Stamatics Summer Project

Options Strategies And Market Analysis

Mentors:

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What will we learn?

The project begins with basic terminologies related to financial market so as to understand the subsequent Concepts, Models and Strategies easily. The project's major focus will be:

- **Derivative Contracts**
- **Option Pricing Models -Black Scholes Model , Monte Carlo Simulation**
- **Basic & Complex Option Strategies: Long put, Straddle, Butterfly, Iron Condor, etc.**
- **Back testing on real dataset.**
- **Risk Management Techniques : Hedging, position sizing, diversification, stop loss, etc.**

Tentative Weekwise Plan

Week 01

Introduction to Options Trading

1. Financial terminologies used in financial market
2. Basics of options trading.

Week 02

Introduction to Pricing Model

1. Study of Binomial pricing model and it’s implications
2. Black scholes model
3. Monte Carlo Simulation

Week 03

Time value of money

1. Understanding of options greeks
2. Overview of volatility, implied volatility, rank, percentile, etc.

Tentative Weekwise Plan

Week 04 & 05

Option Strategies

1. Exploring basic options strategies such as long call, long put, covered call and put protective.
2. Complex options strategies such as strangles, iron condors, and butterflies.
3. Beck testing over the trading platform over sensibull and frontpage.

Week 06

Market analysis

1. Stock movement trends using momentum, volume and volatility.
2. Impact of market news and events on stock prices movement.

Tentative Weekwise Plan

Week 07

Fundamentals of Technical Indicators

1. Introduction to technical indicators like MACD, SMA, EMA, Bollinger Bands, Keltner Channel etc.
2. Implementation of few indicators in python.
3. Finding resistance and support lines and overview of various candlestick patterns.

Week 08

Risk management and Hedging Techniques

1. Understand the importance of risk management in options trading.
2. Learn how to use options to hedge portfolio against adverse price movements.

Logistics :

- Estimated Project Duration : 7-8 weeks
- Estimated Time Commitment : 8-10 hrs/week
- Intended Audience : Y23s
- Assignments per week

Prerequisites :

- Basic Python knowledge
- Interest in Finance

Deliverables :

- Knowledge of derivatives
- Understanding of pricing models
- Option Strategies Application
- Risk Management (Portfolio hedging, etc.)
- Assignments Submission

Thank You

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