

data_exploration

May 14, 2019

```
In [32]: import numpy as np
import pandas as pd
from matplotlib import pyplot as plt
import math
```

We'll begin by reading in all of the data and printing a few rows from each CSV file

```
In [22]: analysts = pd.read_csv('./data/analysts.csv')
print(analysts.shape)
analysts.head(10)
```

(187327, 12)

```
Out [22]:
```

	num	file-company-name	file-exchange	file-symbol	\
0	1	Ark Restaurants Corp.	NASDAQ	ARKR	
1	2	UniFirst Corp.	NYSE	UNF	
2	2	UniFirst Corp.	NYSE	UNF	
3	2	UniFirst Corp.	NYSE	UNF	
4	2	UniFirst Corp.	NYSE	UNF	
5	3	Resources Connection, Inc.	NASDAQ	RECN	
6	3	Resources Connection, Inc.	NASDAQ	RECN	
7	3	Resources Connection, Inc.	NASDAQ	RECN	
8	4	Sonic Corp.	NASDAQ	SONC	
9	4	Sonic Corp.	NASDAQ	SONC	

	file-published-on	file-title	\
0	2017-01-01 06:49:04	Ark Restaurants' (ARKR) CEO Michael Weinstein ...	
1	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...	
2	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...	
3	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...	
4	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...	
5	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...	
6	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...	
7	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...	
8	2017-01-04 21:41:07	Sonic's (SONC) CEO Cliff Hudson on Q1 2017 Res...	
9	2017-01-04 21:41:07	Sonic's (SONC) CEO Cliff Hudson on Q1 2017 Res...	

	company-name	quarter-year-event \
0	Ark Restaurants Corp.	Q4 2016 Earnings Conference Call
1	UniFirst Corporation.	Q1 2017 Earnings Conference Call
2	UniFirst Corporation.	Q1 2017 Earnings Conference Call
3	UniFirst Corporation.	Q1 2017 Earnings Conference Call
4	UniFirst Corporation.	Q1 2017 Earnings Conference Call
5	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
6	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
7	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
8	Sonic Corp.	Q1 2017 Results Earnings Conference Call
9	Sonic Corp.	Q1 2017 Results Earnings Conference Call

	symbol-exchange	symbol	datetime \
0	NaN	ARKR	December 30, 2016 10:00 A.M. ET
1	NaN	UNF	January 4, 2017 10:00 AM ET
2	NaN	UNF	January 4, 2017 10:00 AM ET
3	NaN	UNF	January 4, 2017 10:00 AM ET
4	NaN	UNF	January 4, 2017 10:00 AM ET
5	NaN	RECN	January 4, 2017 17:00 ET
6	NaN	RECN	January 4, 2017 17:00 ET
7	NaN	RECN	January 4, 2017 17:00 ET
8	NaN	SONC	January 04, 2017 05:00 PM ET
9	NaN	SONC	January 04, 2017 05:00 PM ET

	analyst-company
0	Bruce Geller - DGHM
1	John Healy - Northcoast Research
2	Kevin Steinke - Barrington Research Associates...
3	Joe Box - KeyBanc Capital Markets
4	Justin Hauke - Robert W. Baird & Company, Inc.
5	Andrew Steinerman - JPMorgan
6	Kevin McVeigh - Deutsche Bank
7	Mark Marcon - Baird
8	Greg Francfort - Bank of America
9	Nicole Miller - Piper Jaffray

```
In [23]: execs = pd.read_csv('./data/executives.csv')
print(execs.shape)
execs.head(10)
```

