# Experiment No 10

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Aim Mini Project: YouTube Video Transcript Summarization

## Code:

```
!pip install -q transformers
!pip install --upgrade youtube-transcript-api
!pip install -q youtube_transcript_api
!pip install IPython

from transformers import pipeline
```

```
from youtube_transcript_api import YouTubeTranscriptApi

yt_video = "https://youtu.be/Jll5baCAaQU?si=io5XEnCrYWGyeJp3"

video id = yt video.split("=")[1] video id
```

```
from IPython.display import YouTubeVideo
YouTubeVideo(video_id)
```

```
yt_video = "https://youtu.be/Jll5baCAaQU?si=io5XEnCrYWGyeJp3"
# Corrected code to extract video ID video_id
= yt_video.split("/")[-1]
# Check if video ID is correct print(f"Extracted
video ID: {video_id}")
```

```
# Check if transcripts are available try:
    transcript = YouTubeTranscriptApi.get transcript(video id)
print("Transcript retrieved successfully.") except
TranscriptsDisabled:
    print("Transcripts are disabled for this video.")
# Print the transcript (if available)
if transcript: for t in
transcript:
        print(f"{t['start']} {t['text']}")
transcript[0:5]
result = "" for i in transcript: result += ' '
+ i['text']
print(len(result))
summarizer = pipeline('summarization')
num iters = int(len(result)/1000)
summarized text = [] for i in
range(0, num iters +1):
  start = 0 start = i * 1000 end
= (i + 1) * 1000 out =
summarizer(result[start:end]) out =
out[0]
  out = out['summary text']
summarized_text.append(out) print(summarized_text)
str(summarized text)
len(str(summarized text))
! pip install streamlit -q
%%writefile app.py
import streamlit as st
from transformers import pipeline
from youtube transcript api import YouTubeTranscriptApi
# Function to get video ID from YouTube URL
def get video id(yt url):
    return yt_url.split("/")[-1].split("?")[0]
```

```
# Function to get YouTube transcript
def get transcript(video id):
        transcript = YouTubeTranscriptApi.get transcript(video id)
        return transcript
    except:
        return None
# Streamlit UI
st.title("YouTube Transcript Summarizer")
# Input field for YouTube URL
yt_video_url = st.text_input("Enter YouTube Video URL:", "")
# Check if URL is provided
if yt video url:
    video id = get video id(yt video url)
    # Check if transcripts are available
    transcript = get transcript(video id)
    if transcript:
        st.write("Transcript retrieved successfully.")
        # Display original transcript
        st.subheader("Original Transcript:")
        for t in transcript:
            st.write(f"{t['start']} - {t['text']}")
        # Concatenate transcript text
        transcript_text = " ".join([t['text'] for t in transcript])
        # Summarize the transcript
        summarizer = pipeline('summarization')
        num iters = int(len(transcript text)/1000)
        summarized text = []
        for i in range(0, num iters + 1):
            start = i * 1000
            end = (i + 1) * 1000
            out = summarizer(transcript text[start:end])
            out = out[0]
            out = out['summary text']
            summarized text.append(out)
        # Print summarized text
        st.subheader("Summarized Transcript:")
        for text in summarized text:
            st.write(text)
```

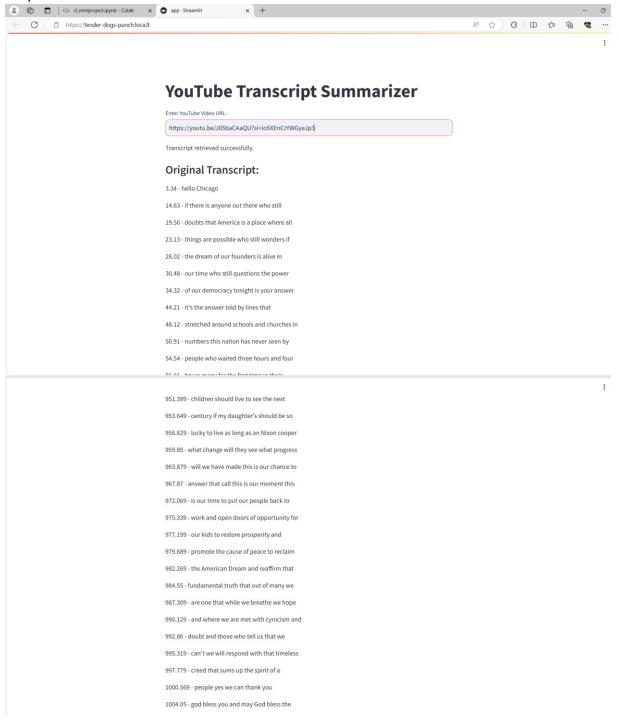
```
# Display length of summarized text
st.subheader("Length of Summarized Text:")
st.write(sum(len(text) for text in summarized_text))

else:
    st.write("Transcripts are disabled for this video or the video
ID is incorrect.")
```

```
!wget -q -0 - ipv4.icanhazip.com
```

