

Presidential Address

Honey A. Adeleke

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Loading Libraries

```
library(readr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##   filter, lag
```

```
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(tidytext)
library(ggplot2)
library(wordcloud)
```

```
## Loading required package: RColorBrewer
```

```
library(wordcloud2)
library(tm)
```

```
## Loading required package: NLP
```

```
##
## Attaching package: 'NLP'
```

```
## The following object is masked from 'package:ggplot2':
##
##   annotate
```

```
library(syuzhet)
library(dplyr)
library(topicmodels)
library(broom)
library(tidyverse)
```

```
## — Attaching core tidyverse packages — tidyverse 2.0.0 —
## ✓ forcats 1.0.0   ✓ stringr 1.5.1
## ✓ lubridate 1.9.3   ✓ tibble 3.2.1
## ✓ purrr 1.0.2     ✓ tidyr 1.3.1
```

```
## — Conflicts — tidyverse_conflicts() —
## X NLP::annotate() masks ggplot2::annotate()
## X dplyr::filter() masks stats::filter()
## X dplyr::lag() masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(reshape2)
```

```
##  
## Attaching package: 'reshape2'  
##  
## The following object is masked from 'package:tidyr':  
##  
##      smiths
```

Reading your data into R

Firstly, you must set your working directory properly, before proceeding to load data into R. There are different ways to import into R. For example, `speech = read.csv(file.choose(), header = T)`. From the result, the structure of the text is dataframe.

```
speech <- read.csv("Presidential Speech (Aug 04, 2024).csv", header = T)  
str(speech)
```

```
## 'data.frame':    45 obs. of  1 variable:  
## $ BROADCAST.BY.HIS.EXCELLENCY.BOLA.AHMED.TINUBU..PRESIDENT.AND.COMMANDER.IN.CHIEF.OF.THE.ARMED: chr  "FORCES OF THE  
FEDERAL REPUBLIC OF NIGERIA ON THE NATIONWIDE PROTEST" " " "DATE: SUNDAY 4TH AUGUST 2024" " " ...
```