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(111916, 12)
```

```
Out[23]:
```

	num	file-company-name	file-exchange	file-symbol \
0	1	Ark Restaurants Corp.	NASDAQ	ARKR
1	1	Ark Restaurants Corp.	NASDAQ	ARKR
2	2	UniFirst Corp.	NYSE	UNF
3	2	UniFirst Corp.	NYSE	UNF

4	3	Resources Connection, Inc.	NASDAQ	RECN
5	3	Resources Connection, Inc.	NASDAQ	RECN
6	3	Resources Connection, Inc.	NASDAQ	RECN
7	4	Sonic Corp.	NASDAQ	SONC
8	4	Sonic Corp.	NASDAQ	SONC
9	5	Walgreens Boots Alliance, Inc.	NASDAQ	WBA

	file-published-on	file-title \
0	2017-01-01 06:49:04	Ark Restaurants' (ARKR) CEO Michael Weinstein ...
1	2017-01-01 06:49:04	Ark Restaurants' (ARKR) CEO Michael Weinstein ...
2	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
3	2017-01-04 13:33:06	UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
4	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...
5	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...
6	2017-01-04 23:16:06	Resources Connection's (RECN) CEO Kate Duchene...
7	2017-01-04 21:41:07	Sonic's (SONC) CEO Cliff Hudson on Q1 2017 Res...
8	2017-01-04 21:41:07	Sonic's (SONC) CEO Cliff Hudson on Q1 2017 Res...
9	2017-01-05 16:33:05	Walgreens Boots Alliance's (WBA) CEO Stefano P...

	company-name	quarter-year-event \
0	Ark Restaurants Corp.	Q4 2016 Earnings Conference Call
1	Ark Restaurants Corp.	Q4 2016 Earnings Conference Call
2	UniFirst Corporation.	Q1 2017 Earnings Conference Call
3	UniFirst Corporation.	Q1 2017 Earnings Conference Call
4	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
5	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
6	Resources Connection, Inc.	Q2 2017 Earnings Conference Call
7	Sonic Corp.	Q1 2017 Results Earnings Conference Call
8	Sonic Corp.	Q1 2017 Results Earnings Conference Call
9	Walgreens Boots Alliance, Inc.	Q1 2017 Results Earnings Conference Call

	symbol-exchange symbol	datetime \
0	NaN ARKR	December 30, 2016 10:00 A.M. ET
1	NaN ARKR	December 30, 2016 10:00 A.M. ET
2	NaN UNF	January 4, 2017 10:00 AM ET
3	NaN UNF	January 4, 2017 10:00 AM ET
4	NaN RECN	January 4, 2017 17:00 ET
5	NaN RECN	January 4, 2017 17:00 ET
6	NaN RECN	January 4, 2017 17:00 ET
7	NaN SONC	January 04, 2017 05:00 PM ET
8	NaN SONC	January 04, 2017 05:00 PM ET
9	NaN WBA	January 05, 2017, 08:30 AM ET

	executive-positions
0	Bob Stewart - President and Chief Financial Of...
1	Michael Weinstein - Chairman and Chief Executi...
2	Ronald Croatti - President and CEO
3	Steven Sintros - SVP and CFO

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4         Alice Washington - Interim General Counsel
5         Kate Duchene - Chief Executive Officer
6         Herb Mueller - Chief Financial Officer
7         Cliff Hudson - CEO
8         Claudia San Pedro - CFO
9 Gerald Gradwell - Senior Vice President, Inves...

```

```

In [24]: qna = pd.read_csv('./data/qna.csv')
         print(qna.shape)
         qna.head(10)

```

(1828257, 14)

```

Out[24]:  num      file-company-name  file-exchange  file-symbol  file-published-on \
0      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
1      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
2      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
3      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
4      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
5      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
6      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
7      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
8      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04
9      1  Ark Restaurants Corp.      NASDAQ      ARKR  2017-01-01 06:49:04

```

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                                file-title      company-name \
0  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
1  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
2  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
3  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
4  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
5  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
6  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
7  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
8  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.
9  Ark Restaurants' (ARKR) CEO Michael Weinstein ...  Ark Restaurants Corp.

```

```

            quarter-year-event  symbol-exchange  symbol \
0  Q4 2016 Earnings Conference Call      NaN  ARKR
1  Q4 2016 Earnings Conference Call      NaN  ARKR
2  Q4 2016 Earnings Conference Call      NaN  ARKR
3  Q4 2016 Earnings Conference Call      NaN  ARKR
4  Q4 2016 Earnings Conference Call      NaN  ARKR
5  Q4 2016 Earnings Conference Call      NaN  ARKR
6  Q4 2016 Earnings Conference Call      NaN  ARKR
7  Q4 2016 Earnings Conference Call      NaN  ARKR
8  Q4 2016 Earnings Conference Call      NaN  ARKR

```

9 Q4 2016 Earnings Conference Call

NaN ARKR

	datetime	order	name \
0	December 30, 2016 10:00 A.M. ET	1	Operator
1	December 30, 2016 10:00 A.M. ET	2	Bruce Geller
2	December 30, 2016 10:00 A.M. ET	3	Bob Stewart
3	December 30, 2016 10:00 A.M. ET	4	Bruce Geller
4	December 30, 2016 10:00 A.M. ET	5	Bob Stewart
5	December 30, 2016 10:00 A.M. ET	6	Bruce Geller
6	December 30, 2016 10:00 A.M. ET	7	Bob Stewart
7	December 30, 2016 10:00 A.M. ET	8	Bruce Howard Geller
8	December 30, 2016 10:00 A.M. ET	9	Bob Stewart
9	December 30, 2016 10:00 A.M. ET	10	Bruce Geller

	content
0	[Operator Instructions] Our first question com...
1	Hi Good morning guys.
2	Hi Bruce, how are you?
3	Good thanks. Glad to hear things have turned a...
4	Yes, that includes an additional week last yea...
5	So it's not nearly as...
6	No, no.
7	as dismal as it might imply. What were the ap...
8	About 2%. Probably down, somewhere along that ...
9	Got it. Okay. Can you just kind of go through ...

