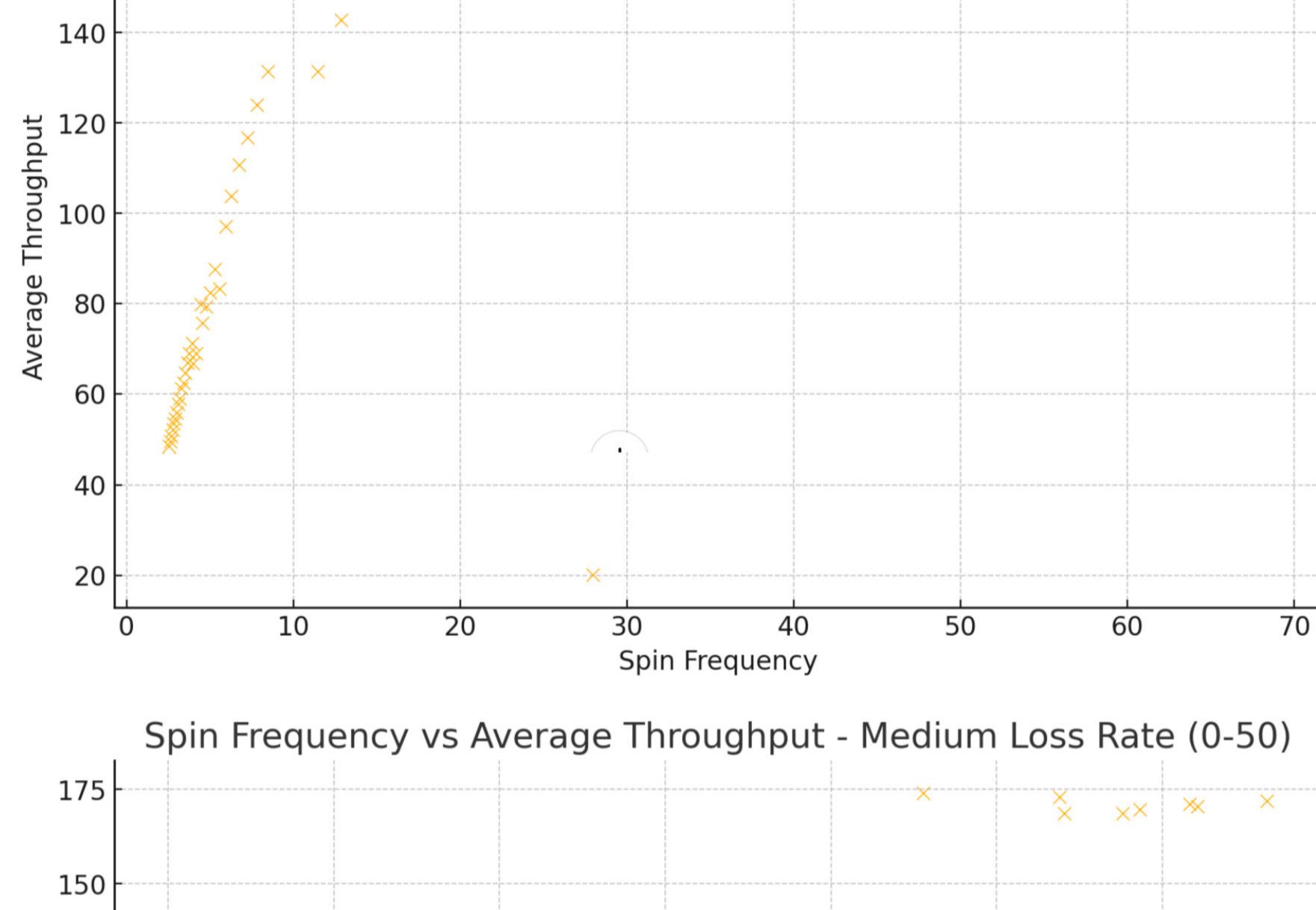
Other notable relationships: avgThroughput is negatively correlated with lossRate (-0.39) and delay (-0.32).

