A

Major Project

On

SENTIMENT ANALYSIS
USING
TELUGU SENTIWORDNET

(Submitted in the Partial Fulfilment of
the Requirements for the Award of
the Degree)

BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING

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CMR TECHNICAL CAMPUS
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2019-2023

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the project entitled **"Sentiment Analysis Using Telugu SentiWordNet"** being submitted by **ANKIT PATEL (197R1A05J5), BANDARU SWAPNIL (197R1A05J7), D S RITHIK (197R1A05K3)** in partial fulfilment of the requirements for the award of the degree of B.Tech in Computer Science and Engineering to the Jawaharlal Nehru Technological University Hyderabad, is a record of bonafide work carried out by them under our guidance and supervision during the year 2022-23.

The results embodied in this thesis have not been submitted to any other University or Institute for the award of any degree or diploma.

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EXTERNAL EXAMINER

Submitted for viva voice Examination held on ________________

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ABSTRACT

In recent times, sentiment analysis in low resourced languages and regional languages has become emerging areas in natural language processing. Researchers have shown greater interest towards analyzing sentiment in Indian languages such as Hindi, Telugu, Tamil, Bengali, Malayalam, etc. In best of our knowledge, microscopic work has been reported till date towards Indian languages due to lack of annotated data set. we proposed a two-phase sentiment analysis for Telugu news sentences using Telugu SentiWordNet. Initially, it identifies subjectivity classification where sentences are classified as subjective or objective. In this project we proposed a system which analyses the sentiment behind the telugu sentence’s. Finally, the sentiment scores of individual words are aggregated to obtain an overall sentiment score for the text. This can be done using different aggregation methods, such as averaging, summing, or taking the maximum value. The resulting sentiment score can be used to classify the text into positive, negative, or neutral categories.

Overall, sentiment analysis using Telugu SentiWordNet can be a useful tool for analyzing the sentiment of Telugu language text data, which can be applied to various applications such as social media monitoring, customer feedback analysis, and market research.

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1. INTRODUCTION

1.1 PROJECT SCOPE

Sentiment analysis can be applied to text in three categories namely, sentence level, document level, and aspect level. Sentence level analysis focuses on identifying sentence-wise polarity value in a given document. Document level analysis determines the polarity value based on consideration of the whole document. In aspect level analysis, it identifies the polarity of every aspect (word-wise) in a given text

1.2 PROJECT PURPOSE

The project has been developed to determine the sentiment behind the telugu sentence's. The main purpose is to understand the sentiment behind the telugu sentence's and also to determine the amount of sentiment underlying behind the sentence's. It also determines the accuracy of the sentiment of the sentence's. This project aims to support the regional languages over the internet.

1.3 PROJECT FEATURES

This project has feature of this performing sentiment analysis on telugu sentences and analyze the emotion behind the sentence. The Telugu SentiWordNet consists of a set of synsets (groups of words with similar meanings) along with their corresponding sentiment scores. Each synset is associated with three scores: positivity, negativity, and objectivity. These scores range from 0 to 1, with 0 indicating no sentiment and 1 indicating extreme sentiment. The positivity score indicates the degree of positive sentiment associated with the synset, while the negativity score indicates the degree of negative sentiment. The objectivity score indicates the degree of neutrality.

2. SYSTEM ANALYSIS

2. SYSTEM ANALYSIS

2.1 INTRODUCTION

System Analysis is the important phase in the system development process. The System is studied to the minute details and analyzed. The system analyst plays an important role of an interrogator and dwells deep into the working of the present system. In analysis, a detailed study of these operations performed by the system and their relationships within and outside the system is done. A key question considered here is, "what must be done to solve the problem?" The system is viewed as a whole and the inputs to the system are identified. Once analysis is completed the analyst has a firm understanding of what is to be done.

2.2 PROBLEM DEFINITION

Sentiment analysis can be applied to text in three categories namely, sentence level, document level, and aspect level. Sentence level analysis focuses on identifying sentence-wise polarity value in a given document. Document level analysis determines the polarity value based on consideration of the whole document. In aspect level analysis, it identifies the polarity of every aspect (word-wise) in a given text. The main problem is that existing system fails to determine the sentiment behind the telugu sentence's accurately and it does not detect if a sentence contains a mix of positive, negative and neutral words.

2.3 EXISTING SYSTEM

The existing system detects only positive or negative telugu sentence's. The system does not provide the ratio of positive, negative and neutral sentence's. The Existing system was not accurate up to the mark and users finds it difficult to get which one is positive and which one is negative sentence. The existing system failed to detect the sentiment from sentence which is positive and which is negative due to which many confusions arises.

There exist several sentiment analyzers for the English language but, in the context of Indian languages, little work has been done. The primary reason behind is the lack of the available resources in Indian languages. In this paper, we proposed a sentence level sentiment analyzer for Telugu news

2.3.1 SENTIMENT ANALYSIS

In natural language processing (NLP), sentiment analysis is a technique that deals with analyzing the emotions, sentiments, opinions of an individual towards a product, movies, events, news or organizations, etc. The primary task of sentiment analysis is to identify the polarity of a text in a given document. The polarity may be either positive, negative or neutral.

Sentiment analysis can be applied to text in three categories namely, sentence level, document level, and aspect level. Sentence level analysis focuses on identifying sentence-wise polarity value in a given document. Document level analysis determines the polarity value based on consideration of the whole document. In aspect level analysis, it identifies the polarity of every aspect (word-wise) in a given text.

Sentiment analysis involves determining whether the author or speaker’s feelings are positive, neutral, or negative about a given topic. For instance, you would like to gain a deeper insight into customer sentiment, so you begin looking at customer feedback under purchased products or comments under your company’s post on any social media platform. You would like to know if the customer is pleased with your services, neutral, or if he/she has any complaints, meaning whether the customer has a neutral, positive or negative sentiment regarding your products, services or actions. Figuring this out is called sentiment analysis.

2.3.2 NATURAL LANGUAGE PROCESSING

Natural language processing (NLP) refers to the branch of computer science—and more specifically, the branch of artificial intelligence or AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can.

NLP combines computational linguistics—rule-based modeling of human language—with statistical, machine learning, and deep learning models. Together, these technologies enable computers to process human language in the form of text or voice data and to 'understand' its full meaning, complete with the speaker or writer's intent and sentiment.

NLP drives computer programs that translate text from one language to another, respond to spoken commands, and summarize large volumes of text rapidly—even in real time. There's a good chance you've interacted with NLP in the form of voice-operated GPS systems, digital assistants, speech-to-text dictation software, customer service chatbots, and other consumer conveniences. But NLP also plays a growing role in enterprise solutions that help streamline business operations, increase employee productivity, and simplify mission-critical business processes.The field of NLP involves making computers to perform useful tasks with the natural languages humans use. The input and output of an NLP system can be –

- Speech
- Written Text

2.3.3 DISADVANTAGES OF EXISTING SYSTEM

Following are the disadvantages of existing system:

- The existing system detects only that sentence is positive or negative sentence.
- The existing system fails to detect sentence’s with mixed emotion’s.
- The existing system does not detect neutral sentances
- The existing system has less accurate results.
- The existing system does not provide sentiment analysis on telugu language.

2.4 PROPOSED SYSTEM

In this project we build an application for detecting positive or negative sentences from Telugu sentences, this detection consists of two parts in which using first part we can detect objective or subjective from sentences and if objective words appear in the neutral list of SentiWordNet then that sentence will be consider as Neutral, if words not appear in SentiWordNet Neutral list then sentence words will check inside positive and negative list of SentiWordNet, if sentence words found in positive list then sentence will be consider as positive otherwise negative In Telugu languages, it’s hard to find annotated data set to perform NLP tasks such as POS tagging, sentiment analysis, sarcasm analysis, text summarization, etc.

In this project, we proposed a sentence-level sentiment analyzer for Telugu news.It is a two-step sentiment analysis process namely, subjectivity analysis and sentiment analysis. In subjectivity analysis, we classify the subjective and objective sentences from the given corpus. Further, we analyze the sentiment of subjective sentences either negative or positive. Therefore, in the first phase, the system classify the sentences as either subjective (positive, negative) or objective (neutral). In the second phase, the system classify the subjective sentences as either positive or negative.

2.4.1 SENTIWORDNET

SentiWordNet is a lexical resource that is used to determine the sentiment of words in natural language processing. It is a lexical resource that is based on WordNet, a lexical database for the English language that is used in natural language processing applications. SentiWordNet assigns scores to words based on their sentiment. The scores are based on three dimensions of sentiment: positivity, negativity, and neutrality. The scores range from 0 to 1, where 0 indicates complete negativity, 1 indicates complete positivity, and 0.5 indicates neutrality. The scores assigned to each word in SentiWordNet are based on the frequency with which the word is used in positive, negative, and neutral contexts. For example, if a word is frequently used in positive contexts, it will be assigned a high positivity score.

SentiWordNet is particularly useful in sentiment analysis, a branch of natural language processing that involves determining the sentiment of a piece of text. In sentiment analysis, SentiWordNet can be used to identify the sentiment of individual words in a sentence or document and combine them to determine the overall sentiment of the text. SentiWordNet has been used in a variety of natural language processing applications, including sentiment analysis, opinion mining, and text classification. It is a valuable resource for researchers and developers who are working on applications that involve sentiment analysis or other forms of natural language processing.

2.4.2 ADVANTAGES OF PROPOSED SYSTEM

The advantages of the proposed system are:

- If sentences contains words from both positive and negative list then we take ratio of both positive and negative words and if positive ratio higher then sentence will be consider as positive else negative.
- If sentence is objective or subjective then the proposed system will consider by taking the ratio of the two.

2.5 FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and a business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. Three key considerations involved in the feasibility analysis:

- Economic Feasibility
- Technical Feasibility
- Social Feasibility

2.5.1 ECONOMIC FEASIBILITY

The developing system must be justified by cost and benefit. Criteria to ensure that effort is concentrated on a project, which will give best, return at the earliest. One of the factors, which affect the development of a new system, is the cost it would require.

The following are some of the important financial questions asked during preliminary investigation:

- The costs conduct a full system investigation.
- The cost of the hardware and software.
- The benefits in the form of reduced costs or fewer costly errors.

Since the system is developed as part of project work, there is no manual cost.

2.5.2 TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

2.5.3 BEHAVIORAL FEASIBILITY

This includes the following questions:

- Is there sufficient support for the users?
- Will the proposed system cause harm?

2.6 HARDWARE AND SOFTWARE REQUIREMENTS

For execution of this project, we require few hardware and software interfaces for implementing the project.This project is developed using Python in a Windows environment. The project’s major goal is to perform sentiment analysis for telugu sentences. The different hardware and software components are required to execute this project.

