SwiftGrasp

A web app to help you quickly digest the key financial statement information and the stock performance for a publicly traded company.

Installation Guide

1. Install `poetry` if you don't have it yet

```
pip install poetry
```

2. Make sure that you're on the `base` environment if not already, you can do the command below to get to the `base` environment if you're on some other conda environment

```
conda deactivate
```

3. Create a new conda environment

```
conda create -n swift python=3.9
```

4. Activate the environment you just created

```
conda activate swift
```

5. Navigate to the unzipped `SwiftGraspWebApp` folder

```
cd ~/your/path/to/SwiftGraspWebApp
```

6. Install the dependencies by poetry

```
poetry install
```

7. Run the web app locally by

```
streamlit run src/SwiftGrasp/app.py
```

Now you should be able to see the web app up and running locally with the URL displayed on the terminal.

Project Status

Completed

- Functionality to input ticker by pre set dropdown list
- Functionality to input ticker by text input
- Functionality to check whether ticker is valid
- Functionlity to pull the financial statement data
    - Balance sheet
    - Income statement
    - Cash statement
- Functionality to pull the stock data
- Interactive plots
    - Wheel zoom (in/out) for plots
    - Reset plot
    - Drag plot
    - Input of what columns are of user's interest
    - Input of time range for data pulling and relationship calculation
- Functionality to perform causual inference of whether there're statistical significant change by the statement posting date, achieved by Bayesian structural time series model.
- Front end interface by streamlit, deployed locally.

ToDo

- Need to create an auto system to calculate/update the structural baysesian time series.
- ^Maybe create a database to store some calculated data will be helpful to the first bullet point.
- Add analytic support for financial statement date (hopefully find more data).
- Deploy to Heroku.
- Consider adding fuzzy match feature on user text input.