! streamlit run app.py & npx localtunnel --port 8501

# Output screen shot



## **Summarized Transcript:**

Lines stretched around schools and churches in numbers this nation has never seen by people who waited three hours and four hours many for the first time in their lives because they believed that this time must be different that their voices could be that difference. It's the answer that led those who've been told for so long by so many to be cynical and fea.

McCain fought long and hard in this campaign and he's fought even longer and harder for the country that he loves he has endured sacrifices for America that most of us cannot begin to imagine we are better off for the service rendered by this brave and selfless leader I congratulate him I congratulate Governor Palin for all the David Diver.

Vice president-elect Joe Biden thanks to his best friend for the last 16 years Joe Biden . Joe Biden says he would not be standing here tonight without the unyielding support of my best friend . He says his debt to them is beyond measure to his sister Maya, Alma, Maya and Alma .

I was never the likeliest candidate for this office we didn't start with much money or many endorsements our campaign was not hatched in the halls of Washington it began in the backyards of Des Moines and the living rooms of Concord and the front porches of Charleston. It drew strength from the young people who rejected the myth of their generations apathy who left their homes and their families for jobs that offered little pay and less sleep.

Even as we celebrate tonight we know the challenges that tomorrow will bring are the greatest of our lifetime. We know there are brave Americans waking up in the deserts of Iraq and the mountains of Afghanistan to risk their lives for us. There are mothers and fathers who will lie awake after their children fall asleep wondering how they'll make the mortgage or pay their doctor's bills.

The road ahead will be long, the climb will be steep but America I have never been more hopeful than I am tonight that we will get there I promise you we as a people will get it. The only way it's been done in America for 221 years is block by block brick by brick block by brick brick by . es to repair the road ahead.

Let us summon a new spirit of patriotism of responsibility where each of us resolves to pitch in and work

Let us summon a new spirit of patriotism of responsibility where each of us resolves to pitch in and work harder and look after not only ourselves but each other. If this financial crisis taught us anything it's that we cannot have a thriving Wall Street while Main Street suffers in this country we rise or fall as one nation as one people.

"I may not have won your vote tonight but I hear your voices I need your help and I will be your president too" "We are not enemies but friends though passion may have strained it must not break our bonds of affection" "A new dawn of American leadership is at hand," says Obama.

Nixon Cooper is 106 years old and was born just a generation past slavery . She was born in a time when there were no cars on the road or planes in the sky when someone like her couldn't vote for two reasons because she was a woman and because of the color of her skin .

A hundred and six years in America through the best of times and the darkest of hours she knows how America can change. She was there to witness a generation rise to greatness and a democracy was saved yes we can she was there for the buses in Montgomery the hoses in Birmingham a bridge in Selma and a preacher from Atlanta who told the people that we shall overcome.

This is our chance to answer that call this is our time to put our people back to work and open doors of opportunity for our kids to restore prosperity and promote the cause of peace to reclaim the American Dream. We will respond with that timeless creed that sums up the spirit of a people yes we can thank you god bless you and may God bless the United States of America you.