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2.6.1 HARDWARE REQUIREMENTS

Hardware Requirements that are required are:

- Processor – Intel Pentium –III or greater
- RAM – 4 GB or greater
- Hard Disk - 20 GB or greater
- Key Board - Standard Keyboard

2.6.2 SOFTWARE REQUIREMENTS

Sofware Requirements that are required to execute the project are:

Operating System: Windows 7 or greater

Coding Language: Python 3.7

3. ARCHITECTURE

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3.1 PROJECT ARCHITECTURE

This project architecture shows the procedure followed for classification,starting from input to final prediction.

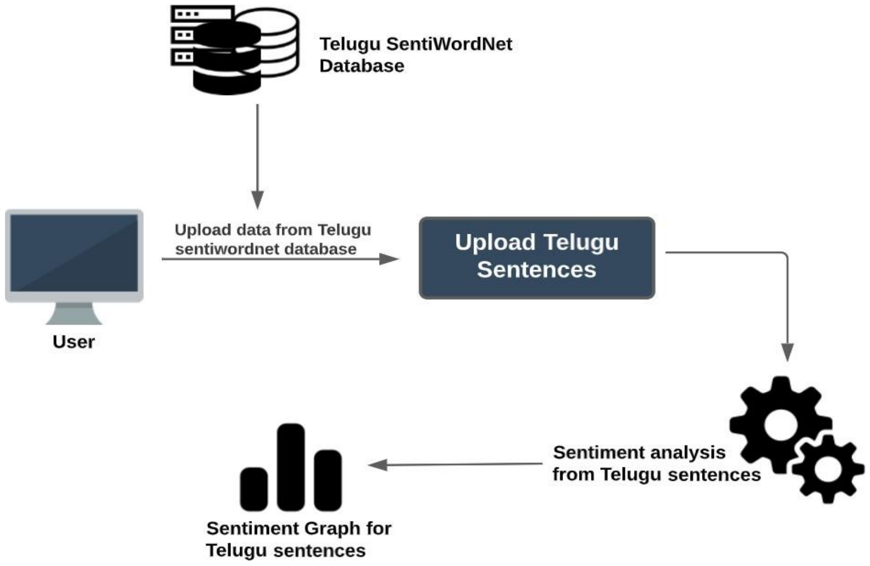


Figure 3.1: ARCHITECTURE DIAGRAM FOR SENTIMENT ANALYSIS

3.2 DESCRIPTION

In this project, data has been collected from the Telugu e-Newspapers namely, Eenadu, Sakshi, Andhrajyothy, Vaartha, and Andhrabhoomi, which are high rated newspapers in the states such as Andhra Pradesh and Telangana where the native language is Telugu. Our news dataset contains 1400 Telugu sentences from all the e-Newspapers as mentioned earlier ranging from the 1st of December 2016 to 31th of December 2016. the projects is detecting positive or negative sentences from Telugu sentences, this detection consists of two parts in which using first part we can detect objective or subjective from sentences and if objective words appear in the neutral list of SentiWordNet then that sentence will be consider as Neutral, if words not appear in SentiWordNet Neutral list then sentence words will check inside positive and negative list of SentiWordNet, if sentence words found in positive list then sentence will be consider as positive otherwise negative.

This project take help of available Telugu SentiWordNet to perform sentiment analysis for Telugu eNewspapers sentences. The proposed system for sentiment analysis has attained an accuracy of 74% for subjectivity classification and 81% for sentiment classification in the domain of news data.

3.3 USE CASE DIAGRAM

In the use case diagram, we have basically one actor who is the user in the trained model. A use case diagram is a graphical depiction of a user's possible interactions with a system. A use case diagram shows various use cases and different types of usersthe system has. The use cases are represented by either circles or ellipses. The actors are often shown as stick figures

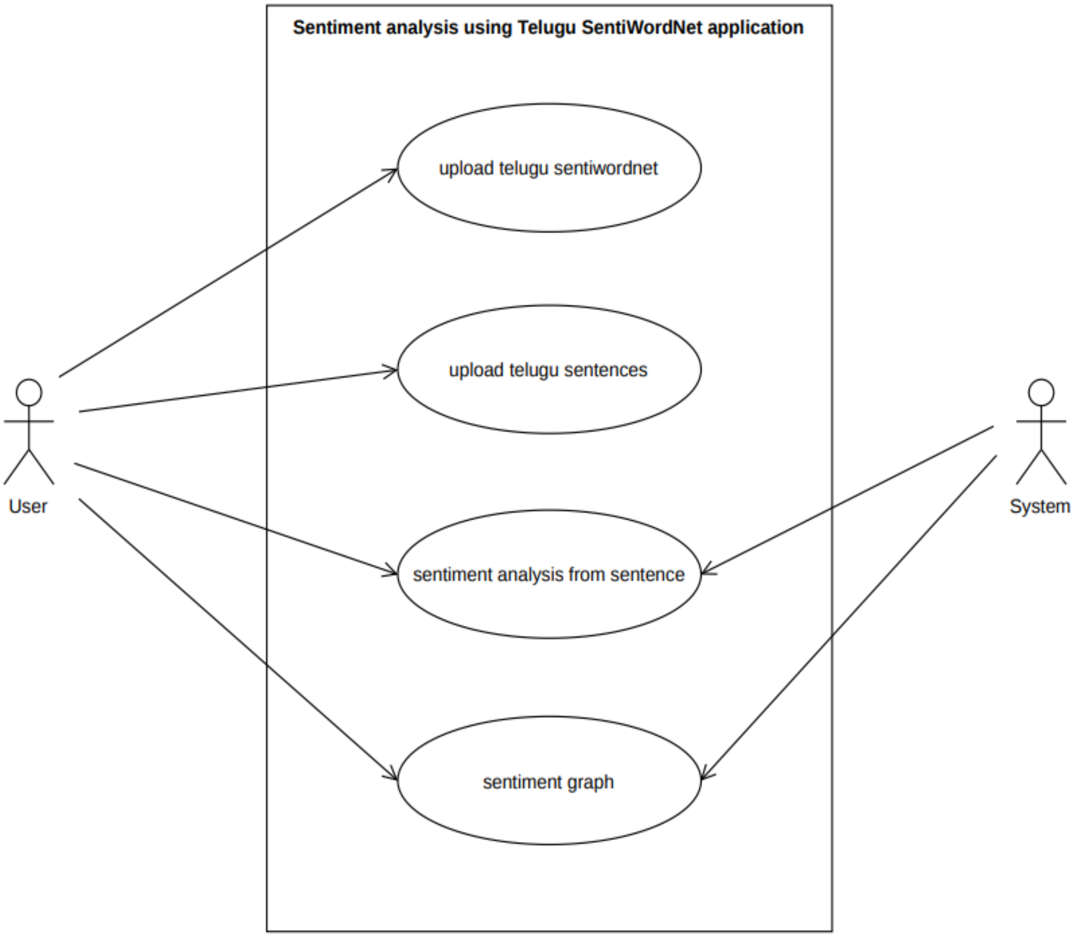

Sentiment analysis using Telugu SentiWordNet application
upload telugu sentiwordnet
upload telugu sentences
sentiment analysis from sentence
sentiment graph
User
System

Figure 3.2: USE CASE DIAGRAM FOR SENTIMENT ANALYSIS

3.4 ACTIVITY DIAGRAM

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control.

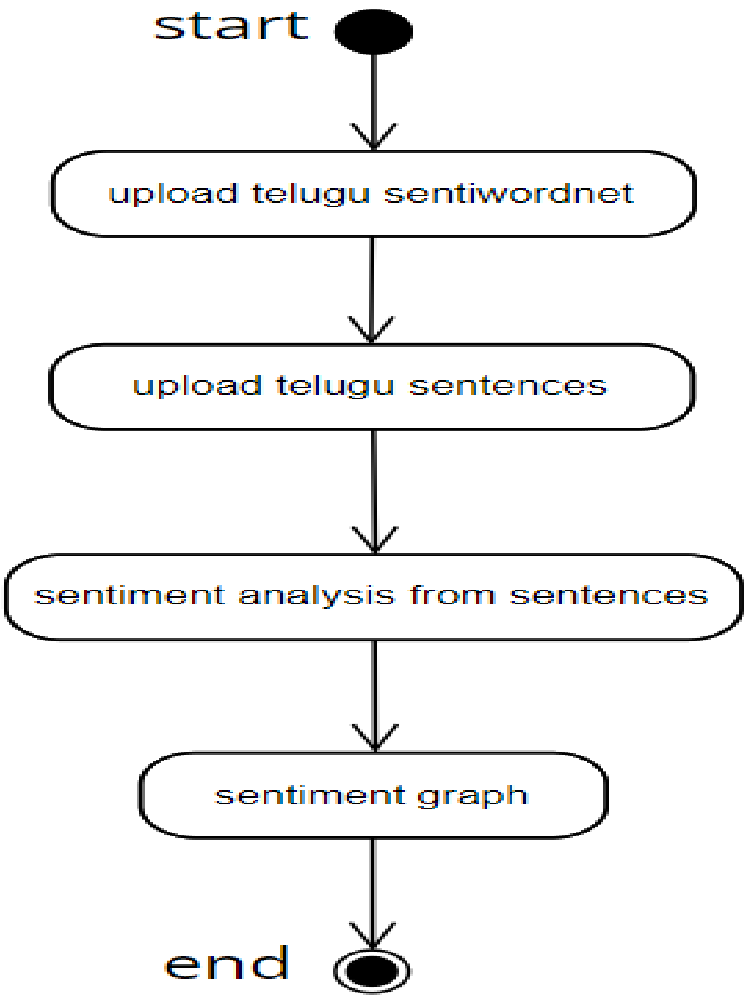


Figure 3.3: ACTIVITY DIAGRAM FOR SENTIMENT ANALYSIS

3.5 SEQUENCE DIAGRAM

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the logical view of the system under development.

