**Report of the Barkan APP:**

**Introduction:**

* Our goal in Developing Barkan app was for it to be used by people interested in Stock Finance mainly for Investing. They will be using the app to develop strategies and make appropriate decisions based on the data shown in the APP.
* In this report we will give u a summary about how we developed this app, some problems and limitation we ran into and possible improvement that could be made down the line in the future.

**Background:**

* After the initial idea we wanted to use something that is both familiar and compatible with Python. After doing some digging, we came across shiny for python library. This came as a fortunate surprise as we had prior experience using shiny in R, and after some more research we came across an article in that not only showed us that the idea is possible but also ended up as the foundation of our script.

**Graphical user interface, text, application, email

Description automatically generated**

**Link:** [**https://appsilon.com/shiny-for-python-introduction/**](https://appsilon.com/shiny-for-python-introduction/)

* As I mentioned above this article showed us how to move forward with our idea only it was a limited as it was fetching data from Yahoo Finance lacking in plots, User interface and also a way to do a comparison but this gave us some groundwork to work on .

**Project:**

* First we made it fetch data from Tiingo using their API , then we added a way to do comparison between stocks , added more plots for different types of analysis and made the UI more intuitive . After code got bigger, we reorganized the code and opted for the “divide and conquer” approach this made it easier to add or modify and to look for errors in the code.
* Most of the modification came from the Shiny for python , pandas and matplotlib libraries.

Link : <https://pandas-datareader.readthedocs.io/en/latest/readers/tiingo.html>

<https://matplotlib.org/stable/plot_types/basic/index.html>

<https://shiny.rstudio.com/py/api/>

Before:

Chart, line chart

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After modifications:

Chart, line chart

Description automatically generated

* We noticed that for our plots using matplotlib lacked complexity for a good analysis this is when tried to use other packages like plotly and Bokeh but sadly with shiny for python being in alpha as it is a new project the compatibility with other libraries was not always there if you want to avoid re-inventing the wheel.

Conclusion:

* Overall, we can say the goal was achieved, only as pointed out by our professor reality is often different from expectations and the results were subpar using shiny for python. But in the processes of developing this app, we learned important skills like how to develop an app work , incorporate different libraries and how to do debugging among other skills.
* If I had to do something differently, I would use Dash from plotly to make the app. As shiny was made for R in the first place and trying to use in python is still a work in progress as compared to Dash used by plotly that has been made using python for python which would have made the work 10 times easier with plenty of examples .This is a likely a future project that I would do in the future.

By Yassine Kandili , Saul Barrientos Rivera