# Length of Summarized Text:

3799

```
[ ] Ipip install -q transformers

[ ] Ipip install -upgrade youtube-transcript-api

Requirement already satisfied: youtube-transcript-api in /usr/local/lib/python3.10/dist-packages (0.6.2)

Requirement already satisfied: enguests in /usr/local/lib/python3.10/dist-packages (from youtube-transcript-api) (2.31.0)

Requirement already satisfied: charset-normalizer.4,>-2 in /usr/local/lib/python3.10/dist-packages (from requests-youtube-transcript-api) (3.7.2)

Requirement already satisfied: dand.4,>-2.5 in /usr/local/lib/python3.10/dist-packages (from requests-youtube-transcript-api) (3.7.7)

Requirement already satisfied: urlib3x3,>-1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests-youtube-transcript-api) (2.0.7)

Requirement already satisfied: certifi>-2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests-youtube-transcript-api) (2024.2.2)

[ ] Ipip install -q youtube_transcript_api

[ ] Ipip install IPython

Requirement already satisfied: Evython in /usr/local/lib/python3.10/dist-packages (from IPython) (67.7.2)

collecting jedi-0-10.1-py2.py3-none-any.whl (1.6 MB)

Requirement already satisfied: decorator in /usr/local/lib/python3.10/dist-packages (from IPython) (67.7.2)

Requirement already satisfied: pickleshare in /usr/local/lib/python3.10/dist-packages (from IPython) (0.7.5)

Requirement already satisfied: pickleshare in /usr/local/lib/python3.10/dist-packages (from IPython) (0.7.5)

Requirement already satisfied: properto-dist-li-3.6, 0.4.30, 1.6.3.1, 0.8.2.0.6, 0.4.30, 1.7.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30, 0.4.30
```

# [ ] video\_id

'io5XEnCrYWGyeJp3'

[ ] from IPython.display import YouTubeVideo YouTubeVideo(video\_id)



Extracted video ID: Jll5baCAaQU?si=io5XEnCrYWGyeJp3 Transcript retrieved successfully.

3.34 hello Chicago

14.63 if there is anyone out there who still

19.56 doubts that America is a place where all

23.13 things are possible who still wonders if

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28.02 the dream of our founders is alive in
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- 30.48 our time who still questions the power
- 34.32 of our democracy tonight is your answer
- 44.21 it's the answer told by lines that
- 48.12 stretched around schools and churches in
- 50.91 numbers this nation has never seen by
- 54.54 people who waited three hours and four
- 56.91 hours many for the first time in their
- 60.0 lives because they believed that this
- 63.059 time must be different that their voices
- 66.63 could be that difference it's the answer
- 71.009 spoken by young and old rich and poor
- 74.869 Democrat and Republican black white
- 78.95 Hispanic Asian Native American gay
- 81.99 straight disabled and not disabled
- 85.88 Americans who sent a message to the
- 88.11 world that we have never been just a
- 91.17 collection of individuals or a
- 93.09 collection of red states and blue states
- 95.49 we are and always will be the United
- 98.939 States of America
- 109.259 it's the answer that led those who've
- 114.759 been told for so long by so many to be
- 117.969 cynical and fearful and doubtful about
- 121.24 what we can achieve to put their hands
- 124.569 on the arc of history and bend it once
- 127.509 more toward the hope of a better day
- 130.739 it's been a long time coming
- 133.17 but tonight because of what we did on
- 137.08 this day in this election at this
- 140.38 defining moment change has come to
- 143.17 America a little bit earlier this
- 154.0 evening I received an extraordinarily
- 157.39 gracious call from Senator McCain
- 164.04 Senator McCain fought long and hard in
- 167.019 this campaign and he's fought even
- 170.739 longer and harder for the country that
- 173.47 he loves he has endured sacrifices for
- 177.609 America that most of us cannot begin to
- 180.91 imagine we are better off for the
- 184.6 service rendered by this brave and
- 187.51 selfless leader I congratulate him I
- 191.579 congratulate Governor Palin for all the
- 195.01 David Rives and I look forward to
- 197.889 working with them to renew this nation's
- 201.31 promise in the months ahead
- 206.94 I want to thank my partner in this
- 213.18 journey
- 213.81 a man who campaigned from his heart and
- 216.98 spoke for the men and women he grew up
- 219.33 with on the streets of Scranton and
- 221.27 rolled with on the train home to
- 223.86 Delaware the Vice president-elect of the
- 226.56 United States Joe Biden and I would not
- 238.89 be standing here tonight without the