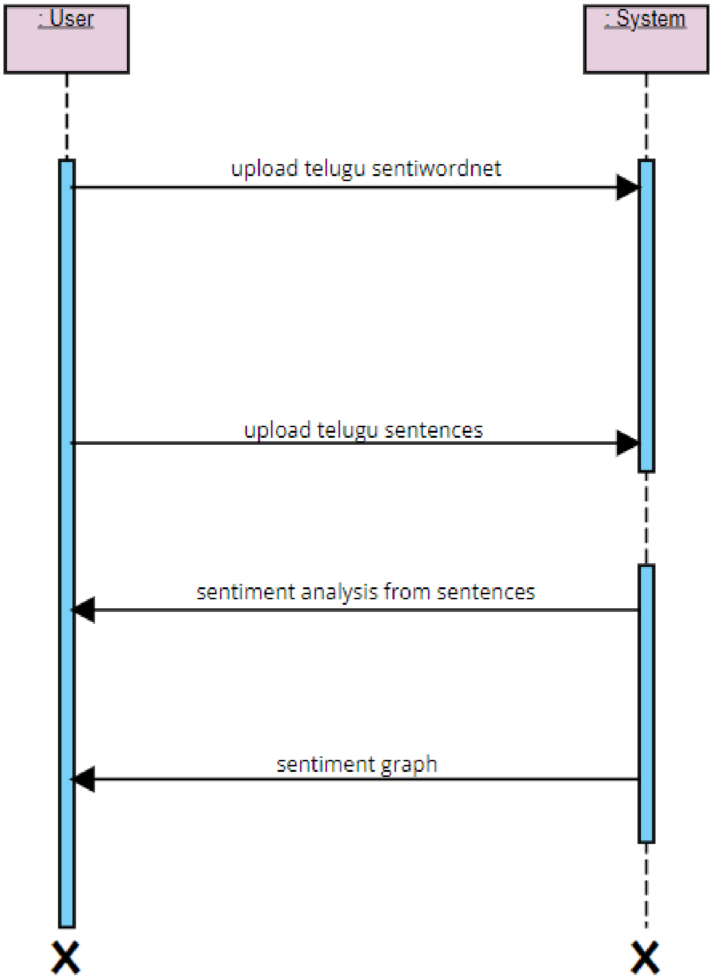


Figure 3.4: SEQUENCE DIAGRAM FOR SENTIMENT ANALYSIS

3.6 CLASS DIAGRAM

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modelling of object oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages

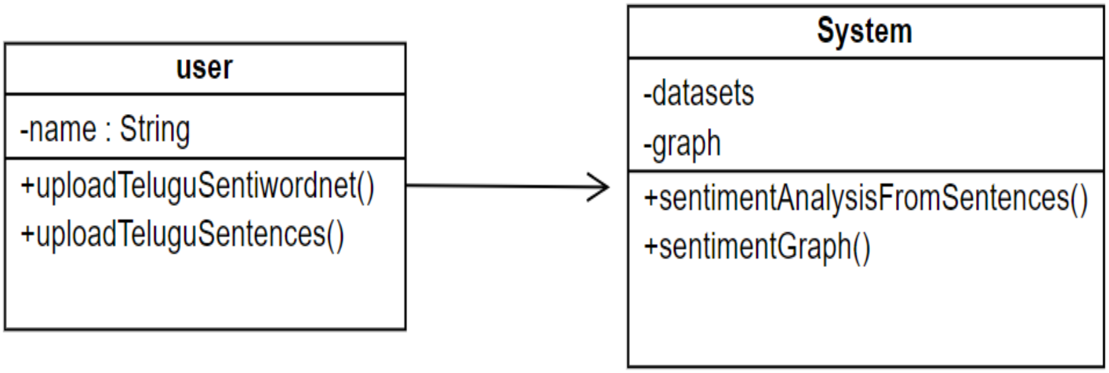


Figure 3.5: CLASS DIAGRAM FOR SENTIMENT ANALYSIS

4. IMPLEMENTATION

4. IMPLEMENTATION

4.1 SAMPLE CODE

```
from tkinter import *
import tkinter
from tkinter import filedialog
from tkinter.filedialog import askopenfilename
from tkinter import simpledialog
import numpy as np
import matplotlib.pyplot as plt

main = tkinter.Tk()
main.title("Telugu Sentiment Detection Using SentiWordNet") #designing main screen
main.geometry("1300x1200")

global filename
positive_list = []
negative_list = []
neutral_list = []

global pos
global neg
global neu
global fscore
global pos_count
global neg_count
global count

def uploadSentiwordnet():
   text.delete('1.0', END)
   text1.delete('1.0', END)
   text2.delete('1.0', END)
   text.insert(END,"Sentiment Negative Words List\n\n");
   text1.insert(END,"Sentiment Neutral Words List\n\n");
   text2.insert(END,"Sentiment Positive Words List\n\n");
   with open("Telugu_SentiWordNet/TE_NEG.txt", "r",encoding="utf-8") as file:
#reading LIWC dictinary
      for line in file:
        line = line.strip('\n')


arr = line.split("\t")
```

```
        negative_list.append(arr[1])
        text.insert(END,arr[1]+"\n")

    with open("Telugu_SentiWordNet/TE_NEU.txt", "r",encoding="utf-8") as file:
#reading LIWC dictinary
      for line in file:
        line = line.strip('\n')
        line = line.strip()
        arr = line.split("\t")
        neutral_list.append(arr[1])
        text1.insert(END,arr[1]+"\n")

    with open("Telugu_SentiWordNet/TE_POS.txt", "r",encoding="utf-8") as file:
#reading LIWC dictinary
      for line in file:
        line = line.strip('\n')
        line = line.strip()
        arr = line.split("\t")
        positive_list.append(arr[1])
        text2.insert(END,arr[1]+"\n")


def uploadSentences(): #function to upload tweeter profile
    global filename
    filename = filedialog.askopenfilename(initialdir="Book_Reviews_Sentences")
    pathlabel.config(text=filename)

def sentimentAnalysis():
    global pos
    global neg
    global neu
    global fscore
    global pos_count
    global neg_count
    global count
    neg_count = 0
    pos_count = 0
    fscore = 0
    text3.delete('1.0', END)
    count = 0;
    with open(filename, "r",encoding="utf-8") as file:  #reading LIWC dictinary
      for line in file:
        line = line.strip('\n')
```

```
 line = line.strip()
        arr = line.split()
        pos = 0
        neg = 0
        neu = 0
        print(str(len(arr))+" "+str(len(neutral_list)))
        if len(arr) > 0 and (line.startswith('______________________________') == False):
            count = count + 1
            for word in arr:
                if word in neutral_list:
                    neu = neu + 1
                if word in negative_list:
                    neg = neg + 1
                if word in positive_list:
                    pos = pos + 1

            pos = pos + neu
            if pos == 0 and neg == 0:
                text3.insert(END,line+"\n")
                text3.insert(END,"Sentence Sentiment : Neutral\n\n")
            elif pos > 0 and neg > 0:
                pos = pos/len(arr)
                neg = neg/len(arr)
                if pos > neg :
                    fscore = fscore + pos
                    pos_count = pos_count
                    text3.insert(END,line+"\n")
                    text3.insert(END,"Sentence Sentiment : Positive, Sentiment Score = 
"+str(pos)+"\n\n")
                else:
                    #fscore = fscore + neg
                    neg_count = neg_count + 1
                    text3.insert(END,line+"\n")
                    text3.insert(END,"Sentence Sentiment : Negative, Sentiment Score = 
"+str(neg)+"\n\n")
            elif pos > 0 and neg == 0:
                pos = pos/len(arr)
                fscore = fscore + pos
                pos_count = pos_count + 1
                text3.insert(END,line+"\n")
                text3.insert(END,"Sentence Sentiment : Positive, Sentiment Score = 
"+str(pos)+"\n\n")
            elif pos == 0 and neg > 0:
                neg = neg/len(arr)
                #fscore = fscore + neg
                neg_count = neg_count + 1
                text3.insert(END,line+"\n")
                text3.insert(END,"Sentence Sentiment : Negative, Sentiment Score = 
"+str(neg)+"\n\n")

            count = count + 1
    text3.insert(END,"\n\nAccuracy : "+str(((fscore*100)/count)*20)+"\n\n\n\n\n\n")


def graph():
    height = [count,pos_count,neg_count]
    bars = ('Total Sentences', 'Positive Sentences','Negative Sentences')
    y_pos = np.arange(len(bars))
    plt.bar(y_pos, height)
    plt.xticks(y_pos, bars)
    plt.show()

font = ('times', 16, 'bold')
title = Label(main, text='Sentiment Analysis Using Telugu SentiWordNet', 
justify=LEFT)
title.config(bg='lavender blush', fg='DarkOrchid1')
title.config(font=font)
title.config(height=3, width=120)
title.place(x=100,y=5)
title.pack()

font1 = ('times', 14, 'bold')
uploadButton = Button(main, text="Upload Telugu Sentiwordnet", 
command=uploadSentiwordnet)
uploadButton.place(x=50,y=100)
uploadButton.config(font=font1)

pathlabel = Label(main)
pathlabel.config(bg='brown', fg='white')
pathlabel.config(font=font1)
pathlabel.place(x=360,y=100)

sentenceButton = Button(main, text="Upload Telugu Sentences", 
command=uploadSentences)
sentenceButton.place(x=50,y=150)
sentenceButton.config(font=font1)

sentimentButton = Button(main, text="Sentiment Analysis From Sentences",
command=sentimentAnalysis)
sentimentButton.place(x=300,y=150)
sentimentButton.config(font=font1)



graphbutton = Button(main, text="Sentiment Graph", command=graph)
graphbutton.place(x=630,y=150)
graphbutton.config(font=font1)


font1 = ('times', 12, 'bold')
text=Text(main,height=20,width=20)
scroll=Scrollbar(text)
text.configure(yscrollcommand=scroll.set)
text.place(x=10,y=200)
text.config(font=font1)

text1=Text(main,height=20,width=20)
scroll1=Scrollbar(text1)
text1.configure(yscrollcommand=scroll1.set)
text1.place(x=220,y=200)
text1.config(font=font1)

text2=Text(main,height=20,width=20)
scroll2=Scrollbar(text2)
text2.configure(yscrollcommand=scroll2.set)
text2.place(x=430,y=200)
text2.config(font=font1)

text3=Text(main,height=20,width=80)
scroll3=Scrollbar(text3)
text3.configure(yscrollcommand=scroll.set)
text3.place(x=650,y=200)
text3.config(font=font1)
text1=Text(main,height=20,width=20)
scroll1=Scrollbar(text1)
text1.configure(yscrollcommand=scroll1.set)
text1.place(x=220,y=200)
text1.config(font=font1)

text2=Text(main,height=20,width=20)
scroll2=Scrollbar(text2)
text2.configure(yscrollcommand=scroll2.set)
```

```
text2.place(x=430,y=200)
text2.config(font=font1)

text3=Text(main,height=20,width=80)
scroll3=Scrollbar(text3)
text3.configure(yscrollcommand=scroll.set)
text3.place(x=650,y=200)
text3.config(font=font1)



main.config(bg='brown')
main.mainloop()

text1=Text(main,height=20,width=20)
scroll1=Scrollbar(text1)
text1.configure(yscrollcommand=scroll1.set)
text1.place(x=220,y=200)
text1.config(font=font1)

text2=Text(main,height=20,width=20)
scroll2=Scrollbar(text2)
text2.configure(yscrollcommand=scroll2.set)
text2.place(x=430,y=200)
text2.config(font=font1)

text3=Text(main,height=20,width=80)
scroll3=Scrollbar(text3)
text3.configure(yscrollcommand=scroll.set)
text3.place(x=650,y=200)
text3.config(font=font1)

text1=Text(main,height=20,width=20)
scroll1=Scrollbar(text1)
text1.configure(yscrollcommand=scroll1.set)
text1.place(x=220,y=200)
text1.config(font=font1)

text2=Text(main,height=20,width=20)
scroll2=Scrollbar(text2)
text2.configure(yscrollcommand=scroll2.set)
text2.place(x=430,y=200)
text2.config(font=font1)
```