Build Corpus

Corpus is a collection of documents

```
corpus = iconv(speech, to = "UTF-8")  
corpus1 = Corpus(VectorSource(corpus))  
inspect(corpus1)
```

```
## <<SimpleCorpus>>
## Metadata: corpus specific: 1, document level (indexed): 0
## Content: documents: 1
##
## [1] c("FORCES OF THE FEDERAL REPUBLIC OF NIGERIA ON THE NATIONWIDE PROTEST", " ", "DATE: SUNDAY 4TH AUGUST 2024", "
", "My fellow Nigerians,", "text", "1. I speak to you today with a heavy heart and a sense of responsibility, aware of t
he turmoil and violent protests unleashed in some of our states.", "2. Notably among the protesters were young Nigerians
who desired a better and more progressive country where their dreams, hopes, and personal aspirations would be fulfill
d.", "3. I am especially pained by the loss of lives in Borno, Jigawa, Kano, Kaduna and other states, the destruction of
public facilities in some states, and the wanton looting of supermarkets and shops, contrary to the promise of protest o
rganisers that the protest would be peaceful across the country. The destruction of properties sets us back as a nation,
as scarce resources will be again used to restore them.", "\n"4. I commiserate with the families and relations of those w
ho have died in the protests. We must stop further bloodshed, violence and destruction.", "5. As President of this count
ry, I must ensure public order. In line with my constitutional oath to protect the lives and property of every citizen,
our government will not stand idly by and allow a few with a clear political agenda to tear this nation apart.", "6. Und
er the circumstances, I hereby enjoin protesters and the organisers to suspend any further protest and create room for d
ialogue, which I have always acceded to at the slightest opportunity. Nigeria requires all hands on deck and needs us al
l - regardless of age, party, tribe, religion or other divides, to work together in reshaping our destiny as a nation. T
o those who have taken undue advantage of this situation to threaten any section of this country, be warned: The law wil
l catch up with you. There is no place for ethnic bigotry or such threats in the Nigeria we seek to build.", "\n"7. Our d
emocracy progresses when the constitutional rights of every Nigerian are respected and protected. Our law enforcement ag
encies should continue to ensure the full protection of lives and properties of innocent citizens in a responsible manne
r.", "8. My vision for our country is one of a just and prosperous nation where each person may enjoy the peace, freedo
m, and meaningful livelihood that only democratic good governance can provide ? one that is open, transparent and accoun
table to the Nigerian people.", "\n" 9. For decades, our economy has remained anaemic and taken a dip because of many mis
alignments that have stunted our growth. Just over a year ago, our dear country, Nigeria, reached a point where we could
n?t afford to continue the use of temporary solutions to solve long-term problems for the sake of now and our unborn gen
erations. I therefore took the painful yet necessary decision to remove fuel subsidies and abolish multiple foreign exch
ange systems which had constituted a noose around the economic jugular of our Nation and impeded our economic developmen
t and progress.", "\n"10. These actions blocked the greed and the profits that smugglers and rent-seekers made. They also
blocked the undue subsidies we had extended to our neighbouring countries to the detriment of our people, rendering our
economy prostrate. These decisions I made were necessary if we must reverse the decades of economic mismanagement that d
idn?t serve us well. Yes, I agree, the buck stops on my table. But I can assure you that I am focused fully on deliverin
g the governance to the people - good governance for that matter.", "\n"11. In the past 14 months, our government has mad
e significant strides in rebuilding the foundation of our economy to carry us into a future of plenty and abundance. On
the fiscal side, aggregate government revenues have more than doubled, hitting over 9.1 trillion Naira in the first half