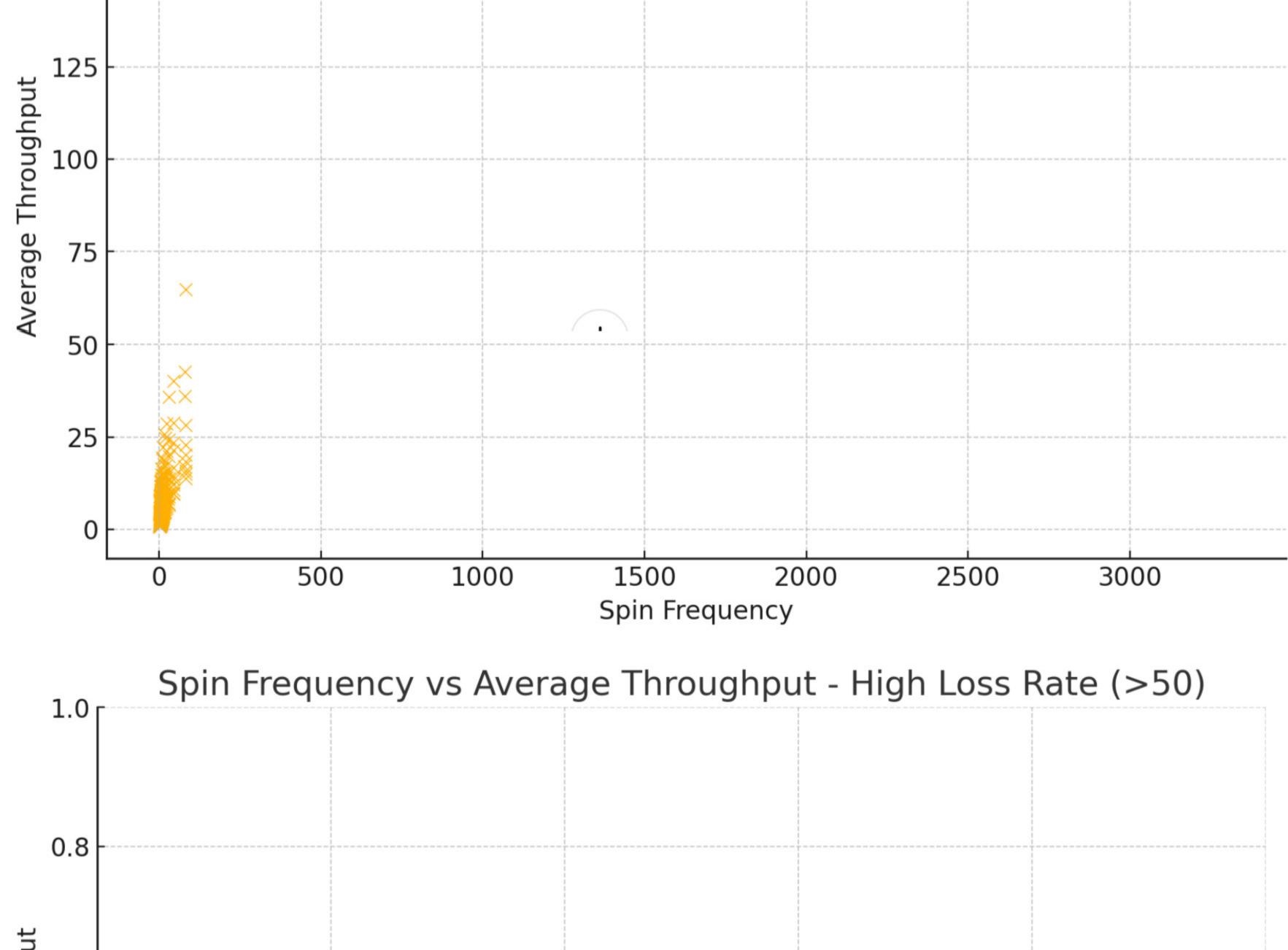
numLosses is highly correlated with los, te (0.97).

