GATEWAY TO LEARN
ALGORITHMIC TRADING SYSTEMS

Master Course for Learning Algorithmic Trading.

Build your career as Quant Programmer, Algorithmic Trading Programmer.

CATP

CERTIFIED ALGORITHMIC TRADER AND PROGRAMMER

Certified program under courses offered by TIAT

- Placement opportunities with hedge funds, brokerage houses, HFT (high frequency trading) houses in India and Overseas.

- 200+ hours of practical training.

- 100+ hours on practical projects on live / real time markets.

- Basket of built in trading strategies on stocks, futures, options, forex and commodities.

- Backtesting tools and how to code your own backtesting software.

- Learn how to do strong risk management and portfolio management.

- Learn in depth on various modules on technical analysis, fundamental analysis, option strategies, mutual funds and automated / algorithmic trading.

Short Term Courses

Amibroker (AFL):
(Theory + Practical)
Amibroker Platform.
AFL programming language.
Backtesting.
Code structures.
Exercise and examples.
Test.

MetaTrader (MT4 or MT5):
(Theory + Practical)
MetaTrader Platform.
MQL programming language.
Backtesting.
Code structures.
Exercise and examples.
Test.

Program Curriculum

Introduction to Capital Markets: 1
What are capital markets? Global Exchanges. Indian Exchanges. Top 6 exchanges with market capitalization. Segments: Index, Equities (Stocks), Forex, Commodities, Derivatives (F&O), ETFs, Mutual Funds.

Fundamental & Technical Analysis: 3
Different ratios of fundamental analysis. Fundamental analysis for different stock and for different sectors. Chart Types. Chart Patterns. (Bullish, Bearish, Indecisive) Understand support and resistance. Technical Indicators: (SMA, EMA, VWMA, RSI, MACD, Stochastics, Fibonacci levels, ATR, DMI, Bollinger Bands). Technical Analysis V/S Fundamental Analysis.

Programming language (Theory + Practical) 5
Introduction and basic concepts. Advance programming concepts (OOPS). GUI tool kit. Open libraries. Code structures. Implementation of trading models. Exercise and examples Project (with real time market data)

Trading Platforms API: (Theory + Practical) 7
(With trading strategies on options, stocks, forex - live streaming of quotes, order routing, executions) Interactive Brokers API. NEST Trading Platform API. Sterling Traders. MetaTrader4, MetaTrader5. FXCM

Final Test

Students can select above course work with programming languages:
Python | C#.NET | JAVA

Introduction to Algorithmic Trading: 2
What is Algorithmic Trading? Steps to set up algorithmic trading desk. Types of Algorithmic trading strategies. (Scalping, Jobbing, Arbitrageur, Technical Indicators / Quant Indicators trading strategies, Pair Trading). Theory + Practical. What is High frequency trading (HFT)? What is Co – Location? Logistics of algorithmic / automated trading. Machine Learning / Artificial Intelligence.

What is BackTesting / Simulation? (Theory + Practical) 4
Introduction. Requirements for backtesting. How to do backtesting? Advantages for backtesting. Limitation of backtesting. How to optimize backtesting process. Tools for backtesting and analysis. Simulation / backtesting reports and analysis. What is risk: reward ratio? What is peak to trough? What is drawdown? (F&O), ETFs, Mutual Funds.

SQL Database: (Theory + Practical) 6
Introduction. SQL Queries. SQL Joins. SQL Stored Procedures. Exercise and examples.

Project with strategies implementation: (Practical) 8
Option trading strategies (Conversal reversal spread strategy, Butterfly spread strategy, Calendar spread strategy, Straddle spread strategy). Pair Trading (forex & stocks) Trend momentum based strategies (technical indicators: SMA, EMA, MACD, RSI, etc) Mathematical / Quantitative models & Machine Learning based trading models (Linear regression, straight lines, statistics)

We at **Tvisi Institute of Algorithmic Trading (TIAT)** look to offer courses for programmers and non programmers to train them into quantitative or algorithmic trading programmers. Our course structure includes widely used programming languages like Python, C#.NET, JAVA, MQL, AFL with SQL database (basic and advanced SQL queries, stored procedures).

Our course is designed for traders, programmers, non-programmers to set up their own automated trading desk. Students will learn about capital markets (stock markets, forex markets, commodities markets). Students will learn about different trading platforms API like Interactive Brokers, Sterling Traders, Amibroker, Metatrader 4, Nest Trading platform, Trading Technologies and more.

Our course is also designed for students who wants to learn data analytics, data simulation, data modelling, who wants to sharpen their skills in different programming languages. Our course structure will serve as a road map to artificial intelligence and data science.

WHO SHOULD JOIN OUR COURSES?

Who wants to...
› Learn programming from scratch
› Learn algorithmic and automated trading
› Implement their trading strategies on their own
› Scale their programming and analytical skills in capital markets
› Build their career as quant programmers in reputed hedge funds, trading firms

Tvisi Institute of Algorithmic Trading (TIAT) is a part of Tvisi Algo Systems LLP. *(www.tvisi.in)*

TVISI INSTITUTE OF ALGORITHMIC TRADING

LEARN WITH CLARITY, GATEWAY TO BE A ROBUST COMPUTER PROGRAMMER

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