Explanation of Quantitative Analysis Engine

Python Finance Project

Confluence Indicators

Indicator	Values	Metric
Primary Signal (Trend Identification)	SMA 50 vs SMA 200 Derivation: Rolling mean of Closing Price of the stock from the last 50/200 days	**Bullish:** SMA50 > SMA200 **Bearish:** SMA200 > SMA50 **Golden Cross:** SMA50 intersects with SMA200 from **below** **Death Cross:** SMA50 intersects with SMA200 from **above**
Momentum (Trend Confirmation)	Overnight Gap Derivation: Open Price – Closing Price of stock from prior day	**Positive:** Open Price **>** Closing Price from the day prior **Negative:** Open Price **<** Closing Price from the day prior
Volatility (Trend Confirmation)	Volatility Derivation: (High Price – Low Price / Closing Price) * 100	**Low:** < 3% **High:** > 3%

Decision Matrix

Signal	Volatility	Overnight Gap	*Trading Verdict*
Golden Cross	Low (> 3%)	Positive	***Strong Buy***
	High (< 3%)	Positive	***Speculative Buy***
	Any	Negative	***Hold/ Monitor***
Death Cross	Low (> 3%)	Positive	***Strong Sell***
	High (< 3%)	Positive	***Speculative Sell***
	Any	Negative	***Exit/ Neutral***
No Cross (SMA50 > SMA20)			***Hold/Monitor***
No Cross (SMA200 > SMA50)			***Exit/Neutral***