TaPy Documentation

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TaPy Contributors

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Source Code https://github.com/dmitriiweb/tapy

Issue Tracker https://github.com/dmitriiweb/tapy/issues

PyPi https://pypi.org/project/tapy/

tapy is a Python3 library which provides various technical indicators for the Pandas' data frames

CHAPTER 1

Installation

```
pip install tapy
```

CHAPTER 2

Indicators

class tapy.**Indicators**(*df*, *open_col='Open'*, *high_col='High'*, *low_col='Low'*, *close_col='Close'*, *volume_col='Volume'*)

Add technical indicators data to a pandas data frame

```
>>> import pandas as pd
>>> from tapy import Indicators
>>> df = pd.read_csv('EURUSD60.csv')
>>> i= Indicators(df)
>>> i.accelerator_oscillator(column_name='AC')
>>> i.sma()
>>> df = i.df
>>> df.tail()
            Date   Time     Open     High      Low    Close  Volume        AC
↪  sma
3723  2019.09.20  16:00  1.10022  1.10105  1.10010  1.10070    2888 -0.001155  1.
↪101296
3724  2019.09.20  17:00  1.10068  1.10193  1.10054  1.10184    6116 -0.000820  1.
↪101158
3725  2019.09.20  18:00  1.10186  1.10194  1.10095  1.10144    3757 -0.000400  1.
↪101056
3726  2019.09.20  19:00  1.10146  1.10215  1.10121  1.10188    3069  0.000022  1.
↪101216
3727  2019.09.20  20:00  1.10184  1.10215  1.10147  1.10167    1224  0.000388  1.
↪101506
```

2.1 Accelerator Oscillator (AC)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/accelerator_decelerator

```
>>> Indicators.accelerator_oscillator(column_name='ac')
```

param str column_name Column name, default: ac

return None

2.2 Accumulation/Distribution (A/D)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/accumulation_distribution

```
>>> Indicators.accumulation_distribution(column_name='a/d')
```

param str column_name Column name, default: a/d

return None

2.3 Alligator

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/alligator

```
>>> Indicators.alligator(period_jaws=13, period_teeth=8, period_lips=5,␣
↪shift_jaws=8, shift_teeth=5, shift_lips=3, column_name_jaws='alligator_jaw
↪', column_name_teeth='alligator_teeth', column_name_lips='alligator_lips')
```

param int period_jaws Period for Alligator' Jaws, default: 13

param int period_teeth Period for Alligator' Teeth, default: 8

param int period_lips Period for Alligator' Lips, default: 5

param int shift_jaws Period for Alligator' Jaws, default: 8

param int shift_teeth Period for Alligator' Teeth, default: 5

param int shift_lips Period for Alligator' Lips, default: 3

param str column_name_jaws Column Name for Alligator' Jaws, default: alligator_jaws

param str column_name_teeth Column Name for Alligator' Teeth, default: alligator_teeth

param str column_name_lips Column Name for Alligator' Lips, default: alligator_lips

return None

2.4 Average True Range (ATR)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/average_true_range

```
>>> Indicators.atr(period=14, column_name='atr')
```

param int period Period, default: 14

param str column_name Column name, default: atr

return None

2.5 Awesome Oscillator (AO)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/awesome_oscillator

```
>>> Indicators.awesome_oscillator(column_name='ao')
```

param str column_name Column name, default: ao

return None

2.6 Bears Power

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/bears_power

```
>>> Indicators.bears_power(period=13, column_name='bears_power')
```

param int period Period, default: 13

param str column_name Column name, default: bears_power

return None

2.7 Bollinger Bands

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/bollinger_bands

```
>>> Indicators.bollinger_bands(self, period=20, deviation=2, column_name_top=
↪'bollinger_up', column_name_mid='bollinger_mid', column_name_bottom=
↪'bollinger_bottom')
```

param int period Period, default 20

param int deviation Number of Standard Deviations, default 2

param str column_name_top default bollinger_up

param str column_name_mid default bollinger_mid

param str column_name_bottom default bollinger_down

return None

2.8 Bulls Power

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/bulls_power

```
>>> Indicators.bulls_power(period=13, column_name='bulls_power')
```

param int period Period, default: 13

param str column_name Column name, default: bulls_power

return None

2.9 Commodity Channel Index (CCI)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/commodity_channel_index

```
>>> Indicators.cci(period=14, column_name='cci')
```

param int period Period, default: 14

param str column_name Column name, default: cci

return None

2.10 DeMarker (DeM)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/demarker

```
>>> Indicators.de_marker(period=14, column_name='dem')
```

param int period Period, default: 14

param str column_name Column name, default: dem

return None

2.11 Exponential Moving Average (EMA)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/moving_average#exponential_moving_average

```
>>> Indicators.ema(period=5, column_name='ema', apply_to='Close')
```

