

Slot Machine 4 - Simulation Analysis

Simulation Overview

This report presents the results of the simulation titled 'Slot Machine 4 - Simulation Analysis', run on 2024-08-11 14:15:04.

The simulation was conducted using the following slot machine configuration:

Slot Machine Payout Probabilities:

Line 1: [0.324667348495042, 0.31456733612791027, 0.21835011597474463, 0.14241519940230318]

Line 2: [0.3126156250512669, 0.0634717443759676, 0.24424221778189836, 0.37967041279086716]

Line 3: [0.3672496662867534, 0.19378529537769973, 0.06196975856508319, 0.3769952797704637]

Rewards: [0, 2, 5, 10]

Number of Trials: 100

Number of Strategies: 5

Summary Statistics

Strategy: FixedBetStrategy

Description: Fixed bet strategy: always bet the same amount.

Win Rate (Mean): 100.00%

Average Number of Spins: 51.81

Final Stake (Mean): 571.13

Final Stake (Median): 513.00

Final Stake (Standard Deviation): 465.70

Strategy: KellyCriterionStrategy

Description: Kelly criterion strategy: calculates the optimal bet size based on the probability of winning and the payout ratio.

Win Rate (Mean): 100.00%

Average Number of Spins: 10227.46

Final Stake (Mean): 5046.85

Final Stake (Median): 5040.00

Final Stake (Standard Deviation): 22.57

Strategy: MartingaleStrategy

Description: Martingale strategy: double the bet after each loss, reset to initial bet after each win.

Win Rate (Mean): 0.00%

Average Number of Spins: 31.86

Final Stake (Mean): 0.00

Final Stake (Median): 0.00

Final Stake (Standard Deviation): 0.00

Strategy: ReverseMartingaleStrategy

Description: Reverse Martingale strategy: double the bet after each win, reset to initial bet after each loss.

Win Rate (Mean): 0.00%

Average Number of Spins: 31.33

Final Stake (Mean): 0.00

Final Stake (Median): 0.00

Final Stake (Standard Deviation): 0.00

Strategy: FibonacciStrategy

Description: Fibonacci strategy: bet according to the Fibonacci sequence.