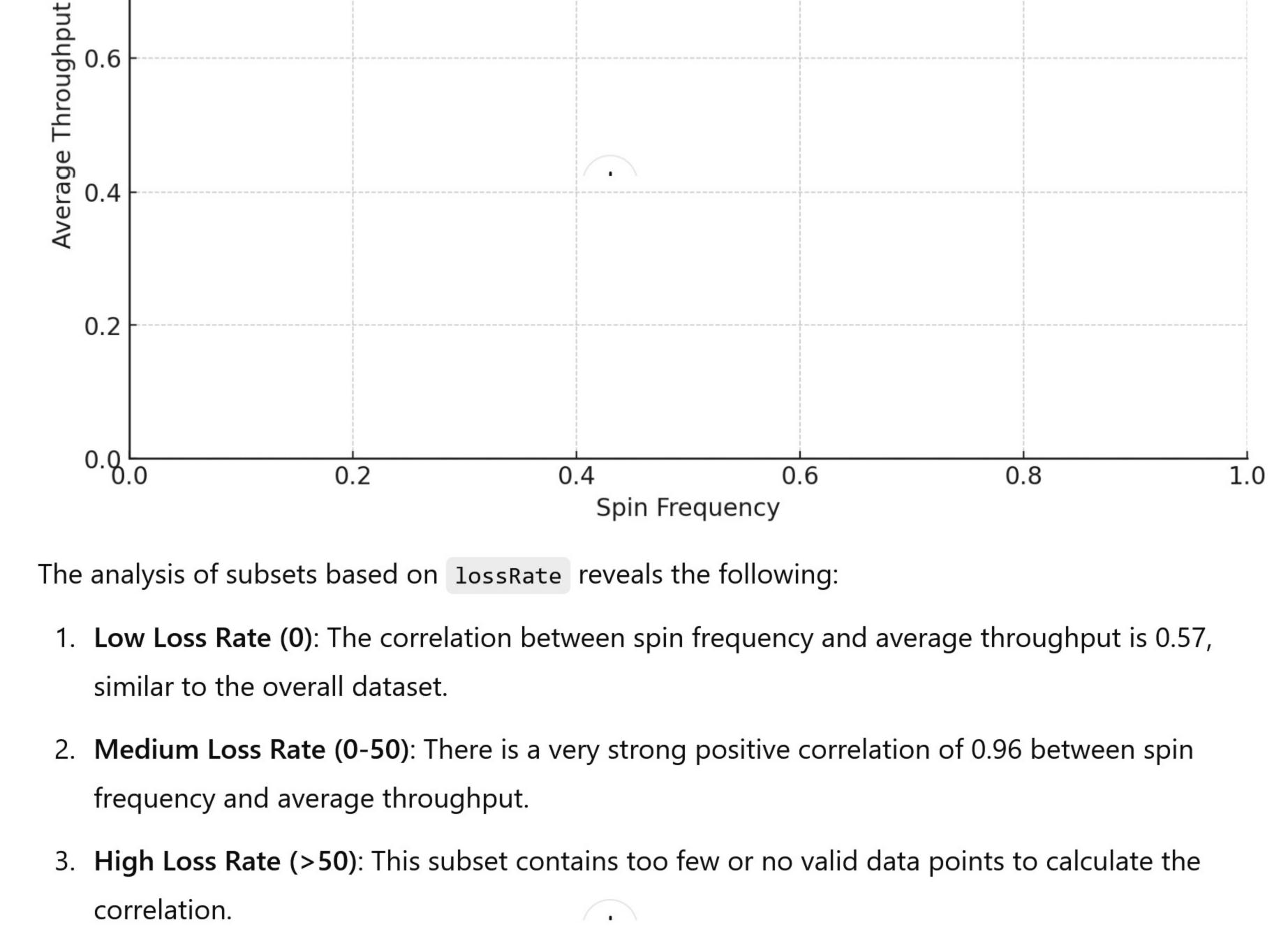
- Now, I will further investigate subsets of the data (e.g., based on different ranges of lossRate or
- delay) to see if there are stronger relationships in specific conditions. [>-]

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Spin Frequency vs Average Throughput - Low Loss Rate (0)







of moderate packet loss, spin frequency has a much stronger influence on throughput. [>-]

