* Scrum Master for Next Week
  + Chelsea Miller
* List at least 5 things the team did well and will continue doing
  + - Working in the Python code
    - Looking forward to developing visualizations in Tableau
    - Sharing ideas
    - Developing code
    - Working with Trello
* List at least 3 things the team did poorly and how you will mitigate them next sprint
  + - Time management
    - Workspace
    - Weekly meeting
* List shout-outs to any team members for excelling in any way
  + Chelsea Miller – Taking care of Trello for this week
* What did you learn as a team this week?
  + - How to share ideas
* What did you learn as an individual this week?
  + - How to work while life is being busy

CODE

Libraries

import numpy as np

import pandas as pd

import matplotlib.pyplot as plt

from matplotlib.pylab import rcParams

rcParams['figure.figsize'] = (10,5)

import seaborn as sns

sns.set\_style('darkgrid')

from statsmodels.graphics.tsaplots import plot\_acf,plot\_pacf

from statsmodels.tsa.seasonal import seasonal\_decompose

from statsmodels.tsa.stattools import adfuller

from statsmodels.tsa.statespace.sarimax import SARIMAX

import warnings

warnings.filterwarnings('ignore')

Loading Data

coffee\_raw = pd.read\_csv('/Users/galexiss/Documents/Education/Data Science/DSO110 - Final Group Project/Coffee Daily Price/coffee.csv')

Data Wrangling

coffee\_raw.Date = pd.to\_datetime(coffee\_raw.Date, yearfirst=True)

coffee\_raw.set\_index('Date', inplace = True)

coffee = coffee\_raw.asfreq('b', 'ffill')

Exploratory Analysis

fig,axes = plt.subplots(2,2,figsize=[15,7])

fig.suptitle('Coffee Price',size=24)

## Resampling to Daily freq (Original Data)

axes[0,0].plot(coffee.Close)

axes[0,0].set\_title("Daily",size=16)

## Resampling to Monthly freq

axes[0,1].plot(coffee.Close.resample('M').mean())

axes[0,1].set\_title("Monthly",size=16)

## Resmapling to Quarterly freq

axes[1,0].plot(coffee.Close.resample('Q').mean())

axes[1,0].set\_title('Quarterly',size=16)

## Resampling to Annualy freq

axes[1,1].plot(coffee.Close.resample('A').mean())

axes[1,1].set\_title('Annualy',size=16)

plt.tight\_layout()

plt.show()

Using statsmodels

data\_close\_price = coffee.Close.resample('Q').mean()

decompose\_result = seasonal\_decompose(data\_close\_price, model = 'additive')

## Systematic Components

trend = decompose\_result.trend

seasonal = decompose\_result.seasonal

## Non-Systematic Components

residual = decompose\_result.resid

decompose\_result.plot();