Win Rate (Mean): 0.00%

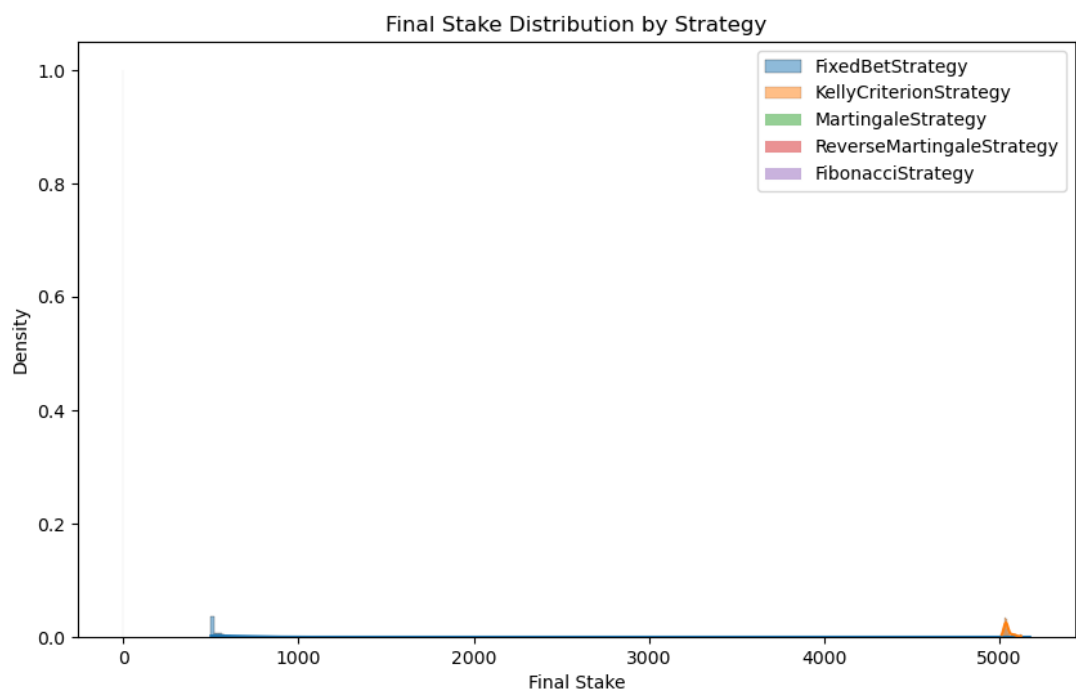
Average Number of Spins: 27.42

Final Stake (Mean): 0.00

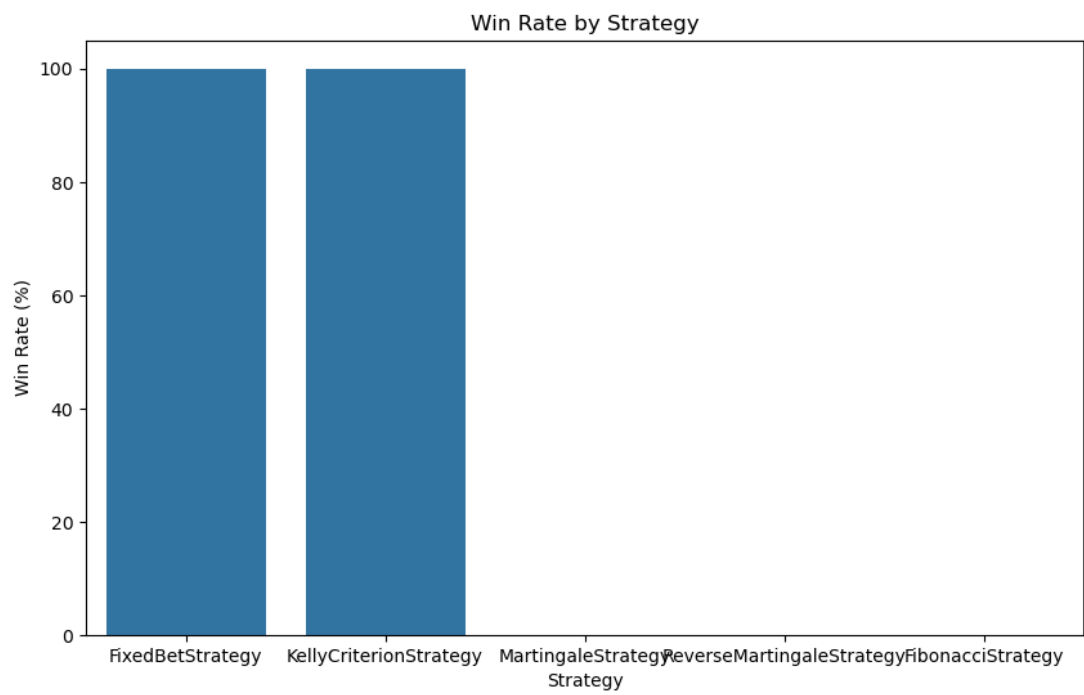
Final Stake (Median): 0.00

