Visualize Monthly Mean, Median and Std of S&P500 Returns - Question & Answer

# Question:

Visualize the monthly mean, median, and standard deviation of daily S&P500 returns from a given dataset.

# Answer (Code):

# Import data here  
sp500 = pd.read\_csv('sp500.csv', parse\_dates=['date'], index\_col='date')  
  
# Calculate daily returns here  
daily\_returns = pd.Series(sp500.squeeze()).pct\_change()  
  
# Resample and calculate statistics  
stats = daily\_returns.resample('M').agg(['mean', 'median', 'std'])  
  
# Plot stats here  
stats.plot()  
plt.show()

## Question Explanation (20 words):

The task is to compute monthly statistics (mean, median, std) of daily returns from the S&P500 dataset.

## Answer Explanation (20 words):

We use pct\_change to find returns, resample by month, apply agg for statistics, and then plot the results.

## Reference Image:

