

NEW YORK TIMES ARTICLES AND SHARE PRICE RETURN / VOLATILITY

STAT 418 Final Project

Ah Sung Yang

May 7, 2019

DATA SOURCE

- Obtained articles from **New York Times Article Search API**
- Searched all the articles on Apple Inc. published from Jan. 1, 2014 to Dec. 31, 2018 (5 years)
 - Besides the query, also used the filter query field to ensure articles have Apple Inc in their organizations field
- Extracted the following information from the JSON file
 - abstract, date, desk, document type, headline, id, locations, organizations, snippet, source, subjects, type of material, url, word count
- For the share price data, used the python package called yahoo_financial to download daily share prices from Yahoo Finance API

abstract	date	desk	doctype	headline	id	locations	organization	snippet	source	subjects	type
b'Apple's iCloud data service works...	2014-01-07	Business	b'article'	b'Taking Along iCloud Calendars'	5c88530a40d36ff070b32a3a		[Apple Inc, iCloud, Samsung Group, Google Inc]	b'Apple's iCloud data service works...	The New York Times	[Android (Operating System), Smartphones]	Question
b'In March, Apple and Samsung Electronics are ...	2014-01-09		b'article'	b'Apple and Samsung Chiefs to Meet a Mediator ...	5c883a5240d36ff070ad279b		[Apple Inc, Samsung Electronics Co]	b'In March, Apple and Samsung Electronics are ...	The New York Times	[Inventions and Patents, Smartphones, Suits an...]	News
b'Last year was the first in which personal co...	2014-01-10		b'article'	b'For PC Makers, the Good News on 2013 Is That...	5c883a5240d36ff070ad27d7		[Apple Inc, Dell Inc, Gartner Inc, Hewlett-Pack...	b'Last year was the first in which personal co...	The New York Times	[Computers and the Internet, Desktop Computers]	News
b'A summary of differences in the latest Windo...	2014-01-10	Business	b'article'	b'Changes in Windows 8.1. With Skype Replacing...	5c88530a40d36ff070b32a3c		[Apple Inc, Microsoft Corporation, Skype Techn...	b'A summary of differences in the latest Windo...	The New York Times	[Windows (Operating System), Mobile Applicatio...]	Question
b'To draw young buyers and increase its market...	2014-01-13	Business	b'article'	b'Cost of Cool in India? An iPhone'	5c8873ec40d36ff070b92dac	[India]	[Apple Inc]	b'To draw young buyers and increase its market...	The New York Times	[iPhone, Prices (Fares, Fees and Rates), Smart...	News

doctype	id	source	id	type	id
0	b'article'	1502	4	The New York Times	1538
1	b'multimedia'	53	2	International New York Times	8
2	b'paidpost'	1	3	Reuters	6
			1	CNBC	3
			0		1
			5	News	1212
			9	Question	206
			8	Op-Ed	47
			14	Video	24
			2	Interactive Feature	23

FINAL PROJECT

NUMBER OF ARTICLES: 1,556
(JAN. 1, 2014 – DEC. 31, 2018)

- Find the relationship between the daily number of articles and the share price returns or stock volatility
- Further create a Shiny app or other interactive tool that illustrates both data at once
- Areas to explore:
 - Try the same analysis on a different company/stock or on a stock market index
 - Try it on a weekly or monthly basis
 - Try it with stock volatility
 - Perform text analysis on the headline or snippet