Final Stake (Standard Deviation): 0.00

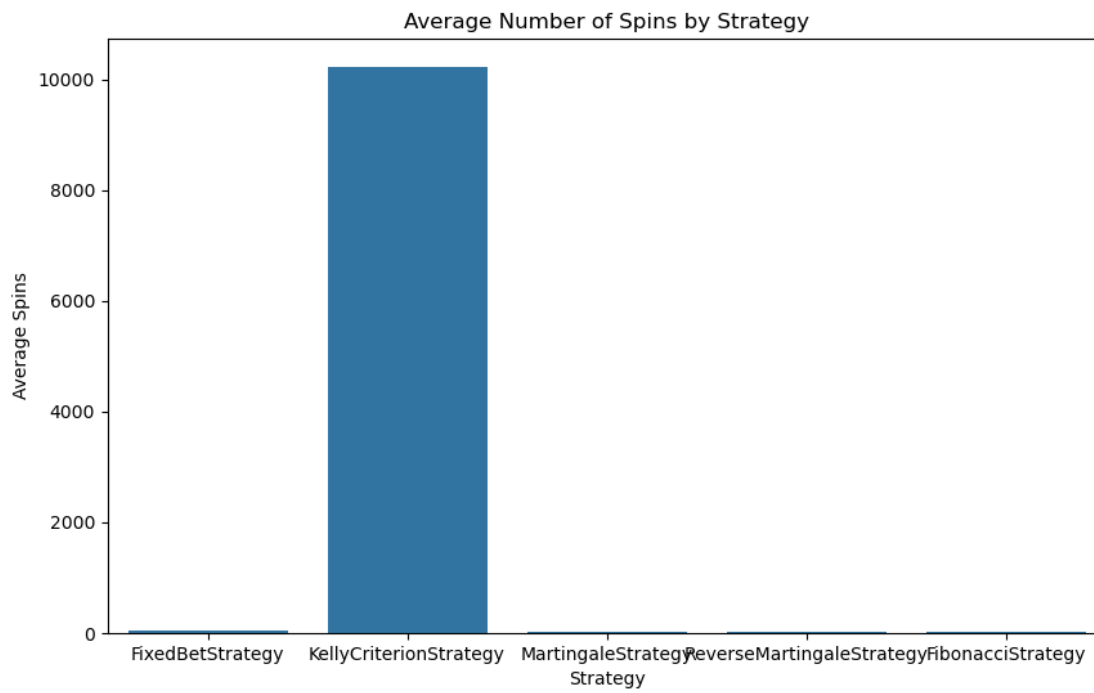
Visualizations



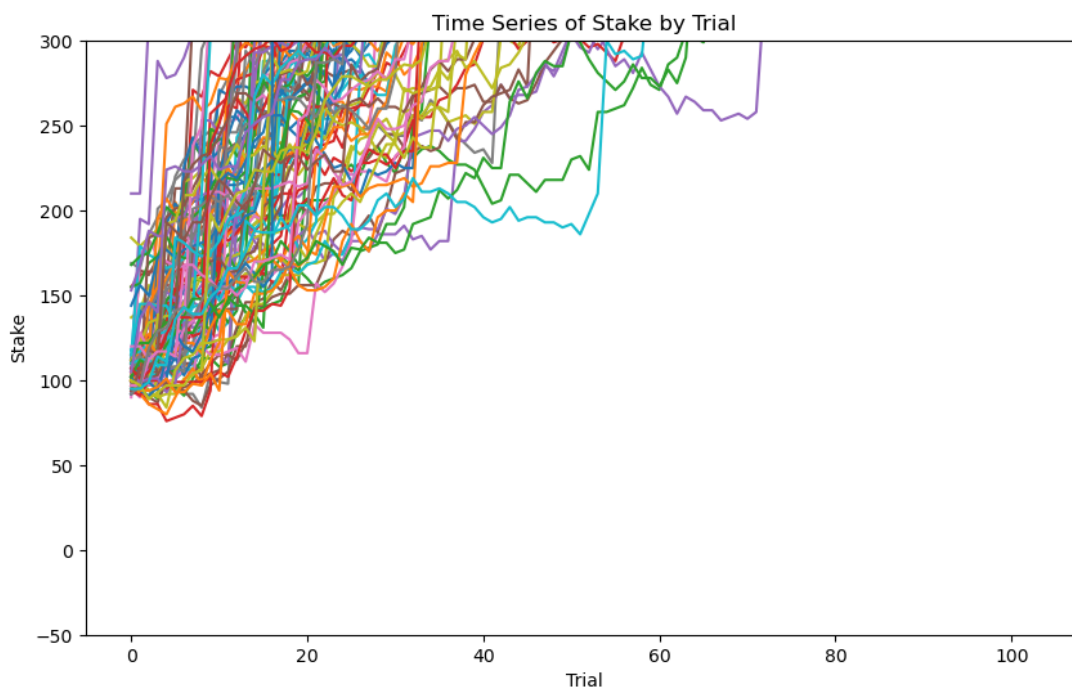
Distribution of final stakes for each trial - Strategy: FibonacciStrategy