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241.65 unyielding support of my best friend for
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- 245.94 the last 16 years the rock of our family
- 249.68 the love of my life the nation's next
- 253.95 first lady Michelle Obama
- 265.08 Sasha and Malia I love you both more
- 271.33 than you can imagine
- 272.639 and you have earned the new puppy that's
- 275.949 coming with us to the White House and
- 285.49 while she's no longer with us I know my
- 288.94 grandmother's watching along with the
- 291.97 family that made me who I am I miss them
- 295.539 tonight I know that my debt to them is
- 299.68 beyond measure to my sister Maya
- 303.43 my sister Alma all my other brothers and
- 306.28 sisters thank you so much for all the
- 308.5 support that you've given me I'm
- 310.389 grateful to them to my campaign manager
- 317.979 David Plouffe
- 325.87 the unsung hero of this campaign who
- 329.84 built the best the best political
- 333.32 campaign I think in the history of the
- 335.84 United States of America my chief
- 342.92 strategist David Axelrod who's been a
- 349.15 partner with me every step of the way to
- 352.22 the best campaign team ever assembled in
- 355.94 the history of politics you made this 358.25
- happen and I am forever grateful for
- 361.09 what you've sacrificed to get it done
- 367.63 but above all I will never forget who
- 371.69 this victory truly belongs to it belongs
- 375.53 to you
- 377.35 it belongs to you I was never the
- 382.85 likeliest candidate for this office we
- 386.96 didn't start with much money or many
- 389.45 endorsements our campaign was not
- 391.85 hatched in the halls of Washington it
- 395.3 began in the backyards of Des Moines in
- 397.85 the living rooms of Concord and the
- 399.89 front porches of Charleston it was built
- 403.43 by working men and women who dug into
- 405.8 what little savings they had to give
- 407.57 five dollars ten dollars and twenty
- 409.64 dollars to the cause
- 411.76 it grew strength from the young people
- 414.56 who rejected the myth of their
- 416.12 generations apathy who left their homes
- 419.36 and their families for jobs that offered
- 422.15 little pay and less sleep it drew
- 425.45 strength from the not-so young people
- 427.43 who braved the bitter cold and scorching
- 430.04 heat to knock on doors of perfect
- 431.96 strangers and from the millions of
- 434.12 Americans who volunteered and organized
- 436.22 and proved that more than two centuries
- 438.65 later a government of the people by the

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441.47 people and for the people has not
443.96 perished from the earth this is your
446.18 victory
453.38 now I know you didn't do this just to
456.81 win an election I know you didn't do it
460.2 for me you did it because you understand
463.23 the enormity of the task that lies ahead
465.42 for even as we celebrate tonight we know
469.77 the challenges that tomorrow will bring
471.75 are the greatest of our lifetime two
475.47 wars a planet in peril the worst
478.8 financial crisis in a century even as we
482.94 stand here tonight we know there are
484.65 brave Americans waking up in the deserts
487.2 of Iraq and the mountains of Afghanistan
489.72 to risk their lives for us there are
493.17 mothers and fathers who will lie awake
494.79 after their children fall asleep and
496.77 wonder how they'll make the mortgage or
498.9 pay their doctor's bills or save enough
501.36 for their child's college education
504.05 there's new energy to harness new jobs
507.78 to be created new schools to build and
510.18 threats to meet alliances to repair the
514.59 road ahead will be long our climb will
518.729 be steep we may not get there in one
521.94 year or even in one term but America I
525.18 have never been more hopeful than I am
527.73 tonight that we will get there I promise
530.58 you we as a people will get there
547.59 there will be setbacks and false starts
552.35 there are many who won't agree with
554.55 every decision or policy I make as
556.23 president and we know the government
558.21 can't solve every problem but I will
561.93 always be honest with you about the
563.61 challenges we face I will listen to you
566.46 especially when we disagree and above
570.66 all I will ask you to join in the work
572.97 of remaking this nation the only way
575.37 it's been done in America for 221 years
578.0 block by block brick by brick calloused
582.0 hand by calloused hand what began 21
585.72 months ago in the depths of winter
588.44 cannot end on this autumn night this
592.44 victory alone is not the change we seek
594.48 it is only the chance for us to make
597.06 that change and that cannot happen if we
600.15 go back to the way things were
601.95 it can't happen without you without a
604.68 new spirit of service a new spirit of
607.89 sacrifice so let us summon a new spirit
612.78 of patriotism of responsibility where
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617.1 each of us resolves to pitch in and work