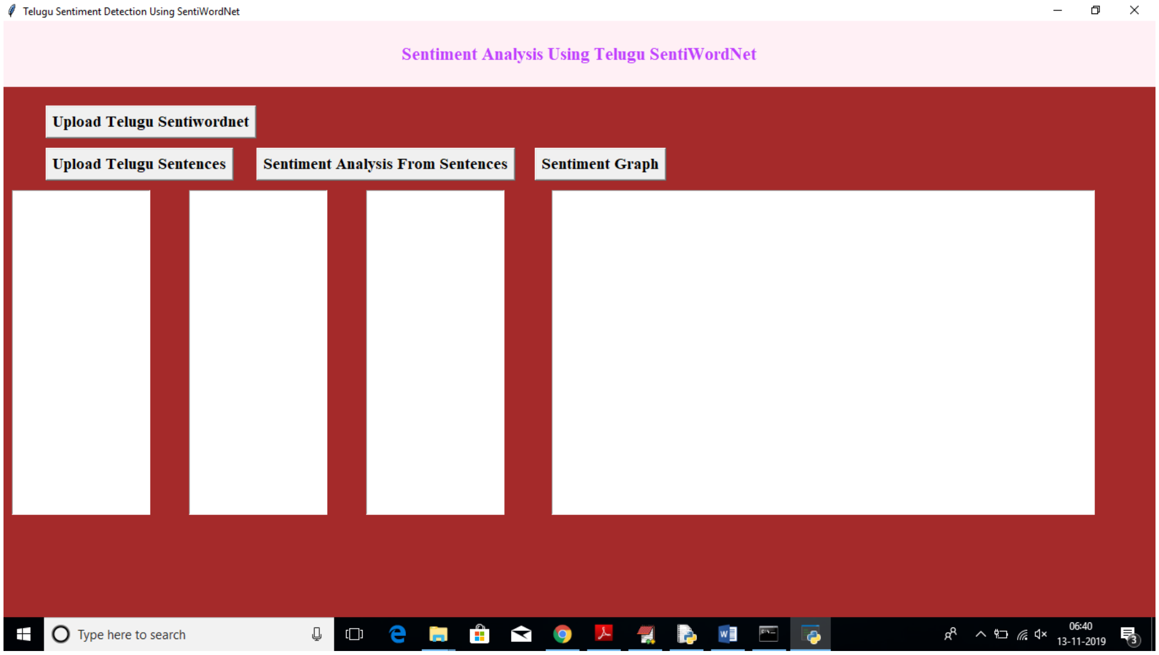
```
text3=Text(main,height=20,width=80)


scroll3=Scrollbar(text3)
text3.configure(yscrollcommand=scroll.set)
text3.place(x=650,y=200)
text3.config(font=font1)


with open("Telugu_SentiWordNet/TE_POS.txt", "r",encoding="utf-8") as file:  #reading
LIWC dictinary
    for line in file:
      line = line.strip('\n')
      line = line.strip()
      arr = line.split("\t")
      positive_list.append(arr[1])
      text2.insert(END,arr[1]+"\n")

pos = pos + neu
        if pos == 0 and neg == 0:
           text3.insert(END,line+"\n")
           text3.insert(END,"Sentence Sentiment : Neutral\n\n")
        elif pos > 0 and neg > 0:
           pos = pos/len(arr)
           neg = neg/len(arr)
           if pos > neg :
              fscore = fscore + pos
              pos_count = pos_count
              text3.insert(END,line+"\n")
              text3.insert(END,"Sentence Sentiment : Positive, Sentiment Score =
"+str(pos)+"\n\n")
           else:
              #fscore = fscore + neg
              neg_count = neg_count + 1
              text3.insert(END,line+"\n")
              text3.insert(END,"Sentence Sentiment : Negative, Sentiment Score =
"+str(neg)+"\n\n")
        elif pos > 0 and neg == 0:
           pos = pos/len(arr)
           fscore = fscore + pos
           pos_count = pos_count + 1
           text3.insert(END,line+"\n")
           text3.insert(END,"Sentence Sentiment : Positive, Sentiment Score =
"+str(pos)+"\n\n")
        elif pos == 0 and neg > 0:
```

```
font1 = ('times', 14, 'bold')
uploadButton = Button(main, text="Upload Telugu Sentiwordnet",
command=uploadSentiwordnet)
uploadButton.place(x=50,y=100)
uploadButton.config(font=font1)


pathlabel = Label(main)
pathlabel.config(bg='brown', fg='white')
pathlabel.config(font=font1)
pathlabel.place(x=360,y=100)


neg = neg/len(arr)
                #fscore = fscore + neg
                neg_count = neg_count + 1
                text3.insert(END,line+"\n")
                text3.insert(END,"Sentence Sentiment : Negative, Sentiment Score =
"+str(neg)+"\n\n")

            count = count + 1
    text3.insert(END,"\n\nAccuracy : "+str(((fscore*100)/count)*20)+"\n\n\n\n\n\n")


line = line.strip()
        arr = line.split()
        pos = 0
        neg = 0
        neu = 0
        print(str(len(arr))+" "+str(len(neutral_list)))
        if len(arr) > 0 and (line.startswith('___________________________') == False):
            count = count + 1
            for word in arr:
                if word in neutral_list:
                    neu = neu + 1
                if word in negative_list:
                    neg = neg + 1
                if word in positive_list:
                    pos = pos + 1
```

5. RESULTS

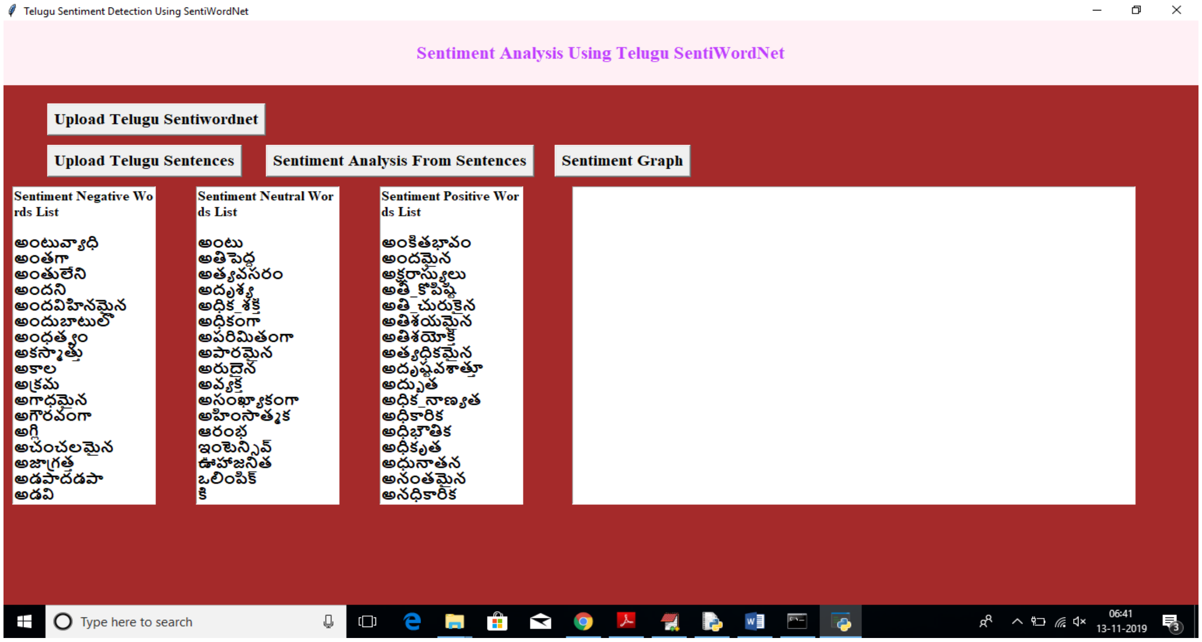
5. RESULTS

5.1 SENTIMENT ANALYSIS APPLICATION


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:40
13-11-2019

Screenshot 5.1: SENTIMENT ANALYSIS APPLICATION

5.2 UPLOADING DATA FROM DATABASE


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:41
13-11-2019

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహినమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

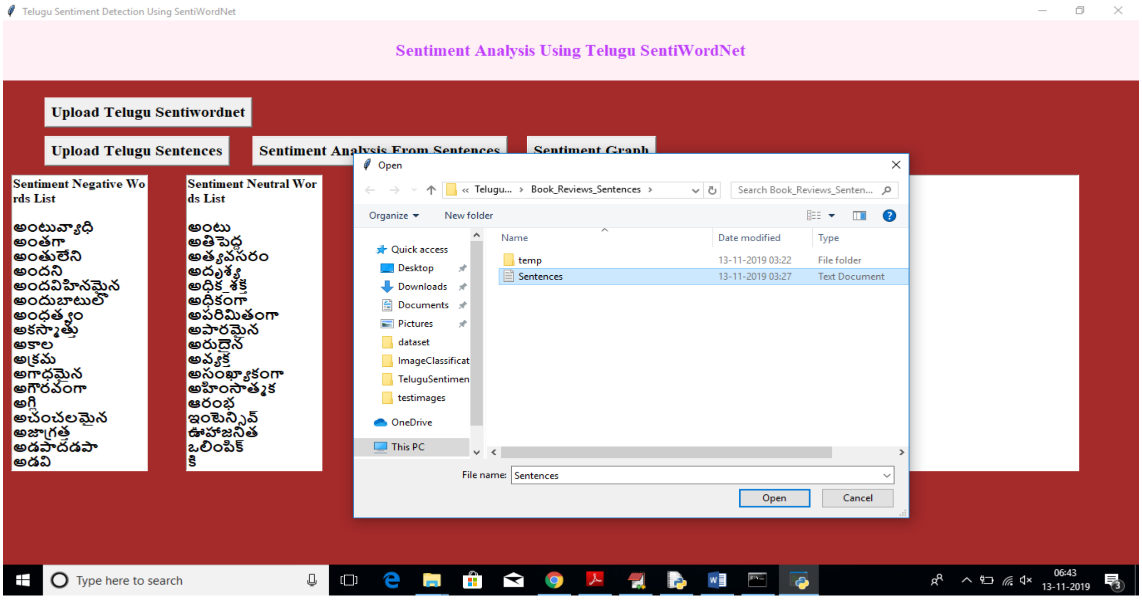
అంటు
అతిపెద్ద
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
కి

