CS 535: Assignment #7

Due on $11:59\mathrm{pm}$ March $31,\ 2018$

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Support your answer: include all relevant discussion, assumptions, examples, etc.

1.1 Question 1

1. Create a blogterm matrix. Start by grabbing 100 blogs; include:

```
http://f-measure.blogspot.com/
http://ws-dl.blogspot.com/
```

and grab 98 more as per the method shown in class. Note that this method randomly chooses blogs and each student will separately do this process, so it is unlikely that these 98 blogs will be shared among students. In other words, no sharing of blog data. Upload to github your code for grabbing the blogs and provide a list of blog URIs, both in the report and in github.

Use the blog title as the identifier for each blog (and row of the matrix). Use the terms from every item/title (RSS) or entrytitle (Atom) for the columns of the matrix. The values are the frequency of occurrence. Essentially you are replicating the format of the "blogdata.txt" file included with the PCI book code. Limit the number of terms to the most "popular" (i.e., frequent) 1000 terms, this is after the criteria on p. 32 (slide 8) has been satisfied. Remember that blogs are paginated.

1.2 Answer 1

To start with I used the following bash program 01_getblog.sh to gather 150 blogs. This program created a file called blogurl.txt. Examples of blogurl.txt are:

```
http://ridingaborrowedbike.blogspot.com/?expref=next-blog http://theslowmusicmovement.blogspot.com/?expref=next-blog http://www.gypsyrhapsody.com/?expref=next-blog http://nathaliealves.blogspot.com/?expref=next-blog http://dana9morgan.blogspot.com/?expref=next-blog
```

I then manually added the following two blogs per requirement 1 to the top of the file.

```
http://f-measure.blogspot.com/
http://ws-dl.blogspot.com/
```

After adding the above blogs a ran 02_cleandata.py. This did two things. Removed the ?expref=next-blog from the end of every line in blogurl.txt and then added feeds/posts/default to the end of the line. I created two files to do this process called urlclean.txt and blogclean.txt. The blogclean.txt is listed below.

```
http://f-measure.blogspot.com/feeds/posts/default http://ws-dl.blogspot.com/feeds/posts/default http://ridingaborrowedbike.blogspot.com/feeds/posts/default http://theslowmusicmovement.blogspot.com/feeds/posts/default http://www.gypsyrhapsody.com/feeds/posts/default http://nathaliealves.blogspot.com/feeds/posts/default
```

I then used the 03_blogmatrix.py to create the blogdata1.txt.

```
def getwordcounts(url):
```

3

```
Returns title and dictionary of word counts for an RSS feed
   # Parse the feed
   d = feedparser.parse(url)
   wc = \{\}
   # Loop over all the entries
   for e in d.entries:
       if 'summary' in e:
           summary = e.summary
       else:
           summary = e.description
       # Extract a list of words
        words = getwords(e.title + ' ' + summary)
       words = getwords(e.title)
       for word in words:
           wc.setdefault(word, 0)
           wc[word] += 1
   return (d.feed.title, wc)
apcount = {}
wordcounts = {}
feedlist = [line for line in open('blogclean.txt', 'r')]
for feedurl in feedlist:
   try:
       (title, wc) = getwordcounts(feedurl)
       wordcounts[title] = wc
       for (word, count) in wc.items():
           apcount.setdefault(word, 0)
           if count > 1:
              apcount[word] += 1
   except:
       print('Failed to parse feed %s' % feedurl)
```

The following blogs did not parse correctly and were not included in any of the blogdata1

```
Failed to parse feed http://www.gypsyrhapsody.com/feeds/posts/default Failed to parse feed http://globalgoon.blogspot.com/feeds/posts/default Failed to parse feed http://momslilprincess.blogspot.com/feeds/posts/default Failed to parse feed http://globalgoon.blogspot.com/feeds/posts/default Failed to parse feed http://www.punkrockteaching.org/feeds/posts/default Failed to parse feed http://www.gypsyrhapsody.com/feeds/posts/default Failed to parse feed http://www.chrisanne-grise.com/feeds/posts/default Failed to parse feed http://www.chrisanne-grise.com/feeds/posts/default
```