```
In [25]: statements = pd.read_csv('./data/statements.csv')
print(statements.shape)
statements.head(10)
```

(204656, 14)

Out [25]:	num	file-company-name	file-exchange	file-symbol \
0	1	Ark Restaurants Corp.	NASDAQ	ARKR
1	1	Ark Restaurants Corp.	NASDAQ	ARKR
2	1	Ark Restaurants Corp.	NASDAQ	ARKR
3	1	Ark Restaurants Corp.	NASDAQ	ARKR
4	2	UniFirst Corp.	NYSE	UNF
5	2	UniFirst Corp.	NYSE	UNF
6	2	UniFirst Corp.	NYSE	UNF
7	2	UniFirst Corp.	NYSE	UNF
8	2	UniFirst Corp.	NYSE	UNF
9	3	Resources Connection, Inc.	NASDAQ	RECN

	file-published-on	file-title \
0	2017-01-01 06:49:04	Ark Restaurants' (ARKR) CEO Michael Weinstein ...
1	2017-01-01 06:49:04	Ark Restaurants' (ARKR) CEO Michael Weinstein ...

```

2 2017-01-01 06:49:04 Ark Restaurants' (ARKR) CEO Michael Weinstein ...
3 2017-01-01 06:49:04 Ark Restaurants' (ARKR) CEO Michael Weinstein ...
4 2017-01-04 13:33:06 UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
5 2017-01-04 13:33:06 UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
6 2017-01-04 13:33:06 UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
7 2017-01-04 13:33:06 UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
8 2017-01-04 13:33:06 UniFirst's (UNF) CEO Ronald Croatti on Q1 2017...
9 2017-01-04 23:16:06 Resources Connection's (RECN) CEO Kate Duchene...

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```

                                company-name      quarter-year-event \
0      Ark Restaurants Corp.  Q4 2016 Earnings Conference Call
1      Ark Restaurants Corp.  Q4 2016 Earnings Conference Call
2      Ark Restaurants Corp.  Q4 2016 Earnings Conference Call
3      Ark Restaurants Corp.  Q4 2016 Earnings Conference Call
4      UniFirst Corporation.  Q1 2017 Earnings Conference Call
5      UniFirst Corporation.  Q1 2017 Earnings Conference Call
6      UniFirst Corporation.  Q1 2017 Earnings Conference Call
7      UniFirst Corporation.  Q1 2017 Earnings Conference Call
8      UniFirst Corporation.  Q1 2017 Earnings Conference Call
9  Resources Connection, Inc.  Q2 2017 Earnings Conference Call

```

```

symbol-exchange symbol      datetime      order \
0      NaN      ARKR  December 30, 2016 10:00 A.M. ET      1
1      NaN      ARKR  December 30, 2016 10:00 A.M. ET      2
2      NaN      ARKR  December 30, 2016 10:00 A.M. ET      3
3      NaN      ARKR  December 30, 2016 10:00 A.M. ET      4
4      NaN      UNF    January 4, 2017 10:00 AM ET      1
5      NaN      UNF    January 4, 2017 10:00 AM ET      2
6      NaN      UNF    January 4, 2017 10:00 AM ET      3
7      NaN      UNF    January 4, 2017 10:00 AM ET      4
8      NaN      UNF    January 4, 2017 10:00 AM ET      5
9      NaN      RECN    January 4, 2017 17:00 ET      1

```

```

                                name      content
0      Presentation      NaN
1      Operator  Greetings, and welcome to the Ark Restaurants ...
2      Bob Stewart  Thank you, operator. Good morning, and thank y...
3  Michael Weinstein  Hi, everybody. If you read the release, we're ...
4      Presentation      NaN
5      Operator  Ladies and gentlemen, thank you for standing b...
6  Steven Sintros  Thank you and welcome to the UniFirst Corporat...
7  Ronald Croatti  Thank you, Steve. I'd like to welcome everyone...
8  Steven Sintros  Thanks, Ron. As Ron mentioned, revenues for th...
9      Presentation      NaN

```

Now let's look at a complete statement and its corresponding Q&A session.

