Nihal Gunukula

Adapting Bollinger Bands for Selective Trend-Following

Bollinger Bands

Approach

calculated by combining a simple moving average (SMA) with an upper and lower band (±x standard deviations).

typically go long when price crosses below the lower band (assuming oversold) and go short when price crosses above the upper band (assuming overbought).

Pros

assumes that price will revert toward the mean after extreme moves.

bands expand/contract based on volatility, giving context for changing market conditions.

Cons

Both the SMA and standard deviation calculations are lagging indicators, so signals might be late.

Parameters (e.g., 20-day SMA, ±2 std dev) may not suit all market conditions

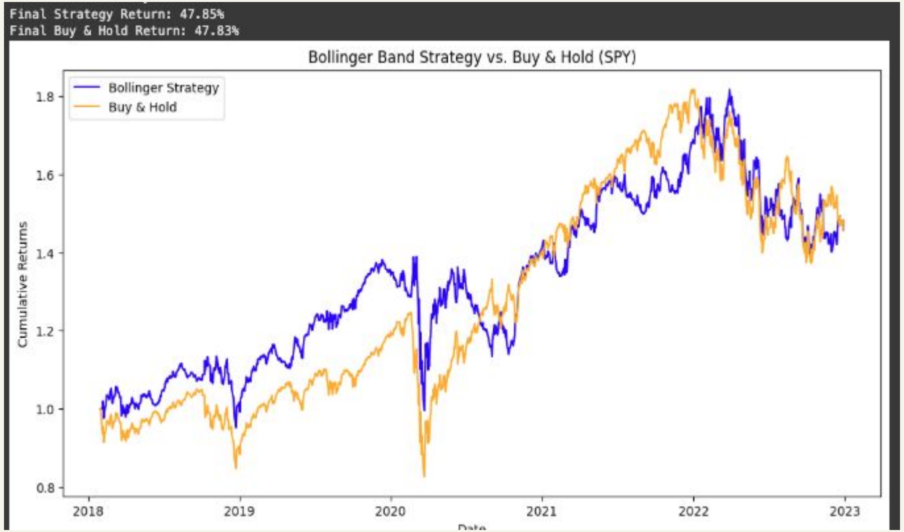
What We Did

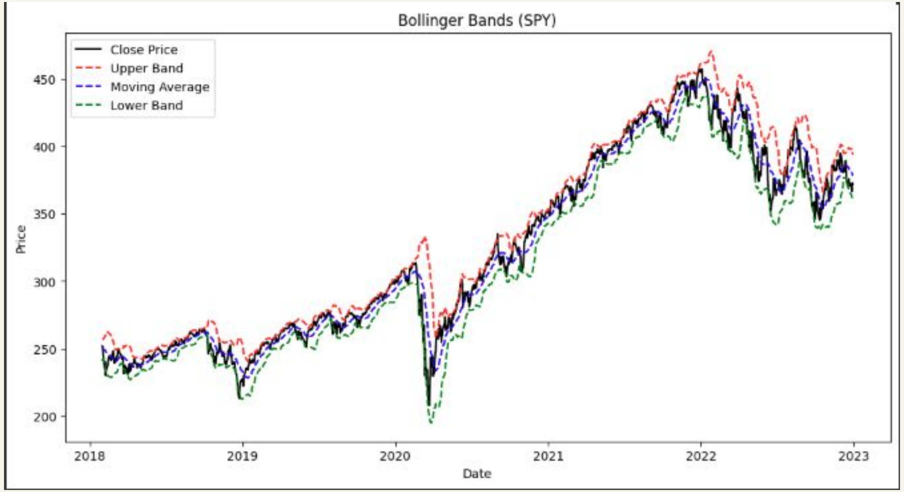
Forward-Fill Positioning: Instead of closing positions immediately after crossing back inside the bands, we forward-fill signals to ride trends or reversals longer.

Combine Mean Reversion with Trend: By letting positions run until a clear reversal signal, we attempted to mix mean-reversion entries with trend-following exits.

Results

Both the strategy and buy-and-hold approach yielded similar returns of approximately 47.8%





Confidential