I initally looked at the title only which had 14 words on it. This was enough to do any real data analysis with. I saved the data as blogdata1_titleonly.txt with the title words only. Here is the list of words and the first three blogs:

I then added the summary by changing the following line in the 03_blogmatrix.py program.

```
# Extract a list of words
words = getwords(e.title + ' ' + summary)

# words = getwords(e.title)
for word in words:
    wc.setdefault(word, 0)
    wc[word] += 1
```

I looked at the title and summary and had 1023 words. I believe this is enough to do some data analysis with. I saved the data as blogdata1.txt with the title words and summary. Here is the list of words:

Blog mid moments die goes brother totally simple player created knew named honestly listen lp fact happens american company series matter frank popular hearing god holding welcome c should stand minutes folk resp ect days problem quality such moved listener space mother media rough rest eight completely copy phone originally decided open takes somehow piano march gives scene verse posted though seem subject miss impressive adding http walk perhaps sad stories men ending mom songs normal book mind news clearly current singles john e friend close similar due english happen clear overall sides positive whatever cover p yourself river sex far co side putting shot america forget skin low learned bought giving surprised indie guitars lose en hate anyway decade random service look held false v hope every performance melodies twin school exciting lyrics fighting research directly heaven hold o appreciate doubt youth goal concert loud pictures understand forward perfect alternative g winter break becoming variety sharing remember somewhere anymore fingers mike absolutely mix bigger taking history six west international process game began wild lo weather earlier keeps highlights brilliant pull was slightly magazine features change dog playing moving voice loss driving end minor snow particular become journey below short done impossible added rarely cause months releases nick try blog guitarist el nice sky dancing friends sorry certainly saw books particularly included passing north april plan christmas longer effort real lack smith bed based create bass brand part seems focused call terms musicians ain lost radiohead heart followed help mean left hook emotional whole tell actual word because paper lead to together onto least trees middle dream otherwise begin knowing anna local write sun thinking offer r career amount font area group vocal via figure details prince wave questions thanks facebook sounding sit members self towards recording high else ben sets per wwwwithin bring fans hip forever talent awesome interesting kill add showing liked true sings hell songwriter control moment small cool community la monday experience official happy wonderful fight remix changing performed total single set closer stuck chance salt above lines choose singer passion allow stood throughout strange performances imagine purpose own trying al myself food bon pre dreams cry stone couldn likely soul store words culture eat l filled despite sitting picked ok wish da wall conversation lies trouble fully met bar easy answer parents corner share main couple east bit bright used need crowd ground plays james makes war doing none less table continue perfectly remains kids meaning machine spent famous hits fit personal extremely buy tunes classic why beats reading soundtrack room next lake names themselves shared please running thing realized november several demo split range thank animals soft brought backing artists latin paul baby attempt huge father recently writing turns team killing stop dark afraid staying fun moon across bad talking outro upcoming learn had alt catplenty latest apart title festival aren hours intro question character sat sing turn opportunity form shows went proud won run find various enjoyed might strong duo pain lives roll deal parts human believe hoping tend today released everyone thought many sweet birds morning general cut indeed studio july pop michael care albums missing style picture led excited glad learning came kept faith reach melody voices catchy york size sound response girl center nature seriously ahead usually especially smile took vocals public wants dear slow gone considered literally member tracks sense hit started effect camera era often daily air finding appeal nothing ways stuff knows half easily fresh age actually edge loved everything getting pink theme making date four star com places debut however car bob system guys start joy hand sea powerful weeks choice projects almost anthem nearly special large society already physical tomorrow attack given ability keeping among fellow hot check ep road including color warm u following titled week feature broken himself promise experiences solid themes turned concept kind instead material excellent incredible jazz link watch ready appear double top super ghost changes electric yeah magic wait eye highly closing king college interview between both entirely heads favorite outside each weekend point anyone note gets hair section under happening k power singing growing works result modern folks sort either sister against speak town feet fast catch weren step blue bowie example complete issue yes managed drummer helped living beginning leaves older featuring tape hands drum the front brown visit quite straight pieces fan haven biggest killer order reasons taken ourselves turning house ride creative leaving head st consider fair entire album better design records artist produced radio fall roots wonder de field white previous door extra yet collection young said tune clean women missed lived jack since type sent felt epic working known beyond focus online mostly incredibly likes state idea minute perform plastic difficult shouldn beach ideas worked

