

**Computer Science Department**  
**CS632P – Topics Python Programming (CRN: 23765/23912)**  
**Spring 2021**

## Project #2 (Due 28-Apr-2021)

In this project you will need to use Python's **dash** and **plotly** modules.  
 Device a Python app that will read the following dataset (securities\_prices\_volumes.csv)

Date	Volume	Adj Close	Stock	Exchange
1/2/2020	135480400	74.33351135	AAPL	NYSE
1/3/2020	146322800	73.61083984	AAPL	NYSE
1/6/2020	118387200	74.19739532	AAPL	NYSE
1/7/2020	108872000	73.84844208	AAPL	NYSE
1/8/2020	132079200	75.03638458	AAPL	NYSE
1/9/2020	170108400	76.63021851	AAPL	NYSE
1/10/2020	140644800	76.80345917	AAPL	NYSE
1/13/2020	121532000	78.44432068	AAPL	NYSE
1/14/2020	161954400	77.38506317	AAPL	NYSE
1/15/2020	121923600	77.05342865	AAPL	NYSE

The app will have the following functionality, components:  
**Upload** the csv, after browsing into your machine, into the app.

### Step 1: Select your File



Select a File to Upload

Browse

Parse Data

After clicking on **parsing** data, select the appropriate **data type** for each of the columns. Do provide the option to **'ignore'** any column:

### Step 2: Describe your data



Column Name	Data Type	Ignore?
Date	Date-Time × ▾	<input type="checkbox"/>
Volume	Numerical × ▾	<input type="checkbox"/>
Adj Close	Numerical × ▾	<input type="checkbox"/>
Stock	String/ Categorical × ▾	<input type="checkbox"/>
Exchange	String/ Categorical × ▾	<input type="checkbox"/>

Then preview the data, along with a corresponding line graph (you can use your own names/labels for each column):

## Step 3: Preview your data

?



Curve Identifiers to Display

× AAPL

Date	Volume	Adj Close	Stock	Exchange
Primary Date	Numerical	Primary Value	Curve Identifier	String/ Categorical
Base	Base	Base	Base	Base
2020-01-02T00:00:00	135480400	74.33351135	AAPL	NYSE
2020-01-03T00:00:00	146322800	73.61083984	AAPL	NYSE
2020-01-06T00:00:00	118387200	74.19739532	AAPL	NYSE
2020-01-07T00:00:00	108872000	73.84844208	AAPL	NYSE
2020-01-08T00:00:00	132079200	75.03638458	AAPL	NYSE

Should you choose more than one security from the 2<sup>nd</sup> drop-down list, the line graph should look like: (You could easily plot 'Volume' instead of 'Adj Close' price from the 1<sup>st</sup> drop-down list)

Feature Name to Plot

Adj Close
× ▼

Securities to Display

× AAPL
× INTC
× ▼

Plot of Adj Close vs Date