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619.74 harder and look after not only ourselves
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- 622.02 but each other let us remember that if
- 625.17 this financial crisis taught us anything
- 626.88 it's that we cannot have a thriving Wall
- 629.37 Street while Main Street suffers in this
- 633.21 country we rise or fall as one nation as
- 635.79 one people
- 638.18 let's resist the temptation to fall back
- 640.98 on the same partisanship and pettiness 643.2
- and immaturity that has poisoned our
- 645.93 politics for so long let's remember that
- 649.29 it was a man from this state who Fair's
- 651.72 carry the banner of the Republican Party
- 653.85 of the white house a party founded on
- 656.28 the values of self-reliance and
- 657.9 individual liberty and national unity
- 660.53 those are values that we all share and
- 663.51 while the Democratic Party has won a
- 665.52 great victory tonight we do so with a
- 667.709 measure of humility and determination to
- 671.16 heal the divides that have held back our
- 673.56 progress
- 679.73 as Lincoln said to a nation far more
- 684.18 divided than ours we are not enemies but
- 687.63 friends though passion may have strained
- 690.42 it must not break our bonds of affection
- 694.61 and to those Americans who whose support
- 698.37 I have yet to earn I may not have won
- 701.31 your vote tonight but I hear your voices
- 704.52 I need your help and I will be your
- 708.48 president too and all those watching
- 718.86 tonight from beyond our shores from
- 721.77 Parliament's and palaces to those who
- 724.56 are huddled around radios in the
- 726.0 Forgotten corners of the world our
- 728.21 stories are singular but our destiny is
- 730.95 shared and a new dawn of American
- 733.41 leadership is at hand to those to those
- 742.68 who would tear the world down we will
- 746.04 defeat you to those who seek peace and
- 750.57 security we support you and to all those
- 755.07 who have wondered if America's beacon
- 757.11 still burns as bright tonight we proved
- 760.17 once more that the true strength of our
- 762.48 nation comes not from the might of our
- 764.46 arms or the scale of our wealth but from
- 766.71 the enduring power of our ideals
- 768.86 democracy Liberty opportunity and
- 772.23 unyielding
- 783.72 that's the true genius of America that
- 787.54 America can change our union can be
- 792.43 perfect what we've already achieved
- 795.01 gives us hope for what we can and must
- 797.589 achieve tomorrow this election had many
- 800.92 firsts and many stories will be told for

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803.5 generations but one that's on my mind
805.63 tonight's about a woman who cast her
808.18 ballot in Atlanta she is a lot like the
811.69 millions of others who stood in line to
813.4 make their voice heard in this election
814.99 except for one thing
816.67 and Nixon Cooper is 106 years old she
822.76 was born just a generation past slavery
824.92 a time when there were no cars on the
827.65 road or planes in the sky when someone 830.8
like her couldn't vote for two reasons
832.54 because she was a woman and because of
835.06 the color of her skin and tonight I
838.51 think about all that she's seen
840.82 throughout her century in America the
844.06 heartache and the hope the struggle and
847.06 the progress the times we were told that
849.82 we can't
850.48 and the people who pressed on with that
853.57 American creed yes we can at a time when
858.52 women's voices were silenced and their
860.32 hopes dismissed she lived to see them
862.779 stand up and speak out and reach for the
865.0 ballot yes we can when there was despair
868.839 in the Dust Bowl and depression across
871.66 the land she saw a nation conquer fear
874.42 itself with a new deal new jobs a new
877.69 sense of common purpose yes we can when
882.58 the bombs fell on our harbor and tyranny
886.06 threatened the world she was there to
887.68 witness a generation rise to greatness
889.51 and a democracy was saved yes we can she
895.66 was there for the buses in Montgomery
897.18 the hoses in Birmingham a bridge in
900.16 Selma and a preacher from Atlanta who
902.589 told the people that
904.029 we shall overcome yes we can a man
909.759 touched down on the moon a wall came
912.97 down in Berlin a world was connected by
916.75 our own science and imagination and this
920.079 year in this election she touched her
923.35 finger to a screen and cast her vote
926.79 because after a hundred and six years in
929.47 America through the best of times and
932.23 the darkest of hours she knows how
934.24 America can change yes we can America we
940.48 have come so far we have seen so much
944.37 but there's so much more to do so
947.189 tonight let us ask ourselves if our
951.399 children should live to see the next
953.649 century if my daughter's should be so
956.829 lucky to live as long as an Nixon cooper
959.85 what change will they see what progress
963.879 will we have made this is our chance to
967.87 answer that call this is our moment this
```

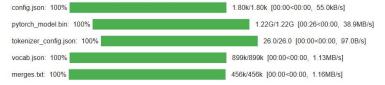
# [ ] transcript[0:5]