full tom children season male seven cold issues third him whether george lovely once lights emotions film event business fear case coming mark ocean x hour possibly black others alone on putclick became ears hard expect etc tried speaking simply listened rain name although drink number late keep deep written natural round sometimes involved feels pure money musical move string points read worth record past london ask bridge talented saying reality starts water seen street starting spend act listening any gonna able golden story notes b rolling needs thoughts acts looked taste original kid spot photo cd seeing female also woman problems times city hall evening probably leave mr pretty sounds n version midnight without memory fuck present national van nobody child para videos plus gold non behind constantly creating release reason shit available bill wrong decent blood unfortunately british certain stay face ones didn watching someone solo red class waiting its bands realize david talk told drop save results near vinyl eventually social truly asked rare body before hey caught august chorus beautiful pt spring return stars approach trip brian fantastic ten underground pick multiple needed boys drive three lucky gave using rather volume influence tour island dead project touch elements audience di meet heat park free job riffs piece recorded major force greatest standing weird ended further currently birthday drums former heavy production wanna energy five shadow review fire breaking electronic soon track del quiet having country happened october typical rock success truth early relationship shape june attention stage count along different second punk cannot tears unique called beat play changed person content means lots family seat use beauty list immediately crazy influences looks funny future everywhere found line alive band says recordings inspired finish ago walking tonight length anything son dropped enough f meant y video bottom los empty channel rhythm hearts seemed familiar boy wouldn quickly green course genre noticed inside few sold during justin february guess itself limited guy exactly maybe recent follow month alex obvious favourite possible falling upon website label noise interested earth dan setting important hop january tiny appeared dance final wanted same mention california honest obviously waves brain friday summer serious poor level packed wide finally later jones metal death mentioned eyes mine image notice quick does light playlist played higher fine apparently must sure until acoustic looking losing art feeling amazing reference message download isn post heard enjoy hear include lot support box links okay whose doesn anti born sleep movie party brings guitar girls definitely youtube strings club wrote kiss page blues ryan opening land damn comes

The list of blogs is listed below.

Oh Yes Jónsi!! hello my name is justin. My Name Is Blue Canary Indie, Rock And Other Great Music Music-Drop Magazine Radiohead Bootlegs CLOUDBUSTING Skiptrack music Primitive Offerings Green Eggs and Ham Mondays 8-10am Unexpectedly Bart (King!) simone goes The Northern Girl Games kaleidoscopekanvas-KK Stephanie Veto Photography Fran Brighton SEVEN1878 A to Zappa - Song of the day ORGANMYTH isyeli's Kid F She May Be Naked The Stearns Family Stereo Pills Helen McCookerybook Faland'hoje www.doginasweater.com Live Show Review Archive You might feel the same

The Run-Out Groove

Wyoming Beat

the traveling neighborhood

The Themes of My Life

BEEHIVE CANDY

Ringtone Lirik

Morgan's Blog

Paulina Gamero. Media Studies A2

Jasmine Hodge

headphonehead

earenjoy

não ponho música

Three Pups, One City

Web Science and Digital Libraries Research Group

Who needs a TV?

sweeping the kitchen

IoTube:)

Incarnate Green

New Amusements

PSI LAB

She's mad but she's magic. There's no lie in her fire.

F-Measure

KiDCHAIR

SEM REGRAS

fractalpress.gr

What Am I Doing?

The Campus Buzz on WSOU

Chemical Robert!

Lost in the Shuffle

mattgarman

Rants from the Pants

INDIEohren.!

