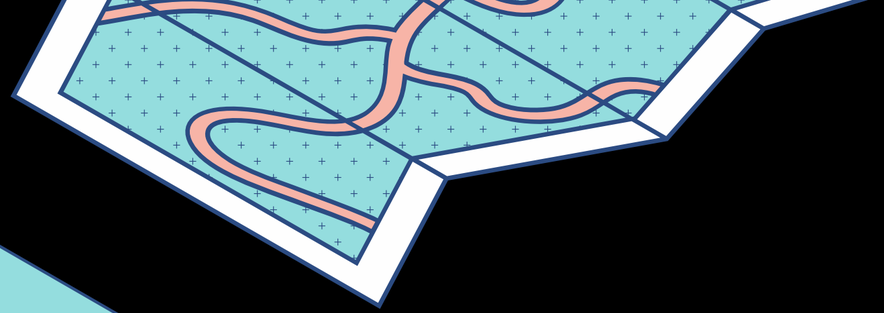
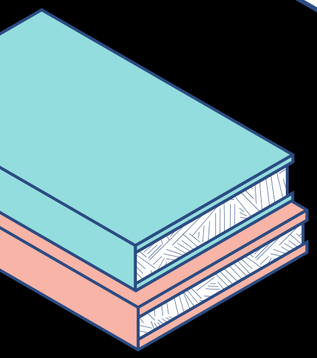
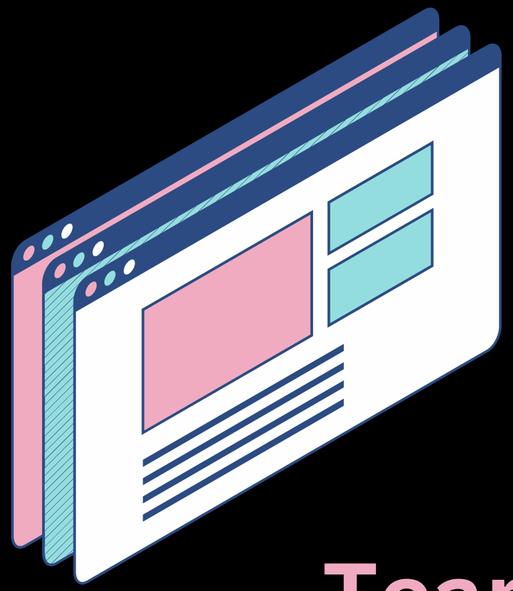
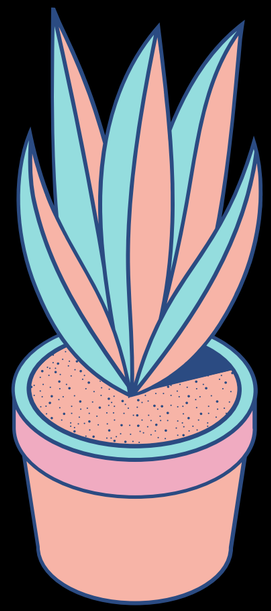








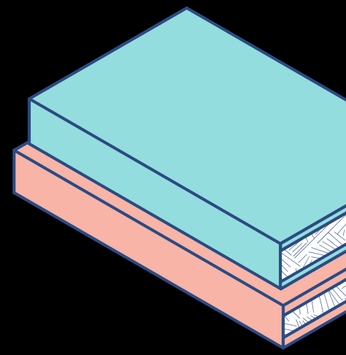
Hackathon presentation for

Edelweiss Global Markets

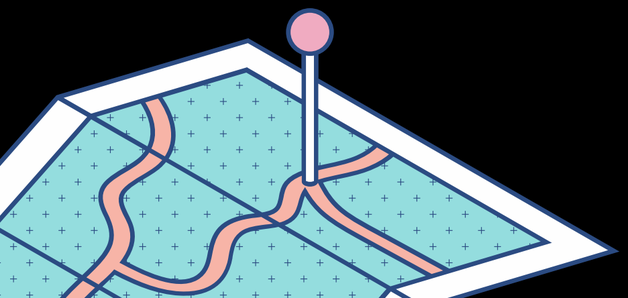
Team- JOVKA

Members- OM, VIVEK, KRISH, ARYAN

TEAM DESCRIPTION

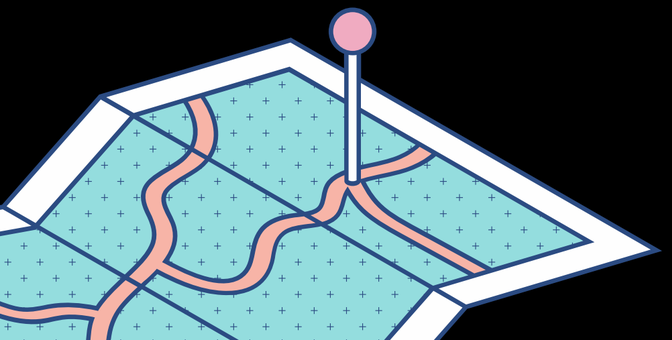


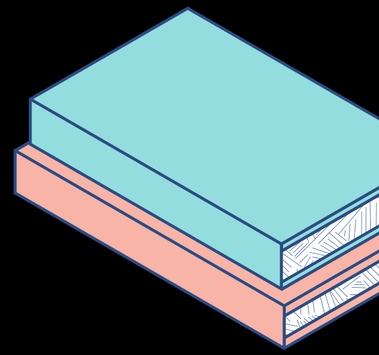
Our team consists of a group of enthusiastic beginner coders who are eager to learn and explore the world of programming. Although we may be new to coding, we bring a passion for technology and a strong drive to develop our skills. We believe in the power of collaboration, mutual support and continuous learning.