Sentiment Positive Words List

అంకితభావం
అందమైన
అక్షరాస్యులు
అతి_కోపిష్ఠ
అతి_చురుకైన
అతిశయమైన
అతిశయోక్తి
అత్యధికమైన
అదృష్టవశాత్తూ
అద్భుత
అధిక_నాణ్యత
అధికారిక
అధిభౌతిక
అధీకృత
అధునాతన
అనంతమైన
అనధికారిక

Screenshot 5.2: UPLOADING DATA FROM DATABASE

5.3 UPLOADING SENTANCES TO PERFORM ANALYSIS


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Open
« Telugu... › Book_Reviews_Sentences ›
Search Book_Reviews_Senten...
Organize
New folder
Quick access
Desktop
Downloads
Documents
Pictures
dataset
ImageClassificat
TeluguSentimen
testimages
OneDrive
This PC
Open
Cancel
Type here to search
06:43
13-11-2019

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహినమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్గి
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

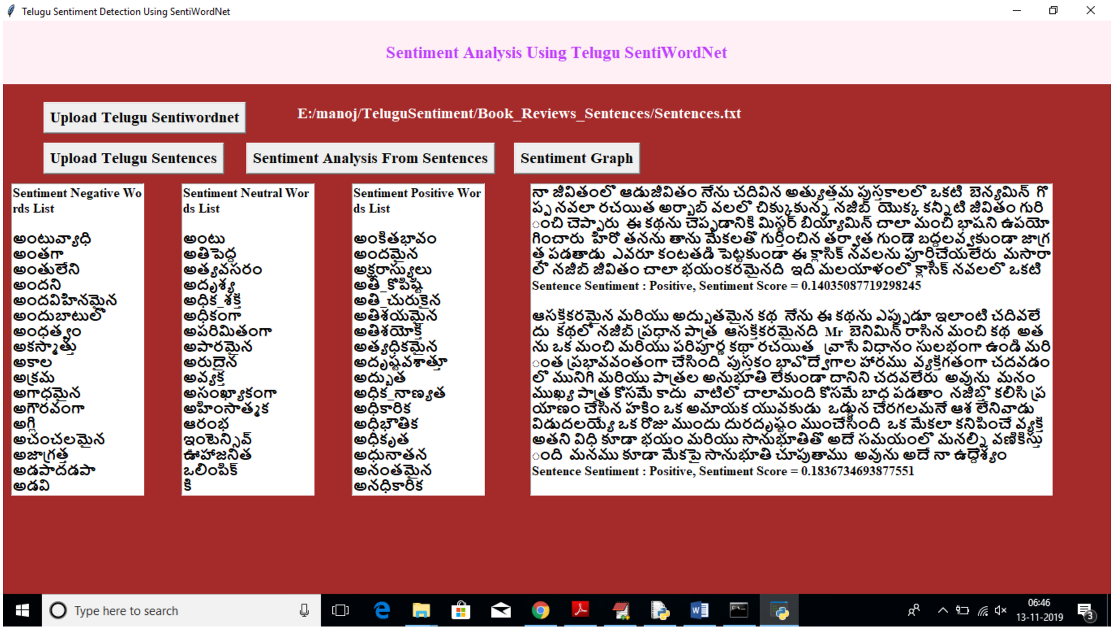
అంటు
అతిపెద్ద
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
కి

Name	Date modified	Type
temp	13-11-2019 03:22	File folder
Sentences	13-11-2019 03:27	Text Document

File name: Sentences

Screenshot 5.3: UPLOADING SENTANCES TO PERFORM ANALYSIS

5.4 SENTIMENT ANALYSIS OF TELUGU SENTANCES


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:46
13-11-2019

E:/manoj/TeluguSentiment/Book_Reviews_Sentences/Sentences.txt

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

అంటు
అతిపెద్ద
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
కి

Sentiment Positive Words List

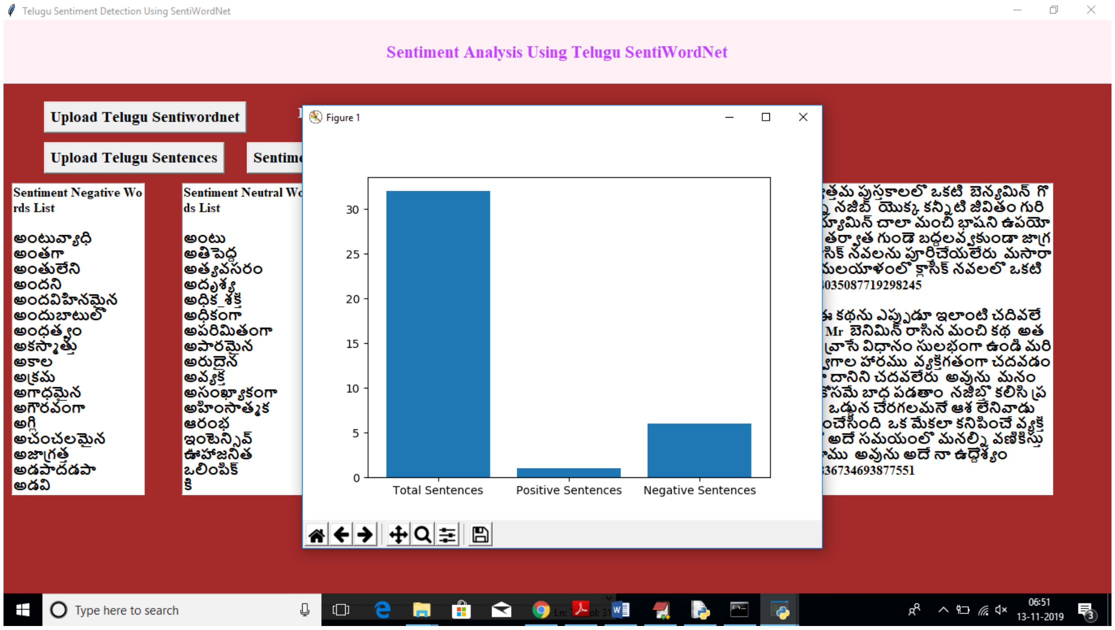
అంకితభావం
అందమైన
అక్షరాస్యులు
అతి_కోపిష్ఠ
అతి_చురుకైన
అతిశయమైన
అతిశయోక్తి
అత్యధికమైన
అదృష్టవశాత్తూ
అద్భుత
అధిక_నాణ్యత
అధికారిక
అధిభౌతిక
అధికృత
అధునాతన
అనంతమైన
అనధికారిక

నా జీవితంలో ఆడుజీవితం నేను చదివిన అత్యుత్తమ పుస్తకాలలో ఒకటి బెన్యమిన్ గోప్ప నవలా రచయిత అర్బాబ్ వలలో చిక్కుకున్న నజీబ్ యొక్క కన్నీటి జీవితం గురించి చెప్పారు ఈ కథను చెప్పడానికి మిస్టర్ బియ్యామిన్ చాలా మంచి భాషని ఉపయోగించారు హీరో తనను తాను మేకలతో గుర్తించిన తర్వాత గుండె బద్దలవ్వకుండా జాగ్రత్త పడతాడు ఎవరూ కంటతడి పెట్టకుండా ఈ క్లాసిక్ నవలను పూర్తిచేయలేరు మసారాలో నజీబ్ జీవితం చాలా భయంకరమైనది ఇది మలయాళంలో క్లాసిక్ నవలలో ఒకటి
Sentence Sentiment : Positive, Sentiment Score = 0.14035087719298245

ఆసక్తికరమైన మరియు అద్భుతమైన కథ నేను ఈ కథను ఎప్పుడూ ఇలాంటి చదివలేదు కథలో నజీబ్ ప్రధాన పాత్ర ఆసక్తికరమైనది Mr బెనిమిన్ రాసిన మంచి కథ అతను ఒక మంచి మరియు పరిపూర్ణ కథా రచయిత వ్రాసే విధానం సులభంగా ఉండి మరింత ప్రభావవంతంగా చేసింది పుస్తకం భావోద్వేగాల హారము వ్యక్తిగతంగా చదవడంలో మునిగి మరియు పాత్రల అనుభూతి లేకుండా దానిని చదవలేరు అవును మనం ముఖ్య పాత్ర కోసమే కాదు వాటిలో చాలామంది కోసమే బాధ పడతాం నజీబ్తో కలిసి ప్రయాణం చేసిన హకీం ఒక అమాయక యువకుడు ఒడ్డున చేరగలమనే ఆశ లేనివాడు విడుదలయ్యే ఒక రోజు ముందు దురదృష్టం ముంచేసింది ఒక మేకలా కనిపించే వ్యక్తి అతని విధి కూడా భయం మరియు సానుభూతితో అదే సమయంలో మనల్ని వణికిస్తుంది మనము కూడా మేకపై సానుభూతి చూపుతాము అవును అదే నా ఉద్దేశ్యం
Sentence Sentiment : Positive, Sentiment Score = 0.1836734693877551

Screenshot 5.4: SENTIMENT ANALYSIS OF TELUGU SENTANCES

5.5 SENTIMENT ANALYSIS GRAPH



Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

అంటు
అతిపెద్ద
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
కి

త్తమ పుస్తకాలలో ఒకటి బెన్యమిన్ గో
నజీబ్ యొక్క కన్నీటి జీవితం గురి
మ్యామిన్ చాలా మంచి భాషని ఉపయో
తర్వాత గుండె బద్దలవ్వకుండా జాగ్ర
సిక్ నవలను పూరిచేయలేరు మసారా
మలయాళంలో క్లాసిక్ నవలలో ఒకటి
035087719298245

ఈ కథను ఎప్పుడూ ఇలాంటి చదివలే
Mr బెనిమిన్ రాసిన మంచి కథ అత
వ్రాసే విధానం సులభంగా ఉండి మరి
్యాగాల హారము వ్యక్తిగతంగా చదవడం
దానిని చదవలేరు అవును మనం
కోసమే బాధ పడతాం నజీబ్తో కలిసి ప్ర
ఒడ్డున చేరగలమనే ఆశ లేనివాడు
ంచేసింది ఒక మేకలా కనిపించే వ్యక్తి
అదే సమయంలో మనల్ని వణికిస్తు
ము అవును అదే నా ఉద్దేశ్యం
3673469387755 1

Screenshot 5.5: SENTIMENT ANALYSIS GRAPH

6. TESTING

6. TESTING

6.1 INTRODUCTION TO TESTING

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, subassemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of tests. Each test type addresses a specific testing requirement.