Stories From the City, Stories From the Sea

FACSO S2 Blog sessions

Hip In Detroit

GLI Press

ELLIA TOWNSEND A2

One Stunning Single Egg

Pewter&Puddles

Pithy Title Here

Soundcheck

Angie Dynamo

Nothing But Ordinary Glances At Extraordinary Things

The Cheat Codes For Drugs

Spinitron Charts

Out of my Mind

Bleak Bliss

a duchess nonethelesss

Spotirama

The Fleshy Fresh

Dust and Water Studios

Words

Yestermorrow

The Nosebleed Section

Too Poppy

MAGGOT CAVIAR

Radio Rithard's Folkways

Stonehill Sketchbook

Encore

Friday Night Dream

macthemost

Happy Accidents

Captain Panda's Local & Independent Music Showcase

persona mia

MPC

The Slow Music Movement

Riley Haas' blog

The World's First Internet Baby

A Music History by Wayne R. Flower

hmmhannahmary

Skywriting

the fast break of champions

i'm in too truthful a mood

Did Not Chart

Luke And The Real Blog

2.1 Question 2

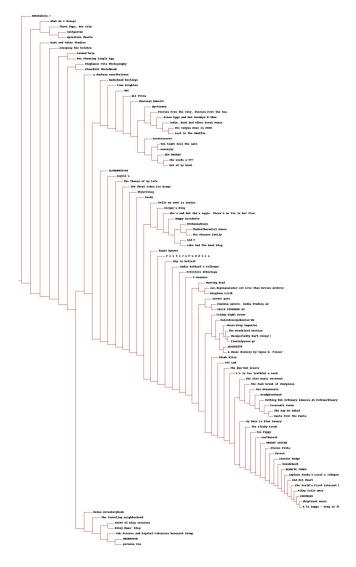
2. Create an ASCII and JPEG dendrogram that clusters (i.e., HAC) the most similar blogs (see slides 13 & 14). Include the JPEG in your report and upload the ascii file to github (it will be too unwieldy for inclusion in the report).

2.2 Answer 2

Because of some font issues with some of the blog titles. They needed by be removed. The following blogs were removed and a new file was created called blogdata1rm.txt file.

Oh Yes Jónsi!! não ponho música IoTube :)

To create the JPEG dendrogram from slide 13 & 14. I used programs 04_ascii.py and 05_demjpg.py. The ascii file printed on the screen and I copied it into file ascii.txt. The JPEG dendrogram can be seen below.



3.1 Question 3

3. Cluster the blogs using KMeans, using k=5,10,20. (see slide 25). Print the values in each centroid, for each value of k. How many iterations were required for each value of k?

3.2 Answer 3

For this I created 3 programs called 06_kmod_5.py, 06_kmod_10.py, 06_kmod_20.py. Each program listed the iterations required then printed out the Centriods. Each one is listed below.

For 5 KMeans it took 9 Iterations

1st Centriod

'hellomyname is just in.', 'CLOUDBUSTING', 'The Northern Girl Games', 'Stephanie Veto Photography', "isyeli's", 'KidF', 'Stephanie Veto Photography', 'KidF', 'KidF',

2nd Centriod

'Primitive Offerings', 'www.dog in a sweater. com Live Show Review Archive', 'Wyoming Beat', 'Ringtone Lirik', 'The Campus Beat', 'Ringtone Lirik', '

3rd Centriod

'Music-DropMagazine','GreenEggs and HamMondays 8-10 am','Unexpectedly Bart(King!)','kaleidoscopekan vas-KK','Shannon and Shannon and Sha

4th Centriod

'MyName Is Blue Canary', 'Indie, Rock And Other Great Music', 'Skiptrack music', 'simone goes', 'Ato Zappa Song of the day', 'Stephen Song of the day', 'S