```
[{'text': 'hello Chicago', 'start': 3.34, 'duration': 3.66}, {'text': 'if there is anyone out there who still',
  {'text': 'if the 'start': 14.63,
 'duration': 8.5},
{'text': 'doubts that America is a place where all',
'start': 19.56,
   'duration': 8.46},
 {'text': 'things are possible who still wonders if', 'start': 23.13,
   'duration': 7.35}.
 {'text': 'the dream of our founders is alive in', 'start': 28.02,
  'duration': 6.3}]
```

## [ ] result = "" for i in transcript: result += ' ' + i['text'] print(len(result)) 10763

## [ ] summarizer = pipeline('summarization')

No model was supplied, defaulted to sshleifer/distilbart-cnn-12-6 and revision a4f8f3e (<a href="https://huggingface.co/sshleifer/distilbart-cnn-12-6">https://huggingface.co/sshleifer/distilbart-cnn-12-6</a>). Using a pipeline without specifying a model name and revision in production is not recommended.



[" Lines stretched around schools and churches in numbers this nation has never seen by people who waited three hours and four hours for the first time in their lives because the

'[" Lines stretched around schools and churches in numbers this nation has never seen by people who waited three hours and four hours for the first time in their lives because they believed that this time must be different that their voices could be that difference. It's the answer that led those who've been told for so long by so many to be cynical and cynical.", " Senator McCain fought long and hard in this campaign and he's fought even longer and harder for the country that he loves he has endured sacrifices for America a that most of us cannot begin to imagine we are better off for the service rendered by this brave and selfless leader I congratulate him I congratulate Governor Palin for all the beavid Rives and I look forward to working with them to renew this nation's promise.", 'Biden says he would not be standing here to night without the unjelding support of his best friend for the last 16 years. He says he\\\'s grateful to his campaign manager David Plouffe the unsung hero of this campaign. Biden: "I love you both more than you can imagine and you have earned the new puppy that'\\'s coming with us to the Mite House'\\\', "I was never the likeliest candidate for this office we didn'\\'s start with much money or many endorsements our campaign was not hatched in the halls of Washington it began in the backyards of Des Moines and the living rooms of Concord and the front porches of Charleston. It drew strength from the young people who rejected the myth of apathy who leave the interest of unit lifetime. We know there are brave Americans waking up in the deserts of Ira and the word was a celebrate tonight we know the challenges that tomorrow will bring are the greatest of our lifetime. We know there are brave Americans waking up in the deserts of Ira end ahead will be long our climb will be steaches and false starts there are many who won't' agree with very decision make as president.", " the us summon an ewa spirit of patriotism of responsibility where each of us resolves to pitch in and work harder and l

## len(str(summarized\_text))

972.069 is our time to put our people back to

975.339 work and open doors of opportunity for

977.199 our kids to restore prosperity and

979.689 promote the cause of peace to reclaim

982.269 the American Dream and reaffirm that

984.55 fundamental truth that out of many we

987.309 are one that while we breathe we hope

990.129 and where we are met with cynicism and

992.86 doubt and those who tell us that we

995.319 can't we will respond with that timeless

997.779 creed that sums up the spirit of a

1000.569 people yes we can thank you

1004.05 god bless you and may God bless the

1006.75 United States of America

1019.4 you

Colab link: <a href="https://colab.research.goo">https://colab.research.goo</a>	gle.com/drive/18jI	Pb1HjR7swhe89y	9N9kFXoGAlSXT	s1U?usp=sharing	ĭ