6.2 TYPES OF TESTING

6.2.1 UNIT TESTING

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application. It is done after the completion of an individual unit before integration. This is a structural testing that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application and/or system configuration. Unit testsensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results.

6.2.2 INTEGRATION TESTING

Integration tests are designed to test integrated software components to determine if they actually run as one program. Integration tests demonstrate that although the components were individually satisfactory, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

6.2.3 FUNCTIONAL TESTING

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals.

Functional testing is centered on the following items:

Valid Input: Identified classes of valid input mustbe accepted.

InvalidInput: identified classes of invalid input must be rejected.

Functions : identified functions must be exercised.

Output : identified classes of application outputs must be exercised.

Systems/Procedures: interfacing systems or procedures must be invoked. Organization and preparation of functional tests is focused on requirements, key functions, orspecial test

6.3 TEST CASES

6.3.1 CLASSIFICATION

Table 1 : Test Cases

Test case ID	Test case name	Purpose	Input	Output
1	Sentiment analysis on telugu sentance	To detect whether it is positive or negative	The user givesthe input of Telugu sentances.	An output is displayed on screen as well as graph
2	Sentiment analysis on telugu sentance	To detect whether it is positive or negative	The user gives the input of Telugu sentances.	An output is displayed on screen as well as graph

7. CONCLUSION

7. CONCLUSION

7.1 CONCLUSION

In Telugu languages, it’s hard to find annotated dataset to perform NLP tasks such as POS tagging, sentiment analysis, sarcasm analysis, text summarization, etc. There are few annotated datasets available in this language. This paper exploits the available Telugu SentiWordNet to perform sentiment analysis for Telugu e-Newspapers sentences. The proposed system for sentiment analysis has attained an accuracy of 74% for subjectivity classification and 81% for sentiment classification in the domain of news data.

7.2 FUTURE RECOMMENDATIONS

In future many other features can be added to the script for performing sentiment analysis on many other regional languages like Hindi, Kannada, Tamil, Bengali. In Further enhancements it can be integrated to various websites to understand various emotions between the user feedback. Although Telugu SentiWordNet is a useful resource, it is still relatively small compared to the English WordNet. In future to improve the accuracy of sentiment analysis in Telugu, efforts should be made to expand the size of Telugu SentiWordNet by including more words and synsets. The current sentiment analysis algorithm used in Telugu SentiWordNet is relatively simple and may not capture the complexity of human emotions accurately. In future by developing more sophisticated algorithms that can capture nuances in sentiment, such as sarcasm and irony, can improve the accuracy of sentiment analysis. Sentiment analysis using Telugu SentiWordNet can be applied to various applications such as social media monitoring and customer feedback analysis also by expanding the scope of applications to areas such as healthcare, education, and politics can provide new insights into the sentiment of Telugu language text data.

8. BIBLIOGRAPHY

8. BIBLIOGRAPHY

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8.2 GITHUB LINK

https://github.com/SwapnilBandaru/Sentiment-Analysis-using-Telugu-SentiWordNet

9. PAPER PUBLICATION

Sentiment Analysis Using Telugu SentiWordNet

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Abstract: In recent times, sentiment analysis in natural language processing has become emerging areas in the field of machine learning. Researchers have shown greater interest towardsthe field of sentiment analysis by analysing sentiment in Indian languages such as Hindi, Telugu, Tamil, Bengali, Malayalam, etc. In best of our knowledge, only small amount of work has been performed in this area of indian languages due to lack of annotated data set where there is no proper labelled data of the telugu words. We proposed a two-phase sentiment analysis for Telugunews sentences using Telugu SentiWordNet. Initially, it identifies subjectivity classification where sentences are classified as subjective or objective and also it determines the accuracy of the detection of sentiment behind the sentences. In this paper we proposed a system which analyses the sentiment behind the telugu sentence's and analyses the sentiment behind thesentence's.

Keywords: Sentiment Analysis, SentiWordNet, annotated data

INTRODUCTION

The Sentiment analysis can be applied to text in three categories namely, sentence level, document level, and aspect level. Sentence level analysis focuses on identifying sentence-wise polarity value in a given document. Document level analysis determines the polarity value based on consideration of the whole document. In aspect level analysis, it identifies the polarity ofevery aspect (wordwise) in a given text. The project has been developed to determine the sentiment behind the telugu sentence's. The main purpose is to understand the sentiment behind the telugu sentence's and also to determine the amount of sentiment underlying behind the sentence's. It also determines the accuracy of the sentiment of the sentence's. SentiWordNet is a lexical resource where it is exclusively introduced for supporting sentiment classification and opinion based applications.There exists a various sentiment analyser's and applications for the English language but whereas in Indian languages only little work has been done. In this paper we proposed a sentiment analyser for the regional language of india which is telugu.

LITERATURE SURVEY

Sentiment analysis is the process of analyzing a piece of text to determine the emotions, attitudes, or opinions expressed within it. Telugu is one of the major languages spoken in India, and therefore, there have been several studies conducted to perform sentiment analysis in Teluguusing Telugu SentiWordNet. Sentiment analysis is a growing field in natural language processing (NLP) that aims to identify the underlying sentiment in a given piece of text. Teluguis one of the major Dravidian languages spoken in India, and Telugu Sentiment Analysis has become increasingly important in recent years.

Telugu Sentiwordnet is a lexical resource that has been developed for Telugu Sentiment Analysis. In this literature survey, we will explore the different approaches and techniques used in Sentiment Analysis using Telugu Sentiwordnet.The use of Sentiwordnet, a lexical resourcethat assigns a polarity score (positive, negative, or neutral) to each word, has become popular in sentiment analysis. Telugu Sentiwordnet, developed by B. Sunitha and K. Madhavi in 2018, is a lexical resource that contains 13,080 synsets with a total of 23,186 words. The synsets are classified as positive, negative, or neutral, based on the polarity of the words they contain. The use of Telugu Sentiwordnet has been explored in several studies.In a study conducted by R. S. Reddy and A. J. Reddy in 2018, they proposed a hybrid approach for Telugu Sentiment Analysis that combines machine learning and Sentiwordnet. They used a Support Vector Machine (SVM) classifier to classify the sentiment of Telugu movie reviews. They also used Telugu Sentiwordnet to improve the accuracy of their model by assigning polarity scores to the words in the reviews. Their results showed that the hybrid approach outperformed the SVM classifier alone.

Another study conducted by K. Kalyani and K. V. R. C. Sharma in 2019 explored the use of Telugu Sentiwordnet in sentiment analysis of Telugu tweets. They used the lexicon-based approach and assigned a sentiment score to each tweet based on the sentiment scores of the words in the tweet using Telugu Sentiwordnet. They achieved an accuracy of 86.25% for the sentiment analysis of Telugu tweets.In a more recent study conducted by B. R. Naveen and N. H. Rao in 2021, they proposed a new hybrid approach that combines Telugu Sentiwordnet and

Convolutional Neural Networks (CNN) for sentiment analysis of Telugu movie reviews. They used Telugu Sentiwordnet to assign a polarity score to each word in the reviews and used CNN to learn the sentiment features from the reviews. Their results showed that the proposed hybrid approach outperformed the traditional machine learning models and achieved an accuracy of 87.56%.In conclusion, the use of Telugu Sentiwordnet has been explored in several studies for sentiment analysis of Telugu text. The results of these studies show that the use of Telugu Sentiwordnet improves the accuracy of sentiment analysis models. The hybrid approach, which combines machine learning and Telugu Sentiwordnet, has been found to be the most effective approach for sentiment analysis of Telugu text.

PROPOSED SYSTEM

In this paper we build an application for detecting positive or negative sentences from Telugu sentences, this detection of sentances consists of two parts in which using first part we can detect objective or subjective from sentences and if objective words appear in the neutral list of SentiWordNet then that sentence will be consider as Neutral, if words not appear in SentiWordNet Neutral list then sentence words will check inside positive and negative list of SentiWordNet, if sentence words found in positive list then sentence will be consider as positive otherwise negative In Telugu languages, it's is difficult to find a data set which is annotated to perform Natural language processing tasks such as POS tagging, sentiment analysis, sarcasm analysis, text summarization, etc. The advantages of the proposed system are if sentences contains words from both positive and negative list then we take ratio of both positive and negative words and if positive ratio higher then sentence will be consider as positive elsenegative.If the sentence is objective or subjective then the proposed system will consider by taking the ratio of the two sentances.

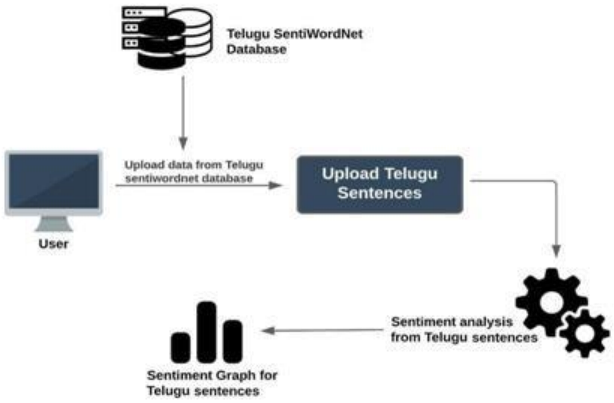
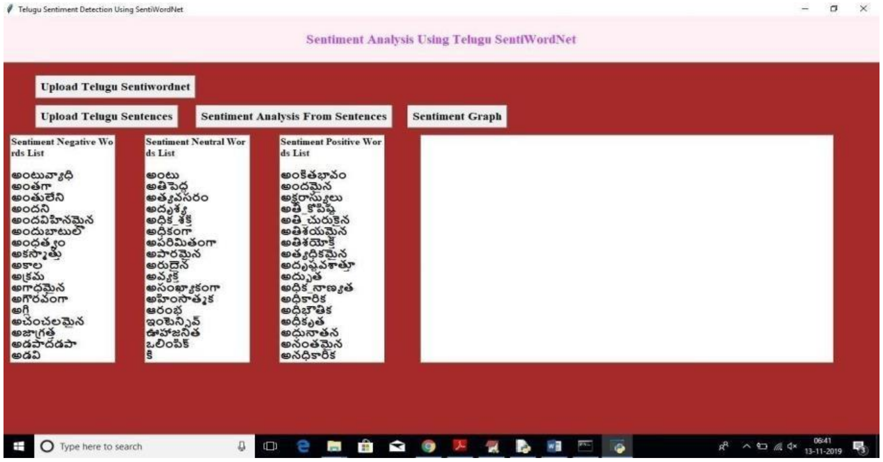

Telugu SentiWordNet Database
Upload data from Telugu sentiwordnet database
Upload Telugu Sentences
User
Sentiment analysis from Telugu sentences
Sentiment Graph for Telugu sentences

Figure. 3.1: Architecture of the Sentiment Analysis

RESULT

To perform the sentiment analysis of the telugu sentances, we need to open the application. Then click on “upload Telugu Sentiwordnet”, this shows all the telugu words . to get the information. Then click on “upload Telugu Sentances” to upload the telugu sentence’s which are stored in a notepad of our wish which are stored in the local database of the system. Then click on“Sentiment Analysis from sentence’s” which executes the program and analyses the sentence’s and displays the result along with the accuracy score. To display the sentiment graph of the results obtained click on “Sentiment Graph” button.