\$

150

125

100

75

50

25

Average Throughput

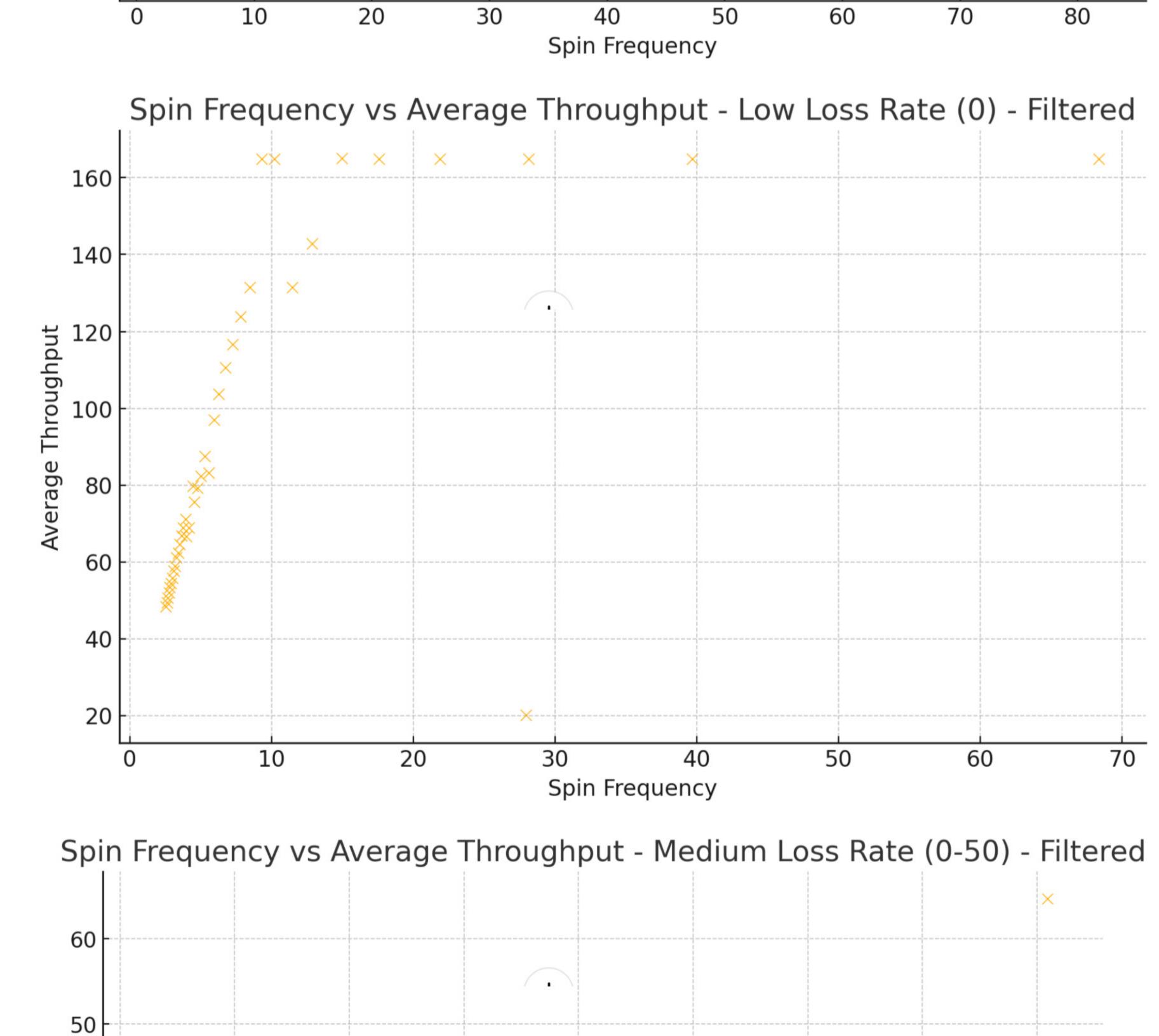
it

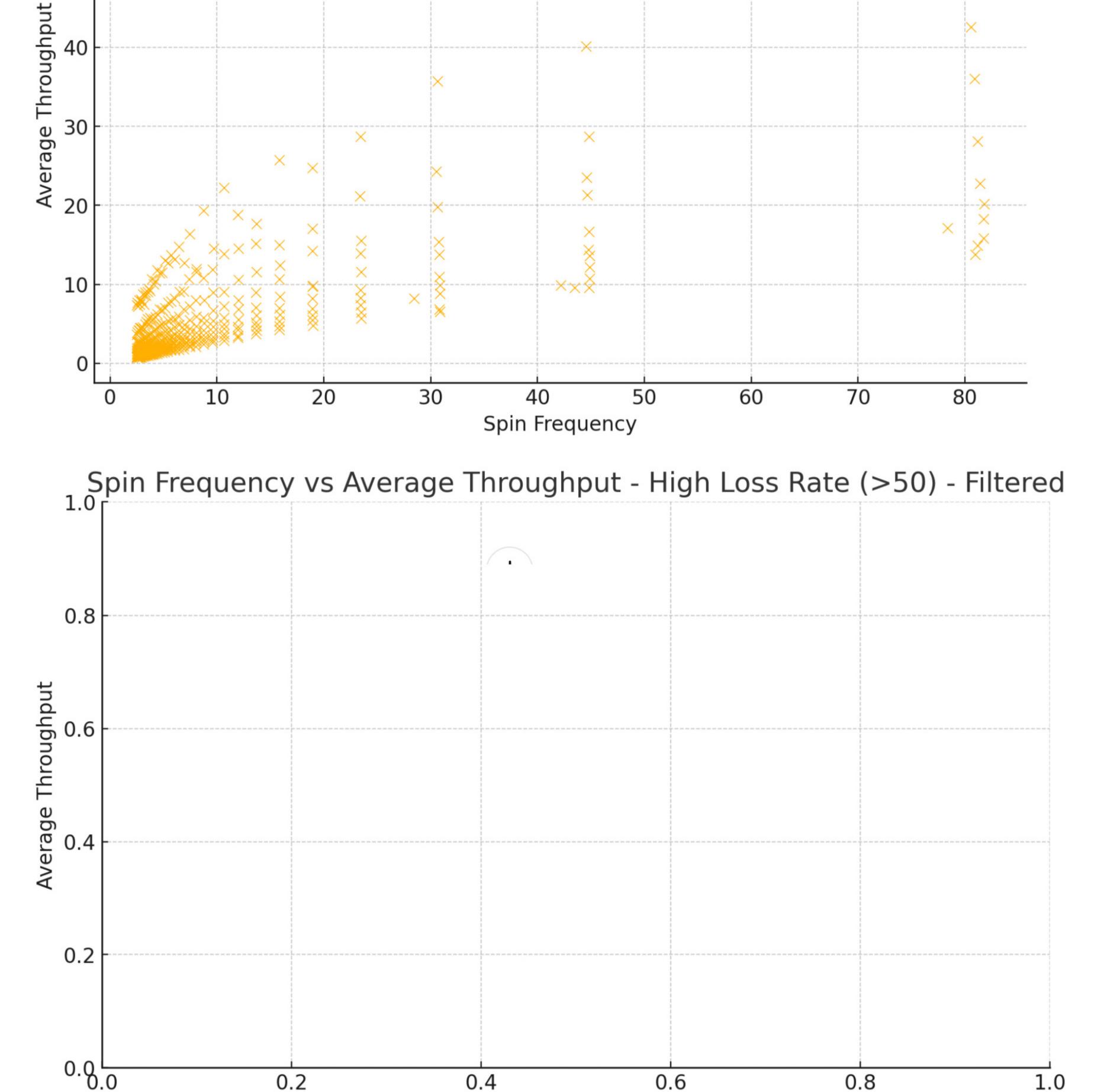
The strongest relationship is observed in the medium loss rate subset, suggesting that in conditions

Spin Frequency vs Average Throughput (SpinFreq <= 1000)

X

Exclude data where spin frequency is bigger than 1000 and re-analyze





After excluding data where the spin frequency is greater than 1000, the re-analysis shows the following: 1. Overall Correlation:

0.2

• The correlation between spinFreq and avgThroughput drops significantly to 0.21, indicating a much weaker relationship after filtering.

0.4

0.6

Spin Frequency

0.8

1.0

- There is a strong negative correlation between spinFreq and delay (-0.65), meaning higher spin frequencies are associated with lower delays. 2. Subset Analysis:
- Low Loss Rate (0): The correlation between spinFreq and avgThroughput remains 0.57, consistent with the previous analysis.

relationship. • **High Loss Rate (>50)**: No valid data points to analyze this subset.

The exclusion of high spin frequencies reduces the overall impact of spin frequency on throughput,

• Medium Loss Rate (0-50): The correlation slightly decreases to 0.71, still indicating a strong

but in moderate loss conditions, the relationship remains strong. [>-] 今日日日日