param int period the number of calculation periods, default: 5

param str column_name Column name, default: ema

param str apply_to Which column use for calculation. Can be *"Open"*, *"High"*, *"Low"* and *"Close"*. **Default**: Close

return None

2.12 Force Index (FRC)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/force_index

```
>>> Indicators.force_index(period=13, method='sma', apply_to='Close', column_
↪name='frc')
```

param int period Period, default: 13

param str method Moving average method. Can be 'sma', 'smma' or 'ema'. Default: sma

param str apply_to Apply indicator to column, default: Close

param str column_name Column name, default: frc

return None

2.13 Fractals

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/fractals

```
>>> Indicators.fractals(column_name_high='fractals_high', column_name_low=
↪'fractals_low')
```

param str column_name_high Column name for High values, default: fractals_high

param str column_name_low Column name for Low values, default: fractals_low

return None

2.14 Gator Oscillator

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/gator_oscillator

```
>>> Indicators.gator(period_jaws=13, period_teeth=8, period_lips=5, shift_
↪jaws=8, shift_teeth=5, shift_lips=3, column_name_val1='value1', column_
↪name_val2='value2')
```

param int period_jaws Jaws period, default: 13

param int period_teeth Teeth period, default: 8

param int period_lips Lips period, default: 5

param int shift_jaws Jaws shift, default: 8

param int shift_teeth Teeth shift, default: 5

param int shift_lips Lips shift, default: 3

param str column_name_val1 Column name for Value1, default value1

param str column_name_val2 Column name for Value2, default value2

return None

2.15 Ichimoku Kinko Hyo

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/ichimoku

```
>>> Indicators.ichimoku_kinko_hyo(period_tenkan_sen=9, period_kijun_sen=26,␣
↪period_senkou_span_b=52, column_name_chikou_span='chikou_span', column_
↪name_tenkan_sen='tenkan_sen', column_name_kijun_sen='kijun_sen', column_
↪name_senkou_span_a='senkou_span_a', column_name_senkou_span_b='senkou_span_
↪b')
```

param int period_tenkan_sen Period for Tenkan-sen, default: 9

param int period_kijun_sen Period for Kijun-sen, default: 26

param int period_senkou_span_b Period for Senkou-span, default: 52

param str column_name_chikou_span Column name for Chikou-span, default: chikou_span

param str column_name_tenkan_sen Column name for Tenkan-sen, default: tenkan_sen

param str column_name_kijun_sen Column name for Kijun-sen, default: kijun_sen

param str column_name_senkou_span_a Column name for Senkou Span A, default: senkou_span_a

param str column_name_senkou_span_b Column name for Senkou Span B, default: senkou_span_b

return None

2.16 Market Facilitation Index (BW MFI)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/market_facilitation_index

```
>>> Indicators.bw_mfi(column_name='bw_mfi')
```

param str column_name Column name, default: bw_mfi

return None

2.17 Momentum

https://www.metatrader4.com/ru/trading-platform/help/analytics/tech_indicators/momentum

```
>>> Indicators.momentum(period=14, column_name='momentum')
```

param int period Period, default: 14

param strr column_name Column name, default: momentum

return

2.18 Money Flow Index (MFI)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/money_flow_index

```
>>> Indicators.mfi(period=5, column_name='mfi')
```

param int period Period, default: 5

param str column_name Column name, default: mfi

return None

2.19 Moving Average Convergence/Divergence (MACD)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/macd

```
>>> Indicators.macd(self, period_fast=12, period_slow=26, period_signal=9,␣
↪column_name_value='macd_value', column_name_signal='macd_signal')
```

param int period_fast Period for Fast EMA, default: 12

param int period_slow Period for Slow EMA, default: 26

param int period_signal Period for Signal Line, default 9

param str column_name_value Column name for MACD Value, default macd_value

param str column_name_signal Column name for MACD Signal, default macd_signal

return None

2.20 Simple Moving Average (SMA)

https://www.metatrader4.com/en/trading-platform/help/analytics/tech_indicators/moving_average#simple_moving_average

```
>>> Indicators.sma(period=5, column_name='sma', apply_to='Close')
```

param int period the number of calculation periods, default: 5

param str column_name Column name, default: sma

param str apply_to Which column use for calculation. Can be *"Open"*, *"High"*, *"Low"* and *"Close"*. **Default**: Close

return None

2.21 Smoothed Moving Average (SMMA)

https://www.metatrader4.com/ru/trading-platform/help/analytics/tech_indicators/moving_average#smoothed_moving_average

```
>>> Indicators.smma(period=5, column_name='smma', apply_to='Close')
```

param int period the number of calculation periods, default: 5

param str column_name Column name, default: smma

param str apply_to Which column use for calculation. Can be *"Open"*, *"High"*, *"Low"* and *"Close"*. **Default**: Close

return None

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