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:41
13-11-2019

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

అంటు
అతిపెద్ద
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
క

Sentiment Positive Words List

అంకితభావం
అందమైన
అక్షరాస్యులు
అతి_కోపిష్ఠ
అతి_చురుకైన
అతిశయమైన
అతిశయోక్తి
అత్యధికమైన
అదృష్టవశాత్తూ
అద్భుత
అధిక_నాణ్యత
అధికారిక
అధిభౌతిక
అధికృత
అధునాతన
అనంతమైన
అనధికారిక

Fig. 4.1: Opening the application

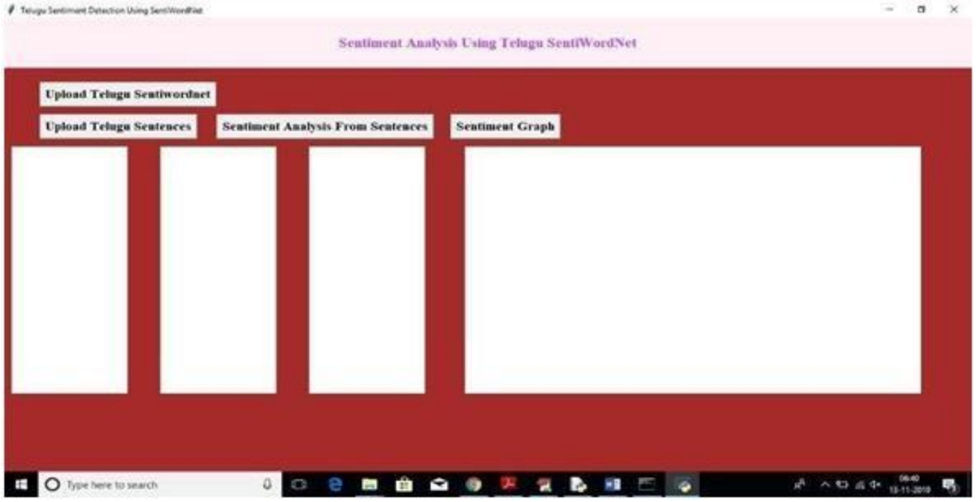
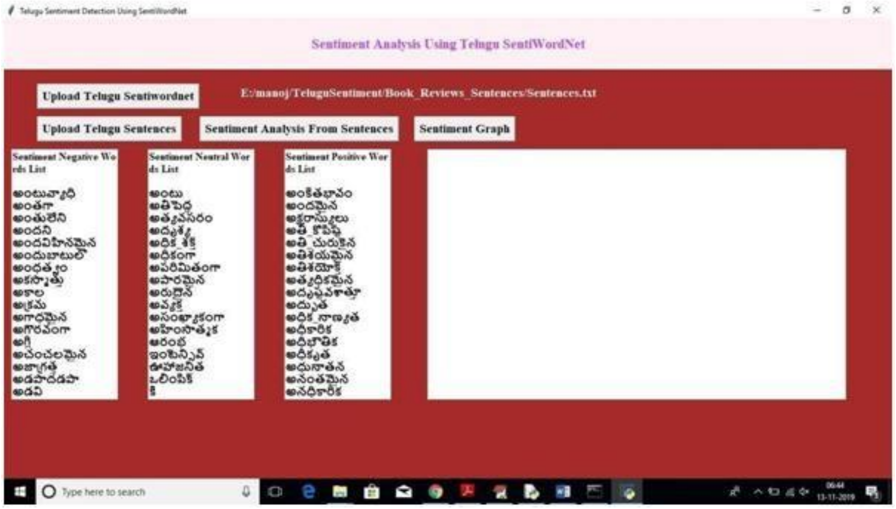

Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:40
13-11-2019

Fig. 4.2 Uploading the data from database


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:44
13-11-2019

E:/manoj/TeluguSentiment/Book_Reviews_Sentences/Sentences.txt

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

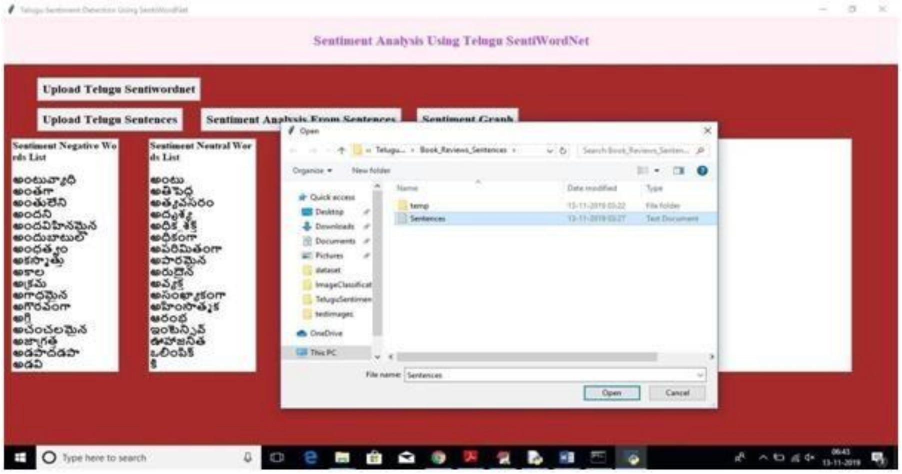
Sentiment Neutral Words List

అంటు
అతిపెద్ధ
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
క

Sentiment Positive Words List

అంకితభావం
అందమైన
అక్షరాస్యులు
అతి_కోపిష్ఠ
అతి_చురుకైన
అతిశయమైన
అతిశయోక్తి
అత్యధికమైన
అదృష్టవశాత్తూ
అద్భుత
అధిక_నాణ్యత
అధికారిక
అధిభౌతిక
అధికృత
అధునాతన
అనంతమైన
అనధికారిక

Fig. 4.3. Uploading sentences to perform sentiment analysis


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Open
« Telugu... › Book_Reviews_Sentences ›
Search Book_Reviews_Senten...
Organize ▾
New folder
Quick access
Desktop
Downloads
Documents
Pictures
dataset
ImageClassificat
TeluguSentimen
testimages
OneDrive
This PC
Open
Cancel
Type here to search
06:43
13-11-2019

Name	Date modified	Type
temp	13-11-2019 03:22	File folder
Sentences	13-11-2019 03:27	Text Document

File name: Sentences

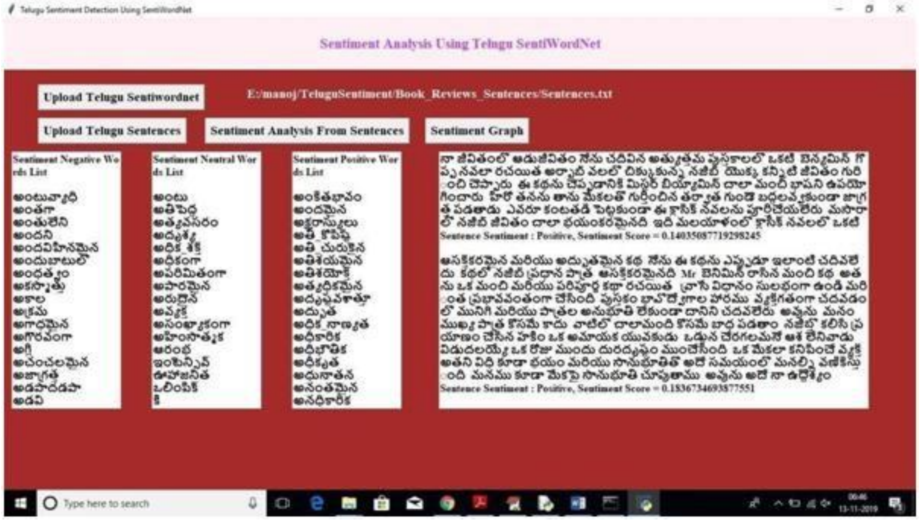
Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

అంటు
అతిపెద్ధ
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
క

Fig. 4.4. Telugu Words Uploaded into application


Telugu Sentiment Detection Using SentiWordNet
Sentiment Analysis Using Telugu SentiWordNet
Upload Telugu Sentiwordnet
Upload Telugu Sentences
Sentiment Analysis From Sentences
Sentiment Graph
Type here to search
06:46
13-11-2019

E:/manoj/TeluguSentiment/Book_Reviews_Sentences/Sentences.txt

Sentiment Negative Words List

అంటువ్యాధి
అంతగా
అంతులేని
అందని
అందవిహీనమైన
అందుబాటులో
అంధత్వం
అకస్మాత్తు
అకాల
అక్రమ
అగాధమైన
అగౌరవంగా
అగ్ని
అచంచలమైన
అజాగ్రత్త
అడపాదడపా
అడవి

Sentiment Neutral Words List

అంటు
అతిపెద్ధ
అత్యవసరం
అదృశ్య
అధిక_శక్తి
అధికంగా
అపరిమితంగా
అపారమైన
అరుదైన
అవ్యక్త
అసంఖ్యాకంగా
అహింసాత్మక
ఆరంభ
ఇంటెన్సివ్
ఊహాజనిత
ఒలింపిక్
క

Sentiment Positive Words List

అంకితభావం
అందమైన
అక్షరాస్యులు
అతి_కోపిష్ఠ
అతి_చురుకైన
అతిశయమైన
అతిశయోక్తి
అత్యధికమైన
అదృష్టవశాత్తూ
అద్భుత
అధిక_నాణ్యత
అధికారిక
అధిభౌతిక
అధికృత
అధునాతన
అనంతమైన
అనధికారిక

