

# Package ‘klineR’

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**Title** Candlestick Pattern Detection and Stock Screening

**Version** 0.1.1

**Description** Detects classical candlestick patterns and structure-based chart patterns from open, high, low, close, and volume (OHLCV) time series and provides reusable stock-screening workflows. Built-in detectors include single- and multi-candle patterns, trend structures such as double bottoms and ascending triangles, and a configurable ``golden pit" recovery setup. Includes a unified API to run pattern scans across one or many symbols. Methods are informed by Nison (2001, ISBN:9780735201811) ``Japanese Candlestick Charting Techniques" and Bulkowski (2021, ISBN:9781119739685) ``Encyclopedia of Chart Patterns".

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**Encoding** UTF-8

**RoxygenNote** 7.3.3

**Imports** stats

**Suggests** knitr, rmarkdown, testthat (>= 3.0.0)

**Config/testthat/edition** 3

**URL** <https://github.com/statlearner123/klineR>

**BugReports** <https://github.com/statlearner123/klineR/issues>

**NeedsCompilation** no

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**Repository** CRAN

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available_patterns	<i>Built-in Candlestick Pattern Names</i>
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### Description

Returns supported pattern identifiers, Chinese names, or both.

### Usage

```
available_patterns(language = c("id", "cn", "both"))
```

### Arguments

language            Output language: "id", "cn", or "both".

### Value

A character vector of supported pattern names.

### Examples

```
available_patterns()
available_patterns("cn")
```

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demo_ohlc	<i>Example OHLCV Data</i>
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### Description

Produces reproducible synthetic OHLCV data for examples and tests.

### Usage

```
demo_ohlc(n = 120, seed = 123)
```

### Arguments

n                    Number of rows to generate.  
seed                 Random seed.

**Value**

A data frame with date, open, high, low, close, volume.

**Examples**

```
d <- demo_ohlcv(60, seed = 99)
head(d, 3)
```

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detect_pattern	<i>Detect a Candlestick or Structure Pattern</i>
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**Description**

Detects one built-in pattern from OHLCV data.

**Usage**

```
detect_pattern(data, pattern, ...)
```

**Arguments**

data	A data frame with at least open, high, low, close columns. Optional columns include date and volume.
pattern	One value from <a href="#">available_patterns()</a> .
...	Additional parameters passed to the selected detector.

**Value**

A logical vector of length `nrow(data)`. TRUE marks rows where the pattern is detected.

**Examples**

```
d <- demo_ohlcv(120)
hit <- detect_pattern(d, "double_bottom")
tail(hit, 3)
```

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pattern\_catalog      *Official TongHuaShun Pattern Catalog*

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### Description

Returns the full 68-pattern catalog grouped by the official menu categories.

### Usage

```
pattern_catalog()
```

### Value

A data frame with pattern\_id, pattern\_cn, and category.

### Examples

```
tbl <- pattern_catalog()
nrow(tbl)
```

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plot\_kline\_patterns      *Plot K-line with Pattern Annotations*

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### Description

Draws candlesticks with optional pattern markers for visual verification.

### Usage

```
plot_kline_patterns(
  data,
  pattern = NULL,
  detections = NULL,
  main = NULL,
  max_labels = 10,
  file = NULL
)
```

### Arguments

data	OHLCV data frame.
pattern	Optional pattern identifier or Chinese name.
detections	Optional logical vector from <a href="#">detect_pattern()</a> . If NULL, detections are computed from pattern.
main	Plot title.
max_labels	Maximum number of labels to draw.
file	Optional PNG file path. If supplied, the plot is saved to disk.

**Value**

Invisibly returns detection indices.

**Examples**

```
d <- demo_ohlc(140, seed = 1)
plot_kline_patterns(d, pattern = "doji", max_labels = 5)
```

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run\_simulation\_demo     *Run a Simulated Screening Demo with Charts*

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**Description**

Simulates several symbols, runs pattern screening, and writes chart images with pattern labels.

**Usage**

```
run_simulation_demo(
  symbols = c("AAA", "BBB", "CCC"),
  patterns = c("double_bottom", "golden_pit", "ascending_triangle"),
  n = 220,
  seed = 123,
  output_dir = tempdir()
)
```

**Arguments**

symbols	Character vector of symbols.
patterns	Patterns to screen.
n	Number of rows per symbol.
seed	Random seed.
output_dir	Output directory for PNG charts.

**Value**

A list with data, screen, and plot\_files.

**Examples**

```
out <- run_simulation_demo(
  symbols = c("AAA", "BBB", "CCC"),
  patterns = c("double_bottom", "golden_pit"),
  n = 180
)
out$screen
```

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scan_patterns	<i>Scan Multiple Patterns on a Single Symbol</i>
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**Description**

Runs several detectors and reports whether each one is present on the latest candle.

**Usage**

```
scan_patterns(data, patterns = available_patterns(), ...)
```

**Arguments**

data	A data frame with OHLCV columns.
patterns	Character vector of pattern names.
...	Additional parameters passed to each detector.

**Value**

A data frame with columns pattern, detected\_latest.

**Examples**

```
d <- demo_ohlc(120)
scan_patterns(d, patterns = c("doji", "hammer", "golden_pit"))
```

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screen_symbols	<i>Screen Symbols by a Pattern</i>
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**Description**

Applies one detector to many symbols.

**Usage**

```
screen_symbols(data_list, pattern, latest_only = TRUE, ...)
```

**Arguments**

data_list	Named list of OHLCV data frames.
pattern	Pattern identifier from <a href="#">available_patterns()</a> .
latest_only	If TRUE, keep symbols where the latest row is detected. If FALSE, keep symbols with at least one detection in their series.
...	Additional parameters passed to <a href="#">detect_pattern()</a> .

**Value**

A data frame with detected symbols and context columns.

**Examples**

```
d1 <- demo_ohlc(130, seed = 1)
d2 <- demo_ohlc(130, seed = 2)
screen_symbols(
  list(SYMA = d1, SYMB = d2),
  pattern = "doji",
  latest_only = FALSE
)
```

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simulate\_symbols

*Simulate Multiple Symbol OHLCV Series*

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**Description**

Generates synthetic OHLCV data for several symbols and injects representative chart structures so pattern-screening workflows can be tested end-to-end.

**Usage**

```
simulate_symbols(symbols = c("AAA", "BBB", "CCC"), n = 220, seed = 123)
```

**Arguments**

symbols	Character vector of symbol names.
n	Number of rows per symbol.
seed	Random seed.

**Value**

A named list of OHLCV data frames.

**Examples**

```
sim <- simulate_symbols(c("AAA", "BBB"), n = 180, seed = 7)
names(sim)
```

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