Questions :- [Week 3]

1. Risk Management in Trading.

→ Stop loss orders automatically sell an asset once its price drops below a specified threshold.

→ Position sizing determines the amount of capital to allocate to a particular asset.

→ Portfolio diversification: spreads investment across different assets or strategies to reduce risk.

⇒ It reduces volatility by ensuring individual trade don't take much capital.

⇒ It balances risk and reward by preventing huge losses.

⇒ It maintain consistency in Trading, focused on long term performance.

2.] Volatility is a statistical measure of the dispersion of return for a given asset.

⇒ It directly impacts the risk and potential profitability of trades.

⇒ High volatility can lead to larger and more frequent deviations in the spread, potentially creating more trading opportunity.

⇒ In high volatility market, traders use tight risk management which causes low loss.

⇒ In low volatility market, traders adjust thresholds, since small price fluctuation might represent meaningful opportunities.

3]. This method removes features with low variance, under the assumption that features with minimal variation carry no info for predicting the target ~~audience~~. variable.

→ In trading, these features may represent price or indicator data that remain relatively constant over time, providing limited predictive value.

→ It helps us identify relevant features, improve model efficiency and enhance predictive accuracy.

⇒ It benefits in noise reduction [removing low-variance features], focus on informative signal, and adaptability.

⇒ As drawback, we are anyhow discarding some information.

⇒ It do not consider feature's correlation or predictive power relative to target audience.

09 4] Using stop loss orders can help us in risk management as it put a check on the spread bet^n 2 assets.
10 We need not to make decisions under stress. We have the algo to take care about it.
11 It is executed automatically even when trader is not actively monitoring the market.
12 It have some drawbacks because it may make an exit during temorary spread, resulting in missed opportunity.
01 It'll be very sensitive in volatile market.

02 5]. To apply volatility threshold to Kalman Filter strategy:
→ We can measure volatility during each iteration of Kalman
03 filter and use the filters' residual as additional measure of volatility.
04 → We establish threshold : low residual volatility : stable relation. high residual volatility = unstable relation.
05 ⇒ We can increase threshold during high volatility periods to avoid overreaction to noise.
06 ⇒ We can use tigher threshold during low volatility period, to capitalize on smaller movement.
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