of 2024 compared to the first half of 2023 due to our efforts at blocking leakages, introducing automation and mobilisin
g funding creatively without additional burden on the people. Productivity is gradually increasing in the non-oil secto
r, reaching new levels and taking advantage of the opportunities in the current economic ambience", "\n"12. My dear broth
ers and sisters, we have come this far. Coming from a place where our country spent 97% of all our revenue on debt servi
ce; we have been able to reduce that to 68% in the last 13 months. We have also cleared legitimate outstanding foreign e
xchange obligations of about $5billion without any adverse impact on our programmes.", "13. This has given us more finan
cial freedom and the room to spend more money on you, our citizens, to fund essential social services like education and
healthcare. It has also led to our State, and Local Governments receiving the highest allocations ever in our country?s
history from the Federation Account.", "\n"14. We have also embarked on major infrastructure projects across the country.
We are working to complete inherited projects critical to our economic prosperity, including roads, bridges, railways, p
ower, and oil and gas developments. Notably, the Lagos-Calabar Coastal Highway and Sokoto-Badagry Highway projects will
open up 16 connecting states, creating thousands of jobs and boosting economic output through trade, tourism and cultura
l integration", "15. Our once-declining oil and gas industry is experiencing a resurgence on the back of the reforms I a
nnounced in May 2024 to address the gaps in the Petroleum Industry Act. Last month, we increased our oil production to
1.6million barrels per day, and our gas assets are receiving the attention they deserve. Investors are coming back, and
we have already seen two Foreign Direct Investments signed of over half a billion dollars since then.", "\n"16. Fellow Ni
gerians, we are a country blessed with both oil and gas resources, but we met a country that had been dependent solely o
n oil-based petrol, neglecting its gas resources to power the economy. We were also using our hard-earned foreign exchan
ge to pay for, and subsidise its use. To address this, we immediately launched our Compressed Natural Gas Initiative (CN
G) to power our transportation economy and bring costs down. This will save over two trillion Naira a month, being used
to import PMS and AGO and free up our resources for more investment in healthcare and education.", "\n"17. To this end, w
e will be distributing a million kits of extremely low or no cost to commercial vehicles that transport people and goods
and who currently consume 80% of the imported PMS and AGO.", "18. We have started the distribution of conversion kits an
d setting up of conversion centres across the country in conjunction with the private sector. We believe that this CNG i
nitiative will reduce transportation costs by approximately 60 per cent and help to curb inflation.", "19. Our administr
ation has shown its commitment to the youth by setting up the student loan scheme. To date, 45.6billion Naira has alread
y been processed for payment to students and their respective institutions", "\n"20. I encourage more of our vibrant yout
h population to take advantage of this opportunity. We established the Consumer Credit Corporation with over N200billion
to help Nigerians to acquire essential products without the need for immediate cash payments, making life easier for mil
lions of households. This will consequently reduce corruption and eliminate cash and opaque transactions. This week, I o
rdered the release of an additional N50billion Naira each for NELFUND ? the student loan, and Credit Corporation from th
e proceeds of crime recovered by the EFCC", "\n"21. Additionally, we have secured $620million under the Digital and Creat
ive Enterprises (IDiCE) ? a programme to empower our young people, creating millions of IT and technical jobs that will
make them globally competitive. These programmes include the 3Million Technical Talents scheme. Unfortunately, one of th
```