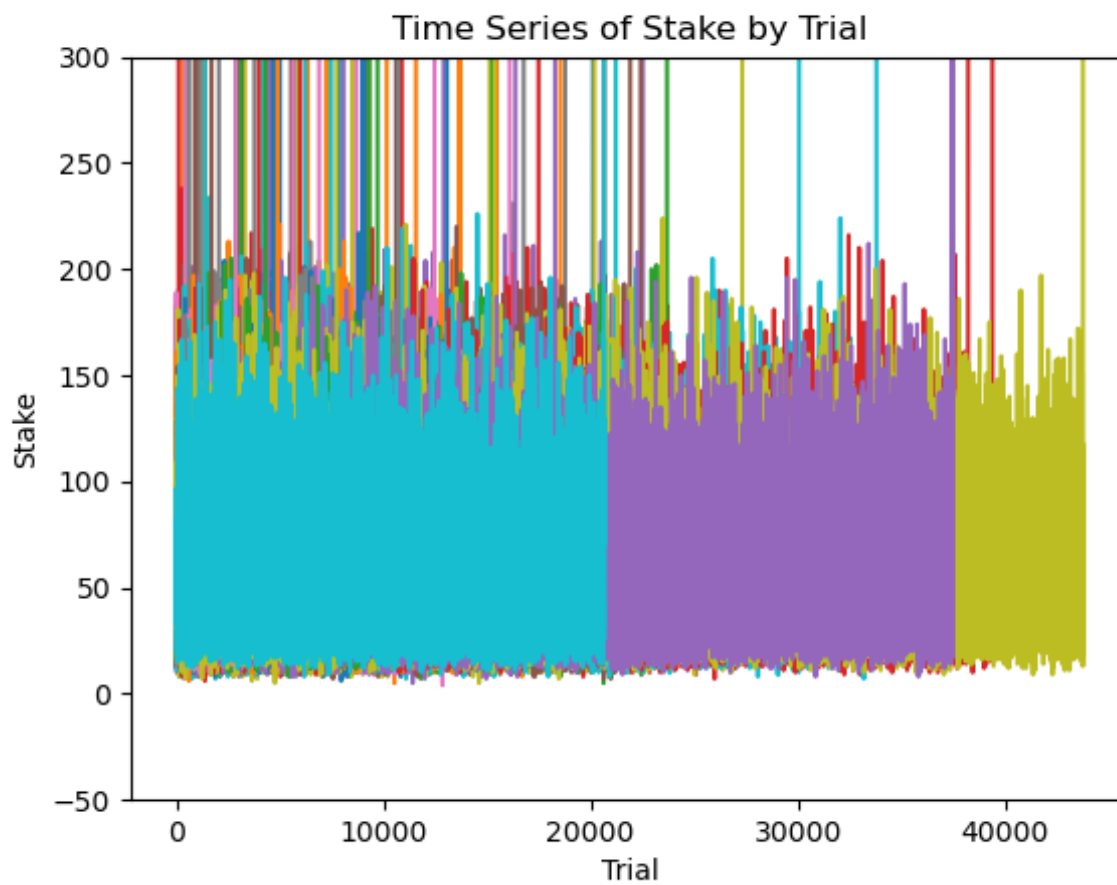
Win rate for each trial - Strategy: FibonacciStrategy



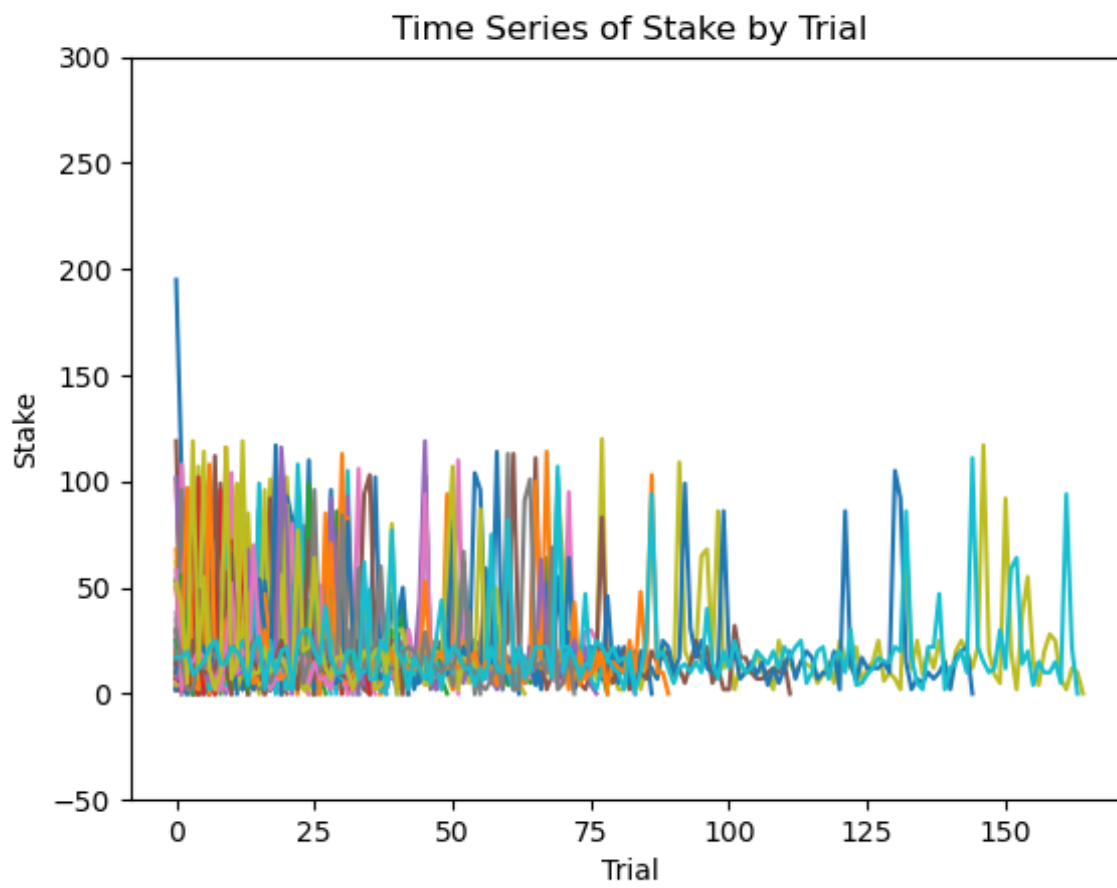
Average number of spins for each trial - Strategy: FibonacciStrategy



