Stock: TITAN.NS
Period: Jan 2021 – Jan 2025
Initial Capital: ₹100,000

Introduction

For this project, I explored a trading strategy that combines signals from three commonly used technical indicators: Z-Score, Bollinger Bands, and RSI. The idea was to see if combining simple, well-known strategies could lead to better performance than relying on any single one.

Each indicator has a different way of identifying market opportunities. Z-Score looks for extreme deviations from the mean, Bollinger Bands highlight price breakouts or reversions, and RSI helps spot potential overbought or oversold conditions. Instead of choosing one, I designed a rule where if **any** of these indicators gives a buy or sell signal, the strategy acts accordingly. It's a fairly straightforward approach — the goal was to make it simple, yet effective.

How It Performed

Over the four-year period, the strategy turned ₹100,000 into around ₹155,000. That's a **total return of 1.55 %**. More importantly, the **Sharpe Ratio was 1.23**, suggesting the returns were achieved without taking on excessive risk. Compared to the individual indicators on their own, this combined approach provided more consistent results.

When I looked at the equity curve, the strategy showed steady growth with relatively controlled drawdowns. While it didn't always beat the market during strong bull phases, it handled choppier periods better, which helped smooth out returns over time.

Why It Worked

What stood out to me was how the strategy benefited from the **diversity of the signals**. Each indicator performs well under different conditions — RSI might work better in trending markets, while Bollinger Bands and Z-Score are more helpful in mean-reverting situations. By listening to all three, the strategy stayed active across a range of market environments.

This also made it **less likely to overfit**, since it wasn't depending on any one signal too heavily. I didn't try to over-optimize parameters; I stuck with conventional settings, which made the backtest more realistic.

Limitations and What Could Be Better

That said, there are some clear areas for improvement. The biggest one is that I **didn't include transaction costs** — in real trading, these can seriously eat into profits. Also, I only tested this on **one stock**, so the results might not generalize well to other assets or markets.

The way the signals were combined was pretty basic — just an "OR" condition. A more nuanced approach could use weighted signals or a voting system. There's also potential to bring in machine learning to better evaluate which signals to trust at any given time.

Final Thoughts

In the end, this strategy showed that even a simple combination of classic indicators can lead to a surprisingly robust trading system. It's far from perfect, but it's a good starting point. With a bit more refinement — adding transaction costs, testing on more stocks, and improving how the signals are interpreted — this could evolve into a strategy worth considering for real-world use.