# Simple Moving Average w/ Volatility

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## Strategy Idea

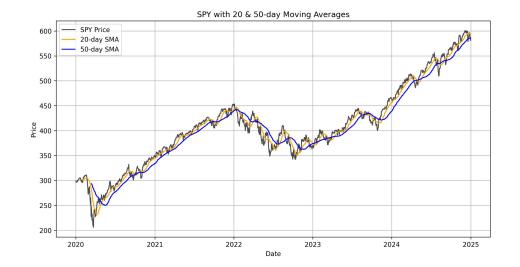
How it works:

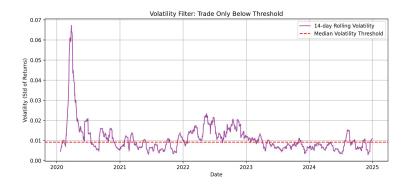
Buy if 20 day SMA > 50 day SMA

Sell if 20 day SMA < 50 day SMA

Volatility: if 14-day rolling volatility < median, we can place trades

Basically, if volatility is high, we stay out of the market with the idea that trading during more volatile periods is more likely to lose money





#### Performance vs. Market

#### Key takeaways:

- Much lower returns than the market over the last 5 years
- Higher sharpe ratio, so this strategy
  has less risk for the amount of return
- Buying and holding went as low as \$80 on a \$100 investment
- This strategy never dips below the initial investment



```
=== SMA + Volatility Strategy ===
Final Value: $138.13
Percent Return: 38.13%
Annualized Sharpe Ratio: 0.80

=== Buy & Hold (Market) ===
Final Value: $194.58
Percent Return: 94.58%
Annualized Sharpe Ratio: 0.74
```

### Conclusion

- SMA w/ Volatility filter reduces trading in noisy, high-volatility periods.
- Strategy shows improved risk-adjusted returns vs buy & hold.
- Absolute returns are much worse at around ½ of what simply holding returns.