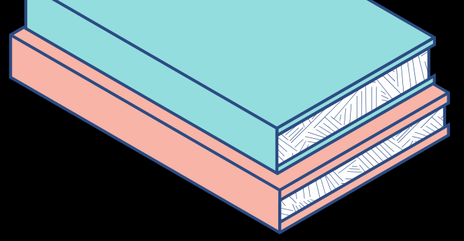


PROBLEM STATEMENT

Build an Options Chain Tool
that processes the market data , calculates Implied volatility(IV) and display as an options chain screen

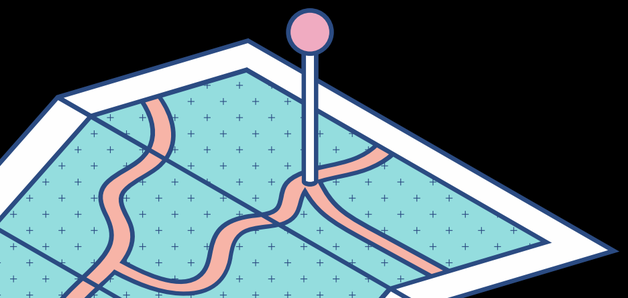






OVERVIEW

- Develop a user interface that displays the option chain screen.
- Implement a mechanism to retrieve real-time or historical market data
- Generate and display the options chain based on the retrieved market data.
- Develop an algorithm to calculate the implied volatility for each option in the options chain



BLOCK DIAGRAM

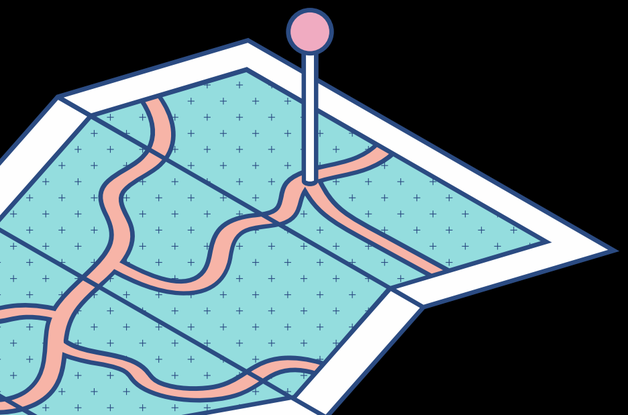
OPTION CHAIN TOOL WEBSITE

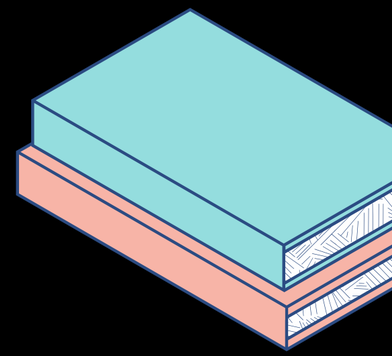
USER INTERFACE

RETRIEVE MARKET DATA

IMPLIED VOLATILITY CALCULATION

OPTION CHAIN GENERATION





PLAN TO IMPLEMENT

- **Socket Setup:** The TCP/IP server will listen for incoming connections and handle the communication with clients.
- **Client Interaction:** Develop a client script that connects to the socket server and sends the required input data for the Options Chain Tool.
- **Data Parsing and Validation:** Implement code to receive and parse the incoming data from the client. Validate the received input to ensure it meets the expected format and criteria.
- **Market Data Retrieval:** Once the input data is validated, integrate the functionality to retrieve market data for the underlying asset using the provided input.
- **Implied Volatility Calculation :** Implement the algorithm to calculate the implied volatility for each option based on the retrieved market data.
- **Options Chain Generation:** Generate the options chain using the calculated implied volatility and other relevant data obtained from the socket input.
- **Response Generation :** Once the options chain is generated, prepare the response data in a suitable format (e.g., JSON, XML) to send back to the client over the socket connection.

FUTURE SCOPE

Enhanced Visualization:

- Advanced charting and visualization capabilities
- Interactive graphs, heatmaps, customizable visuals

Options Strategy Recommendations:

- Provide users with strategy recommendations based on risk profile and market conditions

Multi-Asset Support:

- Extend support for options chains and implied volatility calculations for various underlying assets

Real-Time News and Alerts:

- Incorporate real-time news feeds and alerts related to the underlying asset and options market

Mobile Application:

- Develop a mobile application for convenient access and analysis of options chain data

Github Link

https://github.com/viv50578/EdelweissHack.git