Brief report for project:

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**Introduction**:

We would like to base our project on the correlation between stocks prices with their industry index. For example, we can get long position in AMD’s stock and hold short position in NASDAQ 100 mini futures. We can also make a portfolio consisting of several stocks from different industries and hedge it with futures, options, even swaps.

Considering we are yet not so familiar with the market, we decide to make our strategy simple.

We would like to set up a portfolio of three stocks and hedge it through S&P 500 INDEX futures and NASDAQ 100 futures. We will calculate the correlation between our portfolio asset and the futures prices, using the recent 3-month-long data. Hence, we can figure out a size, of which we should hold the short position on futures.

The data would come from Bloomberg terminal. And the output would be the quantity of futures we chose. The input would be the downloaded trading data during the last 3 months. Furthermore, we’ll work on to make the program catch the spot price direct from the website if we have extra time.

As to say, the program will return the number of futures we should hold after we input the price data, which would be dynamic adjusted process.

Other optional derivatives used to hedge risk:

construct ETF of SP&500,based on market capital,  compare with SP&500

ETF  vanguard group

vix  volatility index         implied volatility