e digital centres was vandalised during the protests in Kano. What a shame!", "22. In addition, we have introduced the Skill-Up Artisans Programme (SUPA); the Nigerian Youth Academy (NIYA); and the National Youth Talent Export Programme (NATEP).", "23. Also, more than N570 billion has been released to the 36 states to expand livelihood support to their citizens, while 600,000 nano-businesses have benefitted from our nano-grants. An additional 400,000 more nano-businesses are expected to benefit.", "24. Furthermore, 75,000 beneficiaries have been processed to receive our N1million Micro and Small Business single-digit interest loans, starting this month. We have also built 10 MSME hubs within the past year, created 240,000 jobs through them and 5 more hubs are in progress which will be ready by October this year.", "25. Payments of N1billion each are also being made to large manufacturers under our single-digit loans to boost manufacturing output and stimulate growth.", "26. I signed the National Minimum Wage into law last week, and the lowest-earning workers will now earn at least N70,000 a month.", "27. Six months ago in Karsana, Abuja, I inaugurated the first phase of our ambitious housing initiative, the Renewed Hope City and Estate. This project is the first of six we have planned across the nation's geopolitical zones. Each of these cities will include a minimum of 1,000 housing units, with Karsana itself set to deliver 3,212 units", "28. In addition to these city projects, we are also launching the Renewed Hope Estates in every state, each comprising 500 housing units. Our goal is to complete a total of 100,000 housing units over the next three years. This initiative is not only about providing homes but also about creating thousands of jobs across the nation as well as stimulating economic growth.", "29. We are providing incentives to farmers to increase food production at affordable prices. I have directed that tariffs and other import duties should be removed on rice, wheat, maize, sorghum, drugs, and other pharmaceutical and medical supplies for the next 6 months, in the first instance, to help drive down the prices.", "30. I have been meeting with our Governors and key Ministers to accelerate food production. We have distributed fertilisers. Our target is to cultivate more than 10 million hectares of land to grow what we eat. The Federal Government will provide all necessary incentives for this initiative, whilst the states provide the land, which will put millions of our people to work and further increase food production. In the past few months, we have also ordered mechanized farming equipment such as tractors and planters, worth billions of Naira from the United States, Belarus, and Brazil. I can confirm to you that the equipment is on the way.", "31. My dear Nigerians, especially our youth, I have heard you loud and clear. I understand the pain and frustration that drive these protests, and I want to assure you that our government is committed to listening and addressing the concerns of our citizens.", "32. But we must not let violence and destruction tear our nation apart. We must work together to build a brighter future, where every Nigerian can live with dignity and prosperity.", "33. The task before us is a collective one, and I am leading the charge as your President. A lot of work has gone into stabilising our economy and I must stay focused on ensuring that the benefits reach every single Nigerian as promised.", "34. My administration is working very hard to improve and expand our national infrastructure and create more opportunities for our young people.", "35. Let nobody misinform and miseducate you about your country or tell you that your government does not care about you. Although there have been many dashed hopes in the past, we are in a new era of Renewed Hope. We are working hard for you, and the results will soon be visible and concrete for everyone to see, feel, and enjoy.", "36. Let us work together to build a brighter future for ourselves and for generations to come. Let us choose hope over fear, unity over division, and progress over stagnation. The economy is recovering; Please, don't shut out its oxygen. Now that we have been enjoying democratic governance for 25 years, do not let the enemies of democracy use you to promote an unconstitutional agenda that will set us back on our democratic journey. FORWARD EVER, BACKWARD NEVER!", "37. In conclusion, security operatives should continue to maintain peace, law, and order in our country following the necessary conventions on human rights, to which Nigeria is a signatory. The safety and security of all Nigerians are paramount.", "38. Thank God -- and Thank you for your attention, and may God continue to bless our great Nation. Thank you very much.", " ")