5th Centriod

'Radiohead Bootlegs', 'Fran Brighton', 'ORGANMYTH', "Faland'hoje", 'Youmight feel the same', 'earenjoy', 'Web Science and 'Radiohead Bootlegs', 'Fran Brighton', 'ORGANMYTH', "Faland'hoje", 'Youmight feel the same', 'earenjoy', 'Web Science and 'Radiohead Bootlegs', 'Fran Brighton', 'ORGANMYTH', "Faland'hoje", 'Youmight feel the same', 'earenjoy', 'Web Science and 'Radiohead Bootlegs', 'Radiohead Bootlegs', 'Fran Brighton', 'ORGANMYTH', 'Radiohead Bootlegs', 'Youmight feel the same', 'earenjoy', 'Web Science and 'Radiohead Bootlegs', 'Radiohea

For 10 KMeans it took 7 Iterations

1st Centriod

'Skip track music', 'simonegoes', 'AtoZappa-Song of the day', 'StereoPills', 'The Run Out Groove', 'BEEHIVE CANDY', 'Jasman', 'StereoPills', 'StereoPills

0 1	0	1
nd	Cent	riod

'CLOUDBUSTING', 'The Northern Girl Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', "isyeli's", 'KidF', 'She Month Games', 'Stephanie Veto Photography', 'ORGANMYTH', 'ORGANMYTH', 'ORGANMYTH', 'ORGANMYTH', 'ORGANMY

3rd Centriod

'Indie, Rock And Other Great Music', 'Radiohead Bootlegs', 'Green Eggs and Ham Mondays 8-10 am', 'Fran Brighton', 'sweeping and Ham Mondays 8-10 am', 'Fran Brighton', 'sweeping 100 am', 'sweeping 100 a

4th Centriod

'hellomyname is just in.', 'SEVEN 1878', 'Whone eds a TV?', 'SEMREGRAS', 'Out of my Mind', 'Yestermorrow' is presented by the contraction of the

5th Centriod

'MyName Is Blue Canary', 'Primitive Offerings', 'Wyoming Beat', 'Three Pups, One City', 'New Amusements', 'Pewter & Puds, Control of City', 'New Amusements', 'Pewter & Puds

6tht Centriod

'www.dog in a sweater.com Live Show Review Archive', 'Ringtone Lirik'

7th Centriod

'What Am IDoing?', 'mattgarman', 'Dustand Water Studios'

8th Centriod

'Music-DropMagazine','UnexpectedlyBart(King!)','kaleidoscopekanvas-KK','Youmightfeelthesame','earenjoy','fractorial and the same of the

9th Centriod

"Faland'hoje", 'The Themes of My Life', 'Paulina Gamero. Media Studies A2', 'ELLIATOWN SENDA2'

10th Centriod

'AMusicHistorybyWayneR.Flower'

For 20 KMeans it took 4 Iterations				
1st Centriod				
'You might feel the same', 'earenjoy', 'Whoneeds a TV?', 'SEMREGRAS', 'Chemical Robert!', 'INDIE ohren.!', 'Out of my Mindiese and 'You will be a support of the property of				
2nd Centriod				
'Radiohead Bootlegs', 'Fran Brighton', 'One Stunning Single Egg'				
3rd Centriod				
4th Centriod				
'SpinitronCharts', 'MAGGOTCAVIAR', 'StonehillSketchbook', 'personamia'				
5th Centriod				
'Primitive Offerings', 'www.dog in a sweater. com Live Show Review Archive', 'Wyoming Beat', "Radio Rithard's Folkways" and the state of the state				
6th Centriod				
'A to Zappa Song of the day', 'PSILAB', 'Bleak Bliss', 'The Fleshy Fresh', 'Encore', 'macthemost', "Captain Panda's Local & Index and the property of the pr				
7th Centriod				
'The Cheat Codes For Drugs', 'Skywriting'				

'F-Measure', 'GLIPress', 'Spotirama'