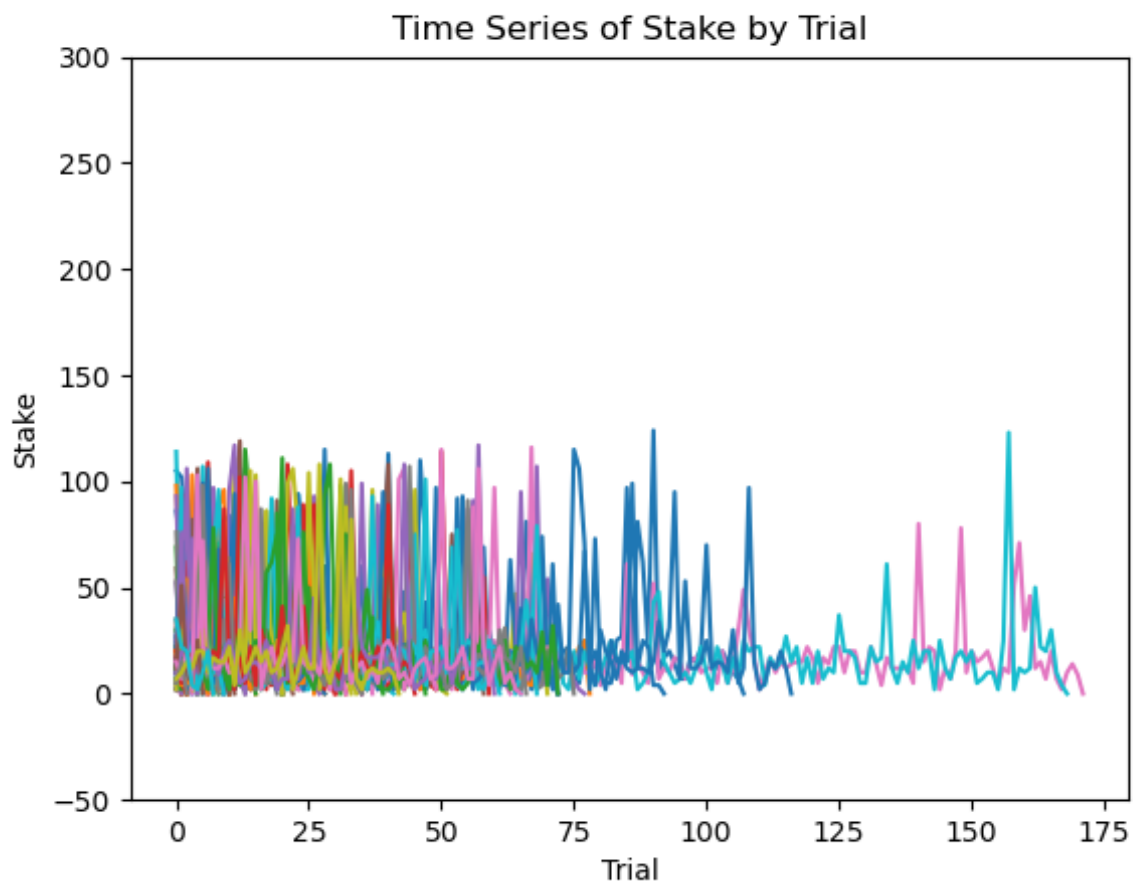
Time series of gain for Fixed Bet Strategy - Strategy: FibonacciStrategy