Text Cleaning

Here, I have to bring all upper cases to lower, remove all punctuation marks, remove all numbers, and remove all stop words. Finally, I had to clear all white spaces

```
corpus2=tm_map(corpus1, tolower) # To make bring document to Lower case
corpus3=tm_map(corpus2, removePunctuation) # To remove punctuation
corpus4=tm_map(corpus3, removeNumbers) # remove number
cleanset=tm_map(corpus4, removeWords, stopwords('english')) # To remove English words that are common and will not add much values
cleanset1=tm_map(cleanset, stripWhitespace) #To get rid of the extra spaces
inspect(cleanset1)
```

<<SimpleCorpus>>

Metadata: corpus specific: 1, document level (indexed): 0

Content: documents: 1

##

[1] cforces federal republic nigeria nationwide protest date sunday th august fellow nigerians text speak today heavy heart sense responsibility aware turmoil violent protests unleashed states notably among protesters young nigerians desire better progressive country dreams hopes personal aspirations fulfilled especially painful loss lives borno jigawa kano kaduna states destruction public facilities states wanton looting supermarkets shops contrary promise protest organisers protest peaceful across country destruction properties sets us back nation scarce resources will used restore commiserate families relations died protests must stop bloodshed violence destruction president country must ensure public order line constitutional oath protect lives property every citizen government will stand idly allow clear political agenda tear nation apart circumstances hereby enjoin protesters organisers suspend protest create room dialogue always acceded slightest opportunity nigeria requires hands deck needs us regardless age party tribe religion divides work together reshaping destiny nation taken undue advantage situation threaten section country warned law will catch place ethnic bigotry threats nigeria seek build democracy progresses constitutional rights every nigerian respected protected law enforcement agencies continue ensure full protection lives properties innocent citizens responsible manner vision country one just prosperous nation person may enjoy peace freedom meaningful livelihood democratic good governance can provide one open transparent accountable nigerian people decades economy remained anaemic taken dip many misalignments stunted growth just year ago dear country nigeria reached point couldnt afford continue use temporary solutions solve longterm problems sake now unborn generations therefore took painful yet necessary decision remove fuel subsidies abolish multiple foreign exchange systems constituted noose around economic jugular nation impeded economic development progress actions blocked greed profits smugglers rentseekers made also blocked undue subsidies extended neighbouring countries detriment people rendering economy prostrate decisions made necessary must reverse decades economic mismanagement didnt serve us well yes a green buck stops table can assure focused fully delivering governance people good governance matter past months government made significant strides rebuilding foundation economy carry us future plenty abundance fiscal side aggregate government revenues doubled hitting trillion naira first half compared first half due efforts blocking leakages introducing automation mobilising funding creatively without additional burden people productivity gradually increasing nonoil sector reaching new levels taking advantage opportunities current economic ambience dear brothers sisters come far coming place country spent revenue debt service able reduce last months also cleared legitimate outstanding foreign exchange obligations billion without adverse impact programmes given us financial freedom room spend money citizens fund essential social services like education healthcare also led state local governments receiving highest allocations ever countrys history federation account also embarked major infrastructure projects across country working complete inherited projects critical economic prosperity including roads bridges railways power oil gas developments notably lagos coastal highway sokotobadagry highway projects will open connecting states creating thousands jobs boosting economic output trade tourism cultural integration oncedeclining oil gas industry experiencing resurgence back reforms announced may address gaps petroleum industry act last month increased oil production million barrels per day gas assets receiving attention deserve investors coming back already seen two foreign direct investments signed half billion dollars since fellow nigerians country blessed oil gas resources met country dependent solely oilbased petrol neglecting gas resources power economy also using hardearned foreign exchange pay subsidise use address immediately launched compressed natural gas initiative cng power transportation economy bring costs will save two trillion naira month used import pms ago free resources investment healthcare education end will distributing million kits extremely low cost commercial vehicles transport people goods currently consume imported pms ago started distribution conversion kits setting conversion centres across country conjunction private sector believe cng initiative will reduce transportation costs approximately per cent help curb inflation administration shown commitment youth setting student loan scheme date billion naira already processed payment students respective institutions encourage vibrant youth population take advantage opportunity established consumer credit corporation billion help nigerians acquire essential products without need immediate cash payments making life easier millions households will consequently reduce corruption eliminate cash opaque transactions week ordered release additional billion naira nelfund student loan credit corporation proceeds crime recovered efcc additionally secured million digital creative enterprises idice programme empower young people creating millions technical jobs will make globally competitive programmes include million technical talents scheme unfortunately one digital centres vandalised protests kano shame addition introduced skillup artisans programme supa nigerian youth academy niya national youth talent export programme natep also n billion released states expand livelihood support citizens nanobusinesses benefitted nanogrants additional nanobusinesses expected benefit furthermore beneficiaries processed receive nmillion micro small business singledigit interest loans starting month also built msme hubs within past year created jobs hubs progress will ready october year payments n billion also made large manufacturers singledigit loans boost manufacturing output stimulate growth signed national minimum wage law last week lowestearning workers will now earn least n month six months ago karsana abuja inaugurated first phase ambitious housing initiative renewed hope city estate project first six planned across nations geopolitical zones cities will include minimum housing units karsana set deliver units addition city projects also launching renewed hope states every state comprising housing units goal complete total housing units next three years initiative providing homes also creating thousands jobs across nation well stimulating economic growth providing incentives farmers increase food production affordable prices directed tariffs import duties removed rice wheat maize sorghum drugs pharmaceutical medical supplies next months first instance help drive prices meeting governors key ministers accelerate food production distributed fertilisers target cultivate million hectares land grow eat federal government will provide necessary incentives initiative whilst states provide land will put millions people work increase food production past months also ordered mechanized farming equipment tractors planters worth billions naira united states belarus brazil can confirm equipment way dear nigerians especially youth heard loud clear understand pain frustration drive protests want assure government committed listening addressing concerns citizens must let violence destruction tear nation apart must work together build brighter future every nigerian can live dignity prosperity task us collective one leading charge president lot work gone stabilising economy must stay focused ensuring benefits reach every single nigerian promised administration working hard improve expand national infrastructure create opportunities young people let nobody misinform miseducate country tell government

ernment care although many dashed hopes past new era renewed hope working hard results will soon visible concrete everyo
ne see feel enjoy let us work together build brighter future generations come let us choose hope fear unity division pro
gress stagnation economy recovering please dont shut oxygen now enjoying democratic governance years let enemies democra
cy use promote unconstitutional agenda will set us back democratic journey forward ever backward never conclusion securi
ty operatives continue maintain peace law order country following necessary conventions human rights nigeria signatory s
afety security nigerians paramount thank god thank attention may god continue bless great nation thank much

