Name: Drij Vaghasia

Email: [vaghasia46@gmail.com](mailto:vaghasia46@gmail.com)

True Beacon Assignment

Assumption:

1. After removing the data which are not in the trading period i.e. from 9:15 to 15:30, I got some Nan values in the implied volatility of both Nifty and Bank nifty, I filled the data with the last value.
2. In Z-score model, instead of taking the mean (Z=0) as a trading signal, I optimised it further by taking the max spread for a rolling period of 5 days, and taking those values where max spread is changing, I took the average Z score of those spreads and took it as a trading signal because in order to consider the trading cost, those trades will nullify the small possible profits.
3. In my model, I tried to keep the number of trades as near as possible to base model (Z score)
4. I assumed risk free rate as 7%

Results/Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | PnL | Volatility | Sharpe Ratio | Total Trades |
| Z score | 421.936 | 3.37 | 57.3 | 550 |
| My model | 2055.28 | 7.8 | 68.957 | 557 |