

DO NOT CONTINUE IF YOU ARE UNSURE ABOUT REQUIREMENTS WE ONLY WANT PROFFESIONALS!

- 1. Do you have the skills to calculate very complex mathematical equations regarding statistics and historical data?
- 2. Have you worked with Python before and know how to build effective UX applications?
- 3. Do you have good knowledge of Machine Learning/AI/Neural Networks/LSTM/GRU and much more?
- 4. Do you have good knowledge about trading and trading strategies, markets, pricebars, patterns and indicators?
- 5. Do you have references of web applications you have produced before?

If NO or unsure on any question 1-5: Thank you for your time and interest but this is not the project for you.

If YES then you are the one we are looking for – Welcome to this project presentation and please continue!

EPISEC.se
/Johan Graf CEO

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Index

Purpose of application and about us	Page 3
Risk to reward & time frame	Page 4
Technical indicator	Page 5-7
Candlestick patterns	Page 8
Chart patterns and Machine learning	Page 9-10
Trading Laboratory	Page 11-18
Trading Dashboard	Page 19-22
Summary	Page 23

Purpose and project vision:

Trading Odds Manager is a online trading tool and website that calculates the odds to win a financial trade in real time. This is done by predictions using the different trading dimensions. This application is only one of many applications/tools a trader uses before making a decision. Nothing is by any means new in this application and vision except it illustrates the market from different dimensions and predicts the outcome of the trade. All done super easy, fast and user friendly!



About us:

EPISEC.se is a Swedish Company that works with Risk & Security applications for end users and organizations.

1. RISK TO REWARD DIMENSION / 2. TIME FRAMES — BASED ON BROAD HISTORICAL DATA:

For any given asset there is an optimal risk to reward setting for each time frame (1 or 5 min etc). But what is it?

Video on this topic: https://www.youtube.com/watch?v=IHhtVfeoCdQ & https://www.youtube.com/watch?v=b41bnRnSLgs

Basics:

Trading Gold for instance on a 15 min chart. If you place a random trade what would the historical optimal target and stopp loss ratio be for a sell or buy order? The historical data will tell us what would be the best bet considering risk to reward ratio!

Example:

If we would bet that Gold index will go up in price we place a buy/long order.

The rule would be to close the trade when either your target is hit at lets say +250 USD or +2.21% (example only)

Or the trade goes against you and your stopp loss is hit at lets say -125 USD or -1.11% (example only)

Your assignment:

Create a calculation application that will answer the following question:

What is the best risk to reward ratio for the asset and time frame you are about to trade - based on historical data?

The app will calculate in real time best buy and sell risk to reward strategy and win ratio for the asset and time frame.

3. TECHNICAL INDICATORS DIMENSION – BASED ON BROAD HISTORICAL DATA:

For any given asset there is an optimal settings for a technical indicator for each time frame. But what is it?

See this report to get an idéa of what type of technical indicator optimazation we are looking for:

http://etfhq.com/blog/2013/01/15/golden-cross-which-is-the-best/

Basics:

Most of the trading technical indicator has settings to customize the indicator. That is because you can optimize it for the asset volatility and time frame you wish to use.

See this general technical analysis overview: http://www.mrao.cam.ac.uk/~mph/Technical Analysis.pdf

Example:

Moving Average - MA or versions of it like Exponential Moving Average use past data to plot a line on the chart. You can get trading signals from many techniques using MA. One common practice it to use two different MA-pair to get buy or sell signals crosses. But which setting is the most profitable?

Your assignment:

Create a calculation application for indicators (<u>in this assignment up to 66 different indicators</u>) that will answer the following question: When trading an asset what is the most profitable setting for this technical indicator and time frame - based on historical data?

<u>Important Note</u>: Some indicators have more then one way to trigger a signal for buy/sell! (<u>all must be considered/tested</u>)

Continue next page:

3. TECHNICAL INDICATORS DIMENSION – 66 TYPES:

Accumulation/Distribution
Advance/Decline
Arnaud legoux Moving Average
Aroon
Average Directional Index
Average True Range
Awesome Oscillator
Balance of Power
Bollinger Bands % B
Bollinger Bands Width
Chaikin Money Flow
Chaikin Oscillator
Chande Kroll Stop
Chande Momentum Oscillator
Choppiness Index
Commodity Channel Index
Coppock Curve
Correlation Coeff
Directional Movement Index
Donchian Channels
Double Exponential Moving Avearge
Ease of Movement
Elders Force Index
Envelope
Fisher Transform
Historical Volatility
Hull MA
Ichimoku Clould
Keltner Channels
Klinger Oscillator
Know Sure Thing
Least Squares Moving Average
Linear Regression Curve

Continue next page:

3.
MA Cross
MACD
Mass Index
McGinley Dynamic
Momentum
Money Flow
Moving Average
Moving Average Exponential
Moving Average Weighted
Net Volume
On Balance Volume
Parabolic SAR
Price Oscillator
Ptice Volume Trend
Relative Strength Index
Relative Vigor Index
Relative Volatility Index
SMI Ergodic Indicator/Oscillator
Smoothed Moving Average
Stochastic
Stochastic RSI
TRIX
Triple EMA
True Strength Indicator
Ultimate Oscillator
VWMA
Volume
Volume Oscillator
Vortex Indicator
Williams % R
Williams Alligator
Williams Fractal
ZigZag

3. TECHNICAL INDICATORS DIMENSION – BASED ON BROAD HISTORICAL DATA:

The app will calculate best profitable setting for buy and sell for the asset and time frame you backtest. The result could be presented to look something like this for Daily time frame:

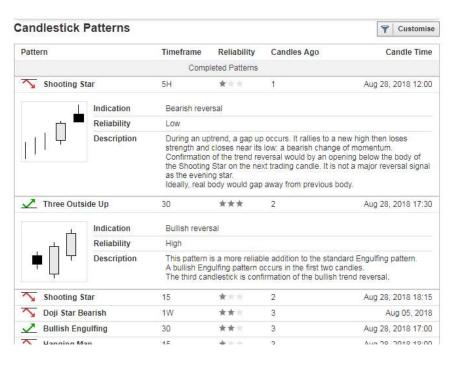
Exposure		3 / 48.5 EOD, Long 2%	-				EN	IA Cros	s, EOD	Long			
Annualized Return		16%				Δn	nualize	d Retu	rn Duri	na Exp	osure		
Ann Return During Exposure		88%	Slow EMA	8	9	10	11	12	13	14	15	16	17
On Nikkei 225		14%	20.0	14.62%	14.99%	15 29%	15.21%	14.85%	14.89%	14 60%	14.95%	15.12%	15.22
On NASDAQ	A PARTY	08%	21.5	14.69%	15.35%	15.08%	14.72%	14.91%	14.57%	14.98%	15.09%	15.30%	15.03
OII NASDAQ	Duration - Days	Return	23.0	14.98%	15.08%	14.75%	14.84%	14.64%	14.94%	15.26%	15.43%	15.27%	15.20
	Duration - Days	Ketuiii	24.5	15.03%	14.76%	14.80%	14.66%	14.78%	15.19%	15.53%	15.41%	15.24%	14.98
			26.0	14.93%	14.85%	14.79%	14.79%	15.26%	15.42%	15.61%	15.05%	15.05%	15.3
			27.5	14.86%	14.64%	14.70%	15.12%	15.33%	15.30%	15.00%	15.27%	15.38%	15.3
A D64	170	44.000/	29.0	14.75%	14.73%	14.88%	15.19%	15.31%	15.17%	15.28%	15.67%	15.34%	15.6
Average Profit	173	14.62%	30.5	14.64%	14.81%	14.82%	15.50%	15.22%	15.35%	15.57%	15.55%	15.85%	15.8
Average Loss	30	-3.02%	32.0	15.02%	14.85%	15.05%		15.25%	15.55%	15.49%	15.84%	15.81%	15.9
Probability of Profit	45	5%	33.5	14.45%	14.79%	15.26%	15.31%	15.52%	15.61%	15.91%	16.14%	15.89%	15.5
	10 1		35.0	14.85%	15.10%	15.36%	15.41%	15.50%	15.73%	16.05%	16.04%	16.04%	16.4
	—— Equal Weight Global Aver	age	36.5	14.89%	15.41%	15.56%	15.46%	15.76%	16.14%	16.18%	16.10%	16.24%	16.1
		EOD, Long	38.0	15.01%	15.61%	15.52%	15.82%	16.02%	16.18%	16.06%	16.34%	16.33%	16.1
	EMA Crossover 50 / 200	EOD. Long	39.5	15.39%	15.31%	15.57%	15.91%	16.04%	16.01%	16.26%	16.17%	16.23%	16.3
Ann Return During Test		M	41.0	15.41%	15.68%	15.96%	16.04%	16,13%	16.27%	16.16%	16.30%	16.28%	16.4
Global Ave 6.32%		at the	42.5	15.57%	15.81%	16.23%	16.19%	16.55%	16.37%	16.21%	16.35%	16.39%	16.2
Nikkei 225 4.02%		A TOWN	44.0	15.63%	15.94%	16.09%	16.37%	16.41%	16.24%	16.38%	16.47%	16.26%	16.2
NASDAQ 8.80%		NA N	45.5	15.88%	16.25%	16.40%	16.33%	16.32%	16.32%	16.69%	16.38%	16.05%	16.1
14A0DAQ 0.0070			47.0 48.5	16.12%	16.17%	16.44%		16.68%		16.49%	16.38%	16.31%	15.8 15.8
		man 1 m W	50.0	16.00%	16.08%	16.56%	16.57%	16.83%	16.62%	16.43%	16.23%	16.08%	15.5
	1. N. N.	My M	51.5	16.00%	16.23%	16.52%	16.54%	16.76%	16.49%	16.27%	16.22%	15.74%	15.6
	J/W	T No. /	53.0	16.22%	16.30%	16.32%		16.48%	16.33%	16.28%	15.95%	15.72%	15.4
		·γ	54.5	16.34%	16.50%	16.43%		16.41%	16.33%	16.20%	15.84%	15.62%	15.4
	An of		56.0	16.38%	16.42%	16.32%		16.37%	16.23%	15.80%	15.68%	15.68%	15.3
	1 9/1991 9/1995 9/1999	9/2003 9/2007	55.0		10. IL/1	10.027	10.27	10.0171	10.2071	10.007	10.0071	10.0071	,0.0

4. CANDLESTICK/PRICE BAR PATTERNS INDICATORS DIMENSION – BASED ON BROAD HISTORICAL DATA:

We know price action tends to follow specific patterns. There are about 65 main candlestick patterns we must backtest. What candlestick pattern is the most effective, can we rank them?

See this page for more info on types of candlestick patterns:

Investing.com has a very nice presentation!

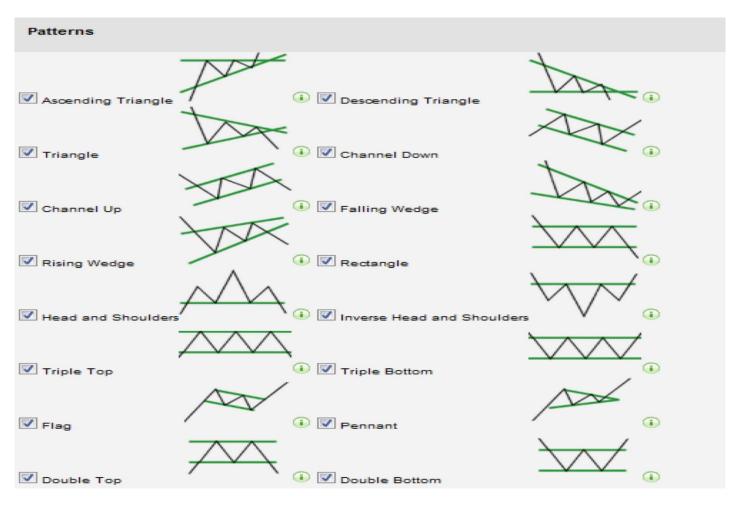


Your assignment:

Create a calculation application that calculate the win ratio and optimal risk to reward setting for that candlestick pattern and time frame and asset - based on historical data.

5. PART 1: CHART PATTERNS DIMENSION – BASED ON BROAD HISTORICAL DATA:

We know price action tends to follow specific chart patterns. There are about 10 patterns or 20 if inversed we must backtest. What chart patterns is the most effective, can we rank them?



See link for more info:

https://optionalpha.com/13-stock-chart-patterns-that-you-cant-afford-to-forget-10585.html

Your assignment:

Create a calculation application that calculate the win ratio and optimal risk to reward setting for that chart pattern and time frame and asset. Based on historical data.

5. PART 2: CHART PATTERNS DIMENSION MACHINE LEARNING – BASED ON BROAD HISTORICAL DATA:

Does price action/charts have memories, can we predict the market better then 65% into the future based on historical data?

Your assignment:

Create an AI/LSTM/Machine learning or other prediction model using as many inputs as necessary to predict future of chart with an accuracy of 65% or more. This is a trial and error assignment and will require deep knowledge in trading and machine learning. This is not a task for an "average programmer"!

See video and pdf for inspiration

https://www.youtube.com/watch?v=ftMq5ps503w

https://arxiv.org/pdf/1808.03867.pdf

https://www.kaggle.com/raoulma/ny-stock-price-prediction-rnn-lstm-gru

Your assignment:

Create prediction models that in realtime predicts future movements with atleast 65% accuaracy/win rate! Store them in our Al-library

The steps to AI models could be something like:

numpy — used to easily make matrix calculations and mathematic manipulations which are essential for any ML model

pandas — used to define a nice data structure for your training data

sklearn — a tool used for data analysis (for example normalizing or clustering data)

matplotlib — used to display our data

tensorflow — Google's open source library used for building ML graphs in an easy and elegant way



CORE VALUE OF THIS SERVICE IS THIS FEATURE: TRADING LABORATORY!

BASIC LAYOUT REQUIREMENTS

- NEEDS HISTORICAL AND LIVE DATA FROM SUPPLIERS LIKE YAHOO FINANCE ETC (PLEASE SUGGEST AND ADD MORE)
- PLOT GRAPH LIKE TRADEVIEW.COM OR SIMULAR WITH: CANDLES, LINE, BARS, RENKO OR HEIKIN ASHI -STYLE GRAPH
- LIBRARY FOR: **66** TECHNICAL INDICATORS/ **65** CANDLESTICK PATTERNS/ **20** CHART PATTERNS
- LIBRARY WILL ALSO CONSIST OF MACHINE LEARNING MODELS AND OTHER CUSTOM TRADING MODELS/IDEAS







Step 3: Add filter from Indicators

Lets add a technical indicator to filter the trades. Lets say we add MACD.

(Example not fact) - We have defined that there are 3 ways this indicator can generate buy/sell signals. (Example not fact) We pick one and add as filter. The application now runs back tests to define the optimal settings for this indicator and strategy.





Lets add another technical indicator to filter the trades even further. Lets say we add MA Cross.

(Example not fact) - We have defined that there are 2 ways this MA Cross indicator can generate buy/sell signals. (Example not fact) We pick one and add as filter. The application now runs back tests to define the optimal settings for this indicator and strategy.

Lets say it is MA Pair 13 and 48 to achieve best performance

Will this filter and the previous filter MACD improve our *Performance data? Yes or no?



Step 5: Add another filter based on Price Bar Pattern and/or Chart pattern

Lets add 4 more filters, Lets say we add Candlestick pattern: **Three outside up & Three outside down** And Chart pattern: **Head and shoulders & Inverse Head and shoulders**

The application now runs back tests to define the optimal settings for this strategy.

Will these 4 new filter and the previous MACD and MA Cross improve our *Performance data? Yes or no?

Important:

The app should be able to handle up to 10 filters to give the user lots of room for exploration! (*We have a raw frame work for this, see attachment for this project.)

We need **you** to help us to define and cross reference the filters. Meaning: What are the rules for filtrering and what is possible when combining the different filters? **The more choices for user, the better of course!**

This part need a lot of work since we want the user to feel he has many option when backtesting his strategies and filters.

*Very basic filter rule example:

What can we use as simple rules that is easy to implement?

- 1. And
- 2. Or
- 3. And/Or
- 4. Length within X pricebars of signal or time lets say X min
- 5.And more

Example:

Signal when indicator (1 and/or 2) is generated and (3 Or 4) within 10 pricebars

Indicator 1 Technical indicator MACD

Indicator 2 Technical indicator MA Cross

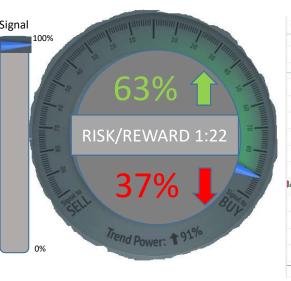
Indicator 3 Candlestick pattern: **Three outside up** Indicator 4 Candlestick pattern: **Three outside down**

Another option is for the user to click and add **AI prediction** to his strategies. Here we can add different prediction models from our "Library" for the user to add to his chart that will predict the next lets say 10-60 bars!



DASHBOARD LAYOUT

Framework done but need lots of improvments!







Range Select:

- Daily
- Weekly
- Monthly
- Yearly

Summary: STRONG	BUY		
Moving Averages:	BUY	Buy (10)	Sell (2)
Technical Indicators:	STRONG BUY	Buy (10)	Sell (1)

Name	Value	Action
RSI(14)	64.260	Buy
STOCH(9,6)	78.718	Buy
STOCHRSI(14)	37.533	Sell
MACD(12,26)	0.970	Buy
ADX(14)	33.748	Buy
Williams %R	-20.914	Buy
CCI(14)	87.8164	Buy
ATR(14)	0.8314	Less Volatility
Highs/Lows(14)	0.4793	Buy
Ultimate Oscillator	64.360	Buy
ROC	1.615	Buy
Bull/Bear Power(13)	1.6780	Buy

Period	Simple	Exponential
	219.82	219.73
MA5	Sell	Sell
MA10	219.28	219.22
WATU	Buy	Buy
MA20	218.04	218.40
WAZU	Buy	Buy
MA50	216.72	216.47
WESU	Buy	Buy
MA100	213.54	213.04
WATOU	Buy	Buy
MA200	205.63	207.51
WIAZUU	Buy	Buy
Buy: 10 Sell: 2 Summary:BUY		

Pattern	Timeframe	e Reliabil	ity Candles Ago
	Co	mpleted Patte	rns
Shooting Star	5H	*:0:0:	1
Ooji Star Bearish	1W	***	3
Bullish Engulfing	1M	***	6
△ Dark Cloud Cover	1D	***	6
Three Outside Up	30	***	6
CHART PATTERNS			
Pattern	Timeframe	Reliability	Candles Ago
	Comple	eted Patterns	
AAA Head and shoulders	5H	***	1
Triangle	1W	***	3
ZVV Triple top	1M	***	6

Time Frame trend power

1 min	+51%
5 min	+76%
15 min	+91%
30 min	+67%
60 min	+61%
4h	+33%
Daily	+67%
Weekly	+55%

Past performance Win/Loss ratio 7/10

|--|

Trade 2 - Win

Trade 3 - Loss

Trade 4 - Loss

Trade 5 - Loss Trade 6 - Win

Trade 7 - Loss

Trade 8 - Win

Trade 9 - Win

Trade 10 - Win



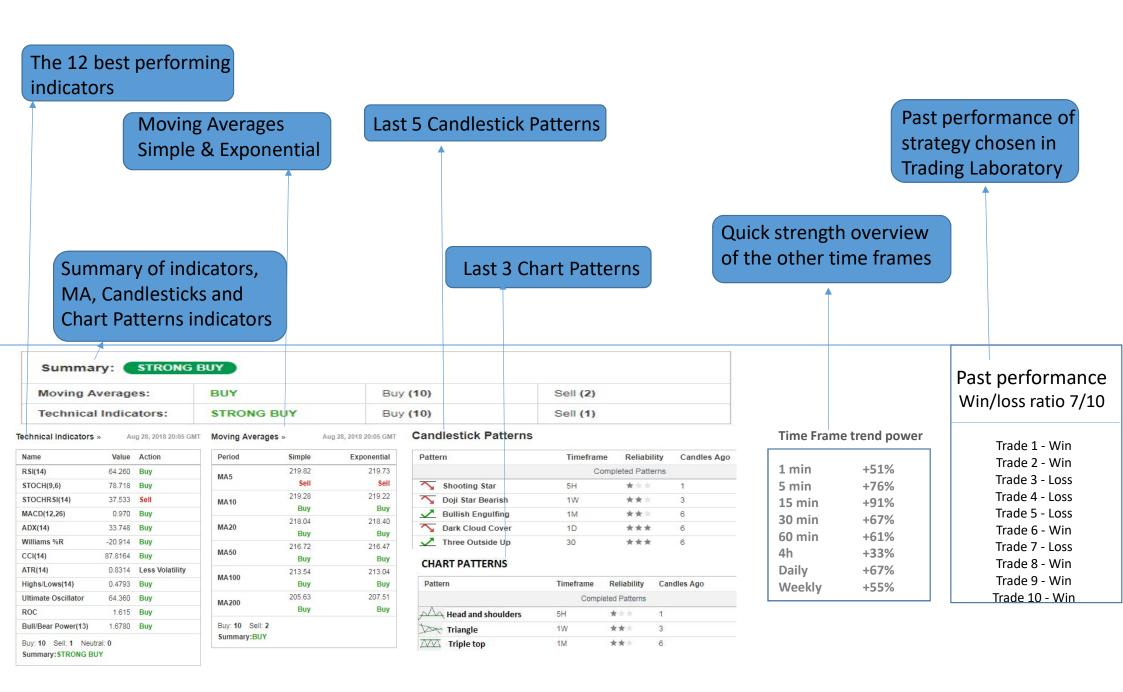
How far are we from a trading signal based on our settings in Laboratory?

AI-Prediction plots 10-60 bars in future

Signal strength to buy/sell Based on user selection of:

- Technical indicators and/or
- Bar patterns and/or
- Chart patterns

Main gauge that gives us the odds/risk to reward ratio and *plots it on chart. Odds for going up or down in a trade i real time in % (63% up and 37% down).



Web application Login Security.

Each user has their e-mail and password for access to application.

First time user e-mail is validated by an request link sent to e-mail (thereafter the user can set up a password) Lost password can be reset by requesting a reset link send to e-mail where user can create a new password

Be ready for pay option.

We might consider a pay option for pro-members later on so we need our application to be ready for an payment option!

Front End/UX.

Front end must be very user friendly. We might have a UX professional adjust the design later on for the best user experience. Hosting and database administration will be handled by us.

Summary:

First, thank you for taking the time to read through this presentation. The Freelancer profile we are looking for is someone with excellent knowledge in math, trading and perhaps most important someone who can think outside the "box" and add to our ideas, values and be our future developing partner. We had a awesome Freelancer who has done most of the graphical work and framework for our application. Unfortunatily he got very sick and is no longer with us. We hope you can finish what he has started and look forward to your proposal. See our application and current status:

http://585tradingepisec.episec.se:8080/#

Best Regards, EPISEC.se Johan Graf CEO