8th Centriod

9th Centriod
'Music-DropMagazine',' Unexpectedly Bart(King!)',' kaleidoscopekanvas-KK',' SEVEN 1878',' fractal press. gr',' The Nostanian Control of the North-No
10th Centriod
'RingtoneLirik'
11th Centriod
'hellomyname is just in.', 'The Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Stephanie Veto Photography', 'KidF', 'She May Be Naked', 'The Stearns For the Northern Girl Games', 'Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphanie Veto Photography', 'KidF', 'She May Be Naked', 'The Steaphani
12th Centriod
'Jasmine Hodge'
13th Centriod
'My Name Is Blue Canary', 's imonegoes', 'Stereo Pills', 'BEEHIVE CANDY', 'Three Pups, One City', 'Sound check', 'Too Pople Canary', 'Sound check', '
14th Centriod
'ORGANMYTH','WebScience and Digital Libraries Research Group'
15th Centriod
'What Am IDoing?', 'mattgarman'
16th Centriod
'Indie, Rock And Other Great Music', 'Green Eggs and Ham Mondays 8-10 am', 's weeping the kitchen', 'Stories From the City, Stories Fro

'Skiptrackmusic','The Run-Out Groove','KiDCHAIR','Pithy Title Here','Dust and Water Studios','The Slow Music Movement and Market Studios', The Slow Music Movement and Market Music Movement and Market Music Movement and Market Music Movement and Market Movement and Market Music Movement and Market Movement and Market Music Movement and Market Movement and Ma

th Centriod

-	0.1	α	1
П	Xt.h	(Geni	triod

'CLOUDBUSTING','PaulinaGamero.MediaStudies A2','The Campus Buzzon WSOU','Lost in the Shuffle','Pewter & Pudding A2', The Campus Buzzon WSOU', Th

19th Centriod

"isyeli's", "Faland'hoje", 'Nothing But Ordinary Glances At Extraordinary Things', 'Yestermorrow'

20th Centriod

'A Music History by Wayne R. Flower'

4.1 Question 4

4. Use MDS to create a JPEG of the blogs similar to slide 29 of the week 11 lecture. How many iterations were required?

4.2 Answer 4

The following data was produced using the information from slide 29 of the week 11 lecture. I used the following program 07_mds.py to create these numbers.

 $4547.043521489129\ 3634.920533462348\ 3515.8839399478115\ 3458.2812091642527\ 3413.5608774776892\ 3374.276948606173$ $3348.5127490457294\ 3330.3940050771434\ 3317.3067505599533\ 3305.1969527040324\ 3295.4500908367454\ 3285.6891855480026$ $3277.2275986559007\ 3270.1385901969525\ 3263.082799426065\ 3255.8755514427567\ 3249.6470923772954\ 3244.011941280313$ $3238.7892469552226\ 3234.086579881611\ 3229.0613466355403\ 3224.193711293276\ 3218.728335385039\ 3212.8500053530183$ $3207.689594320295\ 3203.150266194056\ 3198.9533959022415\ 3194.604889994371\ 3190.2897368511835\ 3186.1387931376194$ $3182.1237121996005\ 3178.307526328884\ 3174.367903053554\ 3170.3350424791097\ 3166.752798856369\ 3163.6780409874955$ $3160.747964784802\ 3157.7328575197034\ 3154.77644914824\ 3152.340211326684\ 3150.327400154053\ 3148.4216402984066$ $3146.772738354147\ 3145.4361232921538\ 3143.734960076024\ 3142.2316167059453\ 3140.7912084980576\ 3139.3835955178583$ $3137.692572248288\ 3135.812385381646\ 3133.7239227427735\ 3131.648109416603\ 3129.5289450971286\ 3127.449995254269$ $3111.59270032171\ 3109.946294358839\ 3108.4909193755507\ 3107.1045891536796\ 3105.8281331270755\ 3104.3869254043566$ $3102.7047333666487\ 3101.097304378567\ 3099.543313580798\ 3098.084514759206\ 3096.672042743501\ 3095.224982182776$ $3093.7313904382568\ 3092.027581045574\ 3090.2104044018242\ 3088.149298803071\ 3085.775778734686\ 3083.383085340877$ $3081.280947880271\ 3079.2365497560872\ 3077.298889320404\ 3075.8079645978023\ 3074.3080221743007\ 3072.851978712689712$ $3071.385544451662\ 3069.9776196329103\ 3068.520092978661\ 3067.149274019729\ 3066.0729659332546\ 3065.082969393555$ $3064.145666242849\ 3063.247777505517\ 3062.4154731034237\ 3061.4793494740084\ 3060.47169346936\ 3059.3756354829725$ $3052.492524459361\ 3051.4628918740345\ 3050.5424254042914\ 3049.7517906129497\ 3049.011887797494\ 3048.4267260927068$ $3038.4337518292828\ 3037.3790657049644\ 3036.231612133021\ 3035.034051890081\ 3033.92414370466\ 3032.8730533644166$ $3031.8514384291143\ 3031.0115886619897\ 3030.1571915968875\ 3029.315418085879\ 3028.5644946694356\ 3027.8135124742435$ $3027.0743907044857\ 3026.3341503127654\ 3025.670914861522\ 3025.0419271220862\ 3024.319727365977\ 3023.55506678629$ $3022.896278116901\ 3022.24080916216\ 3021.625202638946\ 3021.0867707435423\ 3020.4753045684206\ 3019.804570141059$ $3016.023992299319\ 3015.624103590204\ 3015.2562011442615\ 3014.830524961372\ 3014.4008117479275\ 3013.9826495271404$ $3013.4962474781896\ 3012.9286083410416\ 3012.269670369528\ 3011.5501389901888\ 3010.8170161469952\ 3010.2410459543544$ $3009.663304101802\ 3009.1072224531044\ 3008.5248957689\ 3007.9160790735205\ 3007.266301980161\ 3006.700046740064$ $3006.1348407605383\ 3005.5784810027235\ 3004.98192385602\ 3004.4065914605812\ 3003.833067295151\ 3003.338651271685$ $3002.945001280539\ 3002.6718369817313\ 3002.440720478205\ 3002.2488640560036\ 3002.129446978688\ 3002.0337810732885$ $3001.9484257631143\ 3001.8549163701864\ 3001.79396223132\ 3001.765834504294\ 3001.7570522955025\ 3001.7243353713498$ $3001.660285212706\ 3001.57275741207\ 3001.441502960767\ 3001.275228739525\ 3001.086431043717\ 3000.875074772635$ $3000.643429796154\ 3000.396713353474\ 3000.1492043924527\ 2999.9120164241035\ 2999.7110462006226\ 2999.5104573539993$ $2998.1518423336875\ 2997.9983505784876\ 2997.8364408655525\ 2997.687367310575\ 2997.55462735149\ 2997.4192341791154$ $2997.2936262233748\ 2997.1901671639525\ 2997.108448852177\ 2997.0327283256684\ 2996.964839448901\ 2996.9327857105077$ $2996.914389943748\ 2996.9115785106906\ 2996.9144407560484$

Which then graphed the below information:

5.1 Question 5

5. Re-run question 2, but this time with proper TFIDF calculations instead of the hack discussed on slide 7 (p. 32). Use the same 1000 words, but this time replace their frequency count with TFIDF scores as computed in assignment #3. Document the code, techniques, methods, etc. used to generate these TFIDF values. Upload the new data file to github.

Compare and contrast the resulting dendrogram with the dendrogram from question #2.

Note: ideally you would not reuse the same 1000 terms and instead come up with TFIDF scores for all the terms and then choose the top 1000 from that list, but I'm trying to limit the amount of work necessary.

5.2 Answer **5**

6.1 Question 6

6. Re-run questions 14, but this time instead of using the 98 "random" blogs, use 98 blogs that should be "similar" to:

http://fmeasure.blogspot.com/ http://wsdl.blogspot.com/

Choose approximately equal numbers for both blog sets (it doesn't have to be a perfect 4949 split, but it should be close). Explain in detail your strategy for locating these blogs.

Compare and contrast the results from the 98 "random" blogs and the 98 "targeted" blogs.

6.2Answer 6