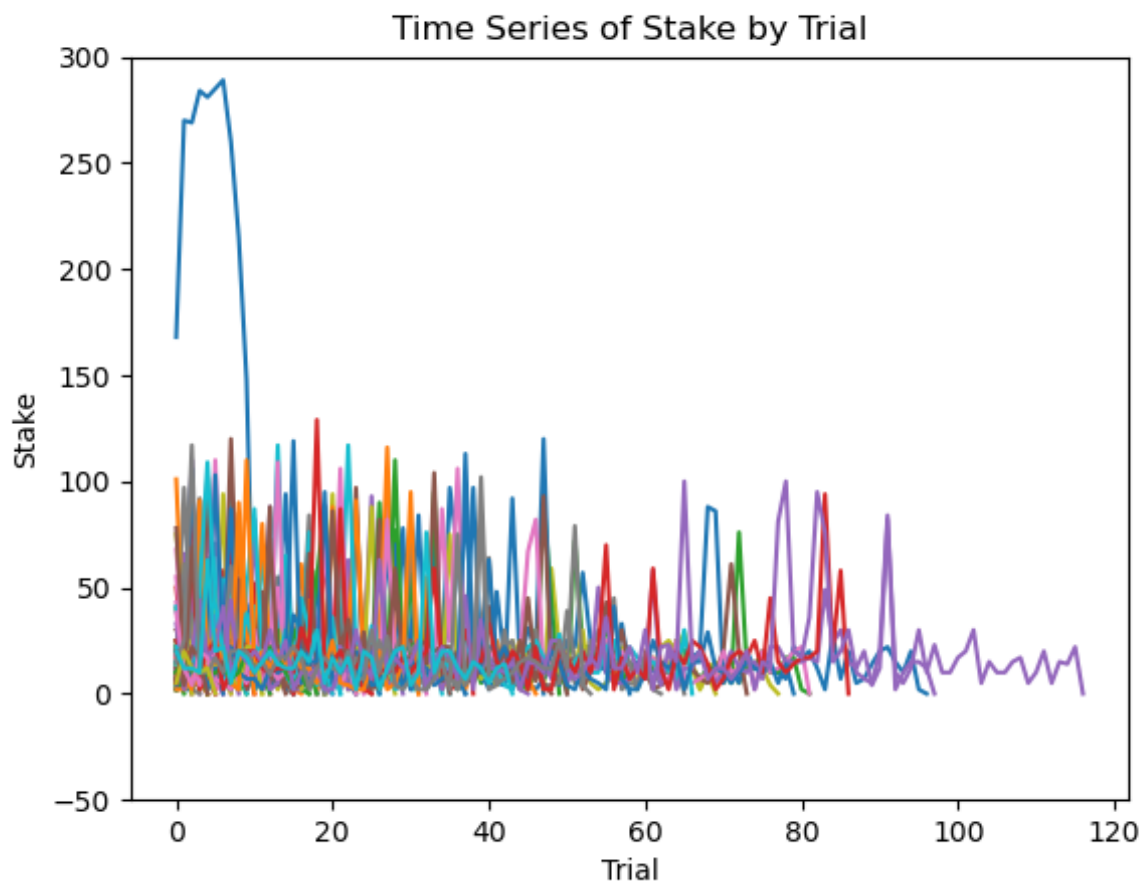
Time series of gain for Kelly Criterion Strategy - Strategy: FibonacciStrategy



Time series of gain for Martingale Strategy - Strategy: FibonacciStrategy



Time series of gain for Reverse Martingale Strategy - Strategy: FibonacciStrategy



Time series of gain for Fibonacci Strategy - Strategy: FibonacciStrategy