```

In [43]: i = 0
         while(True):

```

```

        if i > 0 and statements.iloc[i, 11] == 1: break
        curr_speaker = str(statements.iloc[i, 12])
        print(curr_speaker + '\n')
        curr_content = str(statements.iloc[i, 13])
        print(curr_content + '\n')
        i += 1

print('=' * 75 + '\n')
print("Moving on to Q&A\n")
print('=' * 75 + '\n')

i = 0
while(True):
    if i > 0 and qna.iloc[i, 11] == 1: break
    curr_speaker = str(qna.iloc[i, 12])
    print(curr_speaker + '\n')
    curr_content = str(qna.iloc[i, 13])
    print(curr_content + '\n')
    i += 1

```

Presentation

nan

Operator

Greetings, and welcome to the Ark Restaurants Fourth Quarter and Full Year 2016 Results Confer

Bob Stewart

Thank you, operator. Good morning, and thank you for joining us on our conference call for the

Michael Weinstein

Hi, everybody. If you read the release, we're comparing a 52-week year against a 53-week year.

=====

Moving on to Q&A

=====

Operator

[Operator Instructions] Our first question comes from the line of Bruce Geller with DGHM. Pleas

Bruce Geller

Hi Good morning guys.

Bob Stewart

Hi Bruce, how are you?

Bruce Geller

Good thanks. Glad to hear things have turned around so far in the current quarter. Was that 7%

Bob Stewart

Yes, that includes an additional week last year. So when you're looking at it, you're comparing

Bruce Geller

So it's not nearly as...

Bob Stewart

No, no.

Bruce Howard Geller

as dismal as it might imply. What were the apples-to-apples comp be, if you could come up with

Bob Stewart

About 2%. Probably down, somewhere along that line, 2% to 3%.

Bruce Geller

Got it. Okay. Can you just kind of go through some of the trends by market? And then also, to t

Michael Weinstein

It's Michael, Bruce. There are - certainly, New York had a very strong 11 weeks. And we think v

Bruce Geller

Thank you.

Michael Weinstein

My pleasure Bruce.

Operator

Our next question comes from the line of Alan Goldberg, Private Investor. Please proceed with y

Unidentified Analyst

Good morning gentlemen. I am a private investor, but I'm not a novice investor. I have been in

Michael Weinstein

Please.

Unidentified Analyst

I live in Palm Beach and I am the one that travels 70 miles to get down there, more than once,

Michael Weinstein

Well, thank you very much. It's truly appreciated. I can address those issues with you. But st

Unidentified Analyst

Well, I don't know if you can still hear me, but very honestly in...

Michael Weinstein

I can.

Unidentified Analyst

In my previous life, I would have said, my God, this is the opportunity I've been waiting for.

Michael Weinstein

Yes. We have a problem here in terms of taking the company private. And number one is, I'm the

Unidentified Analyst

But I thought you've just agreed with me that we're both young men, sort of.

Michael Weinstein

We're very rigorous, but I don't want to sneeze one day and have a subordinated lender come to

Unidentified Analyst

I was just being a flippant. I understand completely. Go on please. I'm sorry.

Michael Weinstein

So those are the things, those are the parameters that are sort of controlling the fact that w

Unidentified Analyst

Would you like to sell it?

Michael Weinstein

Right. So when we bought it, we said, hey, this is earning \$1 million to \$1.5 million, probably

Unidentified Analyst

You know anybody in the world would grab that.

Michael Weinstein

Yes. So the same situation is true in Shuckers. The same situation is true in Alabama. These g

Unidentified Analyst

What about the situation of your - let's call it, your buyback program?

Michael Weinstein

Buyback program, quite honestly, was instituted for 2 reasons. Number one, we're looking at th

Unidentified Analyst

You have answered my questions, I thank you so much for your time. I would like to at sometime

Michael Weinstein

Thank you.

Unidentified Analyst

Thank you so much for the wonderful job you are doing and I appreciate it. Thank you so very m

Michael Weinstein

Thank you. I guess we are ready for other questions.

Operator

Our next question comes from the line of Jeff Kay [ph] Private Investor. Please proceed with y

Unidentified Analyst

Hi, good morning gentlemen and congratulations on continued good performance. I have a couple o

Michael Weinstein

We have two. One is Canyon Road on First Avenue and 75th Street, which is a small restaurant th

Bob Stewart

16.

Michael Weinstein

We have 16 years left on that lease. That lease was bought by a New York real estate developer

Unidentified Analyst

Yes, I'm familiar with it.

Michael Weinstein

We think we have a great installation. Reviews for Clyde's are sensational if you go to OpenTal

Unidentified Analyst

Okay. Thank you. And just a follow-up to the previous caller's question regarding possibly goin

Michael Weinstein

Yes. We had a few discussions with Simpson Thacher on that. And quite frankly, this may be very

Unidentified Analyst

Okay. Happy New Year.

Michael Weinstein

And the second point, we don't like to have calls on December 30 at 10:00 in the morning, espe

Unidentified Analyst

Alright. Happy and healthy New Year.

Michael Weinstein

Same to you.

Operator

Mr. Weinstein, theres no further questions at this time. So, I will turn it back to you for cl

Michael Weinstein

Well, thank you very much. I'm pleased that at least we have two people that seem to be very, v