| **Line** | **Simple Explanation** |
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| df: pd.DataFrame | This is your trading data—like prices, volume, indicators, etc.—stored in a table. |
| feature\_cols=None | These are the columns you want the model to look at (e.g., "Close", "Volume"). If you don’t pick, it uses "Close" price by default. |
| window\_size: int = 50 | The model looks at the last 50 time steps (e.g., days or minutes) to make decisions. Like checking the past 50 candles. |
| initial\_balance: float = 100\_000.0 | You start trading with ₦100,000 in cash. This is your starting wallet. |
| commission\_pct: float = 0.0005 | Every time you trade, you pay 0.05% of the trade’s value as a fee. |
| commission\_fixed: float = 0.0 | A fixed fee per trade. If set to ₦10, you pay ₦10 every time you buy or sell. |
| spread\_pct: float = 0.0002 | This simulates the difference between buying and selling prices (bid-ask spread). You lose a tiny bit on each trade. |
| slippage\_coeff: float = 0.1 | Slippage means you don’t always get the price you want. This controls how much worse your price gets when trading big volumes. |
| volume\_limit: float = 0.1 | You can only trade up to 10% of the available volume in the market at each step. Prevents unrealistic trades. |
| max\_leverage: float = 3.0 | You can borrow money to trade up to 3× your account size. So ₦100k lets you control ₦300k worth of assets. |
| maintenance\_margin: float = 0.25 | You must keep at least 25% of your account value as safety buffer when using leverage. If you fall below, you get margin-called. |
| financing\_rate\_annual: float = 0.02 | If you borrow money to trade, you pay 2% interest per year. |
| reward\_scaling: float = 1.0 | This multiplies the reward the model gets. You can scale it up or down to tune learning. |
| dd\_penalty\_coeff: float = 0.0 | If set, the model gets punished for big drops in account value (drawdowns). |
| turnover\_penalty\_coeff: float = 0.0 | If set, the model gets punished for trading too much (high turnover). |
| normalize\_observations: bool = True | This makes the data easier for the model to understand by standardizing it (like converting prices to z-scores). |
| random\_start: bool = True | Each training run starts at a random point in the data, so the model doesn’t memorize one pattern. |
| `episode\_length: int | None = None` | You can set how long each training session lasts. If left empty, it runs until the data ends. |