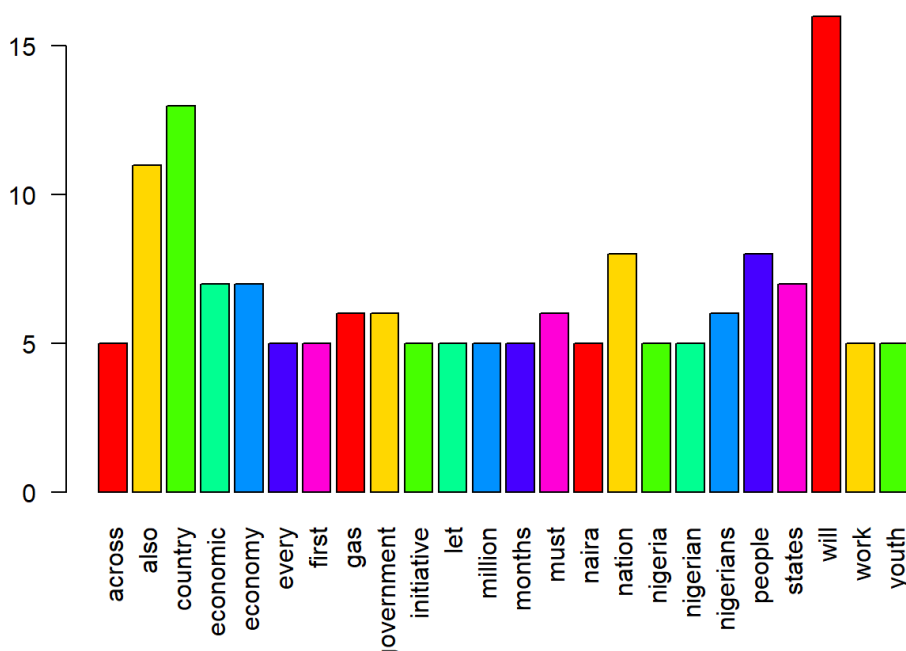
#Term document Matrix Tweet is an unstructured data TDM will put all unstructured data to row and columns, where the first column stands for each words or terms and the second column represent the frequencies of each words

```
speech_tdm<-TermDocumentMatrix(cleanset1)
speech_tdm1 = as.matrix(speech_tdm)
write.csv(speech_tdm1, "Presidential Speech Freq.csv")
```

Barplot

I showed two bar plot here. The first one shows words with frequency greater than or equal to 3 while the second one shows words with frequency greater than or equal to 5. The second bar plot clearly shows the most frequently used words are will, also, country, nation and people.

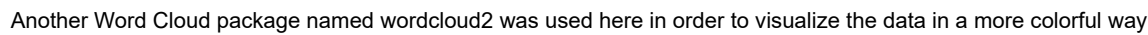
```
speech_bar=rowSums(speech_tdm1) #To find how often each row appears
speech_bar1=subset(speech_bar,speech_bar>=3) #words with frequency greater than or equal to 3 will appear
speech_bar1=subset(speech_bar,speech_bar>=5) #words with frequency greater than or equal to 5 will appear
barplot(speech_bar1,
        las =2,
        col = rainbow(7))
```



WORD CLOUD

Visualizing the text in a word cloud also emphasizes the words most often used in the presidential speech

```
speech_bar2<- sort(rowSums(speech_tdm1), decreasing = T)
wordcloud(words = names(speech_bar2),
          freq = speech_bar2,
          max.words = 1000,
          random.order = F,
          min.freq = 30,
          colors = brewer.pal(7,"Dark2"),
          scale = c(2,0.1),
          rot.per = 0.3)
```

[illegible]