నా జీవితంలో ఆడుజీవితం నేను చదివిన అత్యుత్తమ పుస్తకాలలో ఒకటి బెన్యామిన్ గొప్ప నవలా రచయిత అర్బాబ్ వలలో చిక్కుకున్న నజీబ్ యొక్క కన్నీటి జీవితం గురించి చెప్పారు ఈ కథను చెప్పడానికి మిస్టర్ బియ్యామిన్ చాలా మంది భాషని ఉపయోగించారు హీరో తనను తాను మేకలతో గుర్తించిన తర్వాత గుండె బద్దలవ్వకుండా జాగ్రత్త పడతారు ఎవరూ కంటతడి పెట్టకుండా ఈ క్లాసిక్ నవలను పూర్తిచేయలేరు మసారాలో నజీబ్ జీవితం చాలా భయంకరమైనది ఇది మలయాళంలో క్లాసిక్ నవలలో ఒకటి
Sentence Sentiment : Positive, Sentiment Score = 0.14035087719298245

ఆసక్తికరమైన మరియు అద్భుతమైన కథ నేను ఈ కథను ఎప్పుడూ ఇలాంటి చదివలేదు కథలో నజీబ్ ప్రధాన పాత్ర ఆసక్తికరమైనది Mr బెనిమిన్ రాసిన మంచి కథ అతను ఒక మంచి మరియు పరిపూర్ణ కథా రచయిత వ్రాసే విధానం సులభంగా ఉండి మరింత ప్రభావవంతంగా చేసింది పుస్తకం భావోద్వేగాల హారము వ్యక్తిగతంగా చదవడంలో మునిగి మరియు పాత్రల అనుభూతి లేకుండా దానిని చదవలేరు అవును మనం ముఖ్య పాత్ర కోసమే కాదు వాటిలో చాలామంది కోసమే బాధ పడతాం నజీబ్ కలిసి ప్రయాణం చేసిన హకీం ఒక అమాయక యువకుడు ఒడ్డున చేరగలమనే ఆశ లేనివాడు విడుదలయ్యే ఒక రోజు ముందు దురదృష్టం ముంచేసింది ఒక మేకలా కనిపించే వ్యక్తి అతని విధి కూడా భయం మరియు సానుభూతితో అదే సమయంలో మనల్ని వణికిస్తుంది మనము కూడా మేకపై సానుభూతి చూపుతాము అవును అదే నా ఉద్దేశ్యం
Sentence Sentiment : Positive, Sentiment Score = 0.1836734693877551

Fig. 4.5. Sentiment analysis from sentences

CONCLUSION

In this paper we build an application for detecting positive or negative sentences from Telugu sentences, where the sentences are uploaded into the application to perform sentiment analysis on the sentences and also to understand the sentiment and emotion behind the telugu sentence's. This application helps in analyse the various data which is in the language telugu and determines the sentiment. This application is useful to analyse various activities like opinions of individual on the internet, customer review's on a product, user comments on social media etc.

This exploits the available Telugu SentiWordNet to perform sentiment analysis for Telugu e-Newspapers sentences. The proposed system for sentiment analysis has attained an accuracy of 74% for subjectivity classification and 81% for sentiment classification in the domain of news data.

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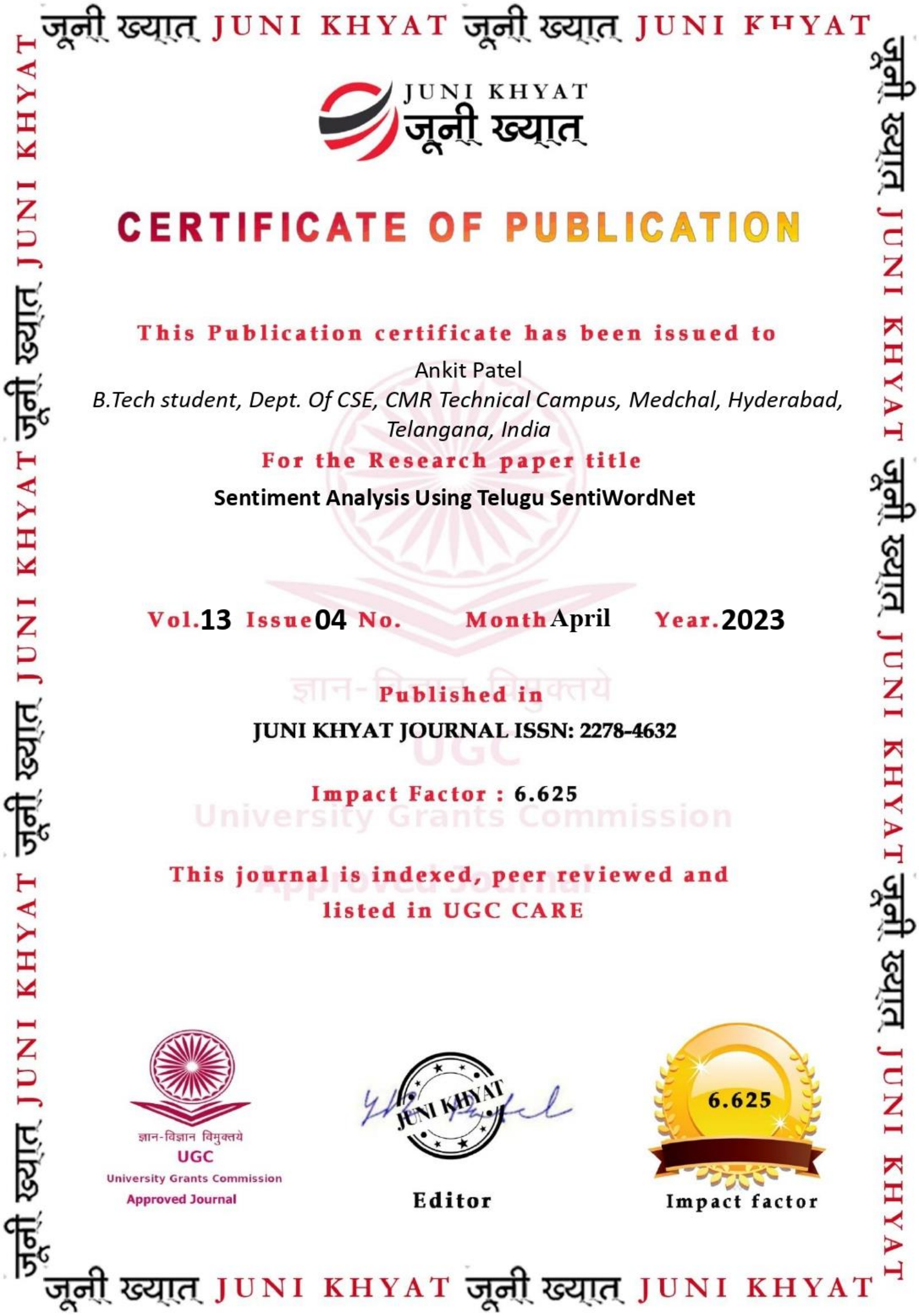
10. CERTIFICATES



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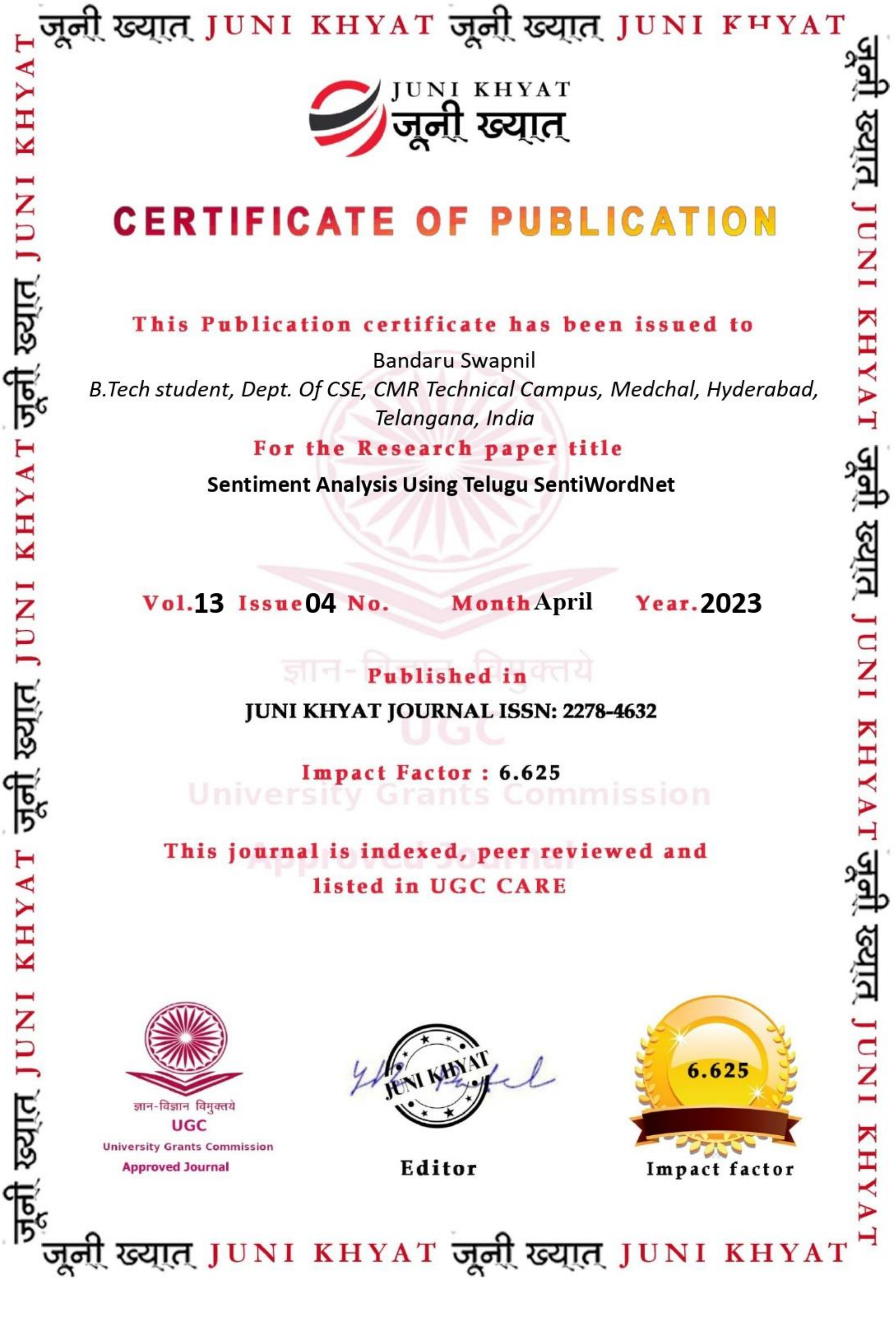

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