7/10

Sentiment Analysis

Sentiment analysis was further carried out to have a glimpse of the sentiments of the words in the presidential speech. Here, I can see that the sentiment with highest frequency is Positive and the one with the lowest frequency is disgust. Going further to just pick a word which in this case **Subsidy** and observe the distribution, I noticed that the word subsidy as a word in the presidential speech contain many sentiments which are anger disgust and negative

```
library(syuzhet)
library(dplyr)
# Read file
speech = read.csv("Presidential speech (Aug 04, 2024).csv", header = T)
speech<-iconv(speech, to= "windows-1252")
speech_sentiment <- get_nrc_sentiment(speech)
write.csv(speech_sentiment, "Presidential Speech sentiment.csv")
head(speech_sentiment)
```

```
##   anger anticipation disgust fear joy sadness surprise trust negative positive
## 1     20             38      9  25  32         15        13    56         52     103
```

```
get_nrc_sentiment("subsidy")
```

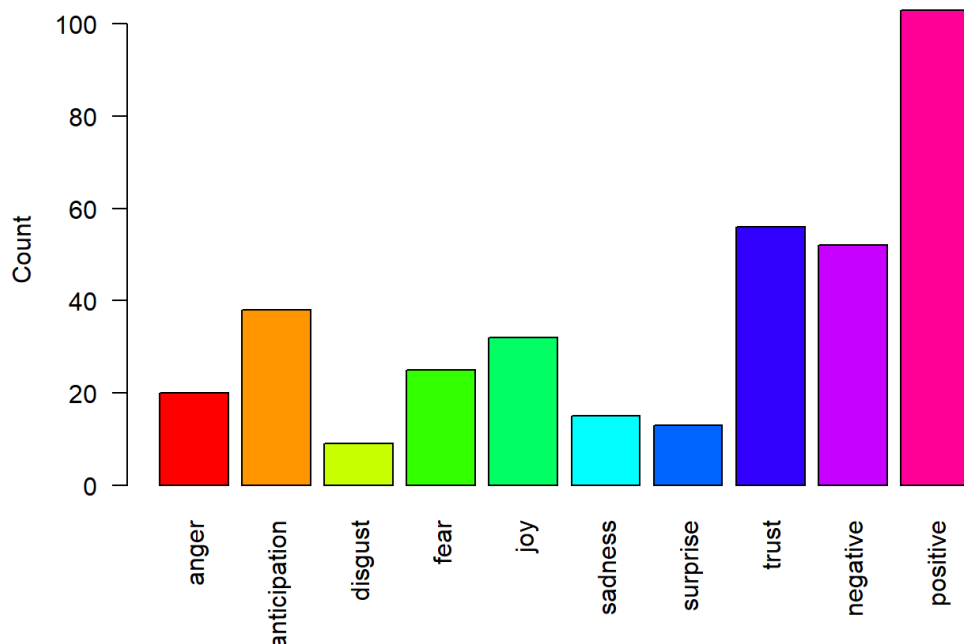
```
##   anger anticipation disgust fear joy sadness surprise trust negative positive
## 1     1             0      1  0  0         0         0     0         1      0
```

Barplot

The bar plot here shows the distribution of the sentiments in the presidential speech, and positive sentiments and trust sentiments are the most frequent sentiments, while disgust and surprise are the least frequent sentiments in the presidential speech on August 04, 2024

```
barplot(colSums(speech_sentiment),
        las = 2,
        col = rainbow(10),
        ylab = "Count",
        main = "Synopsis")
```


Synopsis



Topic Modelling

The following steps was carried out

- Create a document-term matrix
- Fit the LDA model
- Get the top terms for each topic
- Visualize the top terms for each topic

In topic modelling, each topic is represented by a set of words with associated probabilities. The higher the probability, the more representative the word is for that topic.

For the first topic, **National Economy and Development** fits in to the words. This label fits well because words like “economy,” “nation,” “states,” “million,” and “country” suggest a focus on economic issues and national development

I believe **Energy and Economic Initiatives** summarizes Topic 2. The presence of words like “economic,” “projects,” “gas,” and “country” suggests the topic might be about energy-related initiatives and their economic impact.

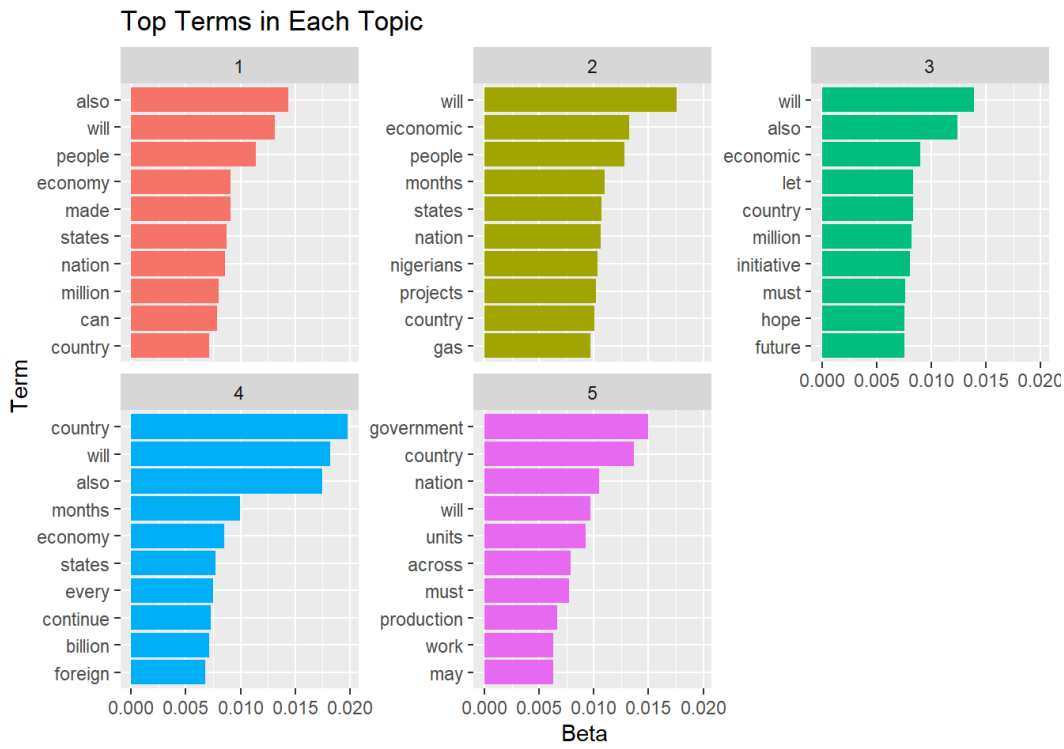
Future Economic Initiatives and Hope captures Topic 3. This label fits well because words like “economic,” “initiative,” “future,” “hope,” and “country” suggest a focus on future economic initiatives and a sense of hope for positive changes.

For Topic 4, **National Economic Policies and Foreign Relations** fits in to the top ten words. Words like “economy,” “states,” “billion,” and “foreign” suggest a focus on national economic policies and foreign relations.

Government Initiatives and National Production summarizes Topic 5. This label fits well because words like “government,” “nation,” “production,” and “work” suggest a focus on government initiatives and national production efforts.

```
dtm <- DocumentTermMatrix(VCorpus(VectorSource(cleanset1)))
lda_model <- LDA(dtm, k = 5, control = list(seed = 1234))
topics <- tidy(lda_model, matrix = "beta")
top_terms <- topics %>%
  group_by(topic) %>%
  top_n(10, beta) %>%
  ungroup() %>%
  arrange(topic, -beta)

top_terms %>%
  ggplot(aes(x = reorder_within(term, beta, topic), y = beta, fill = factor(topic))) +
  geom_col(show.legend = FALSE) +
  facet_wrap(~ topic, scales = "free_y") +
  coord_flip() +
  scale_x_reordered() +
  labs(title = "Top Terms in Each Topic", x = "Term", y = "Beta")
```



In summary, the 5 themes/ topics deduced from the presidential speech on Aug 4th, 2024 are

- 1. National Economy and Development
- 2. Energy and Economic Initiatives
- 3. Future Economic Initiatives and Hope
- 4. National Economic Policies and Foreign Relations
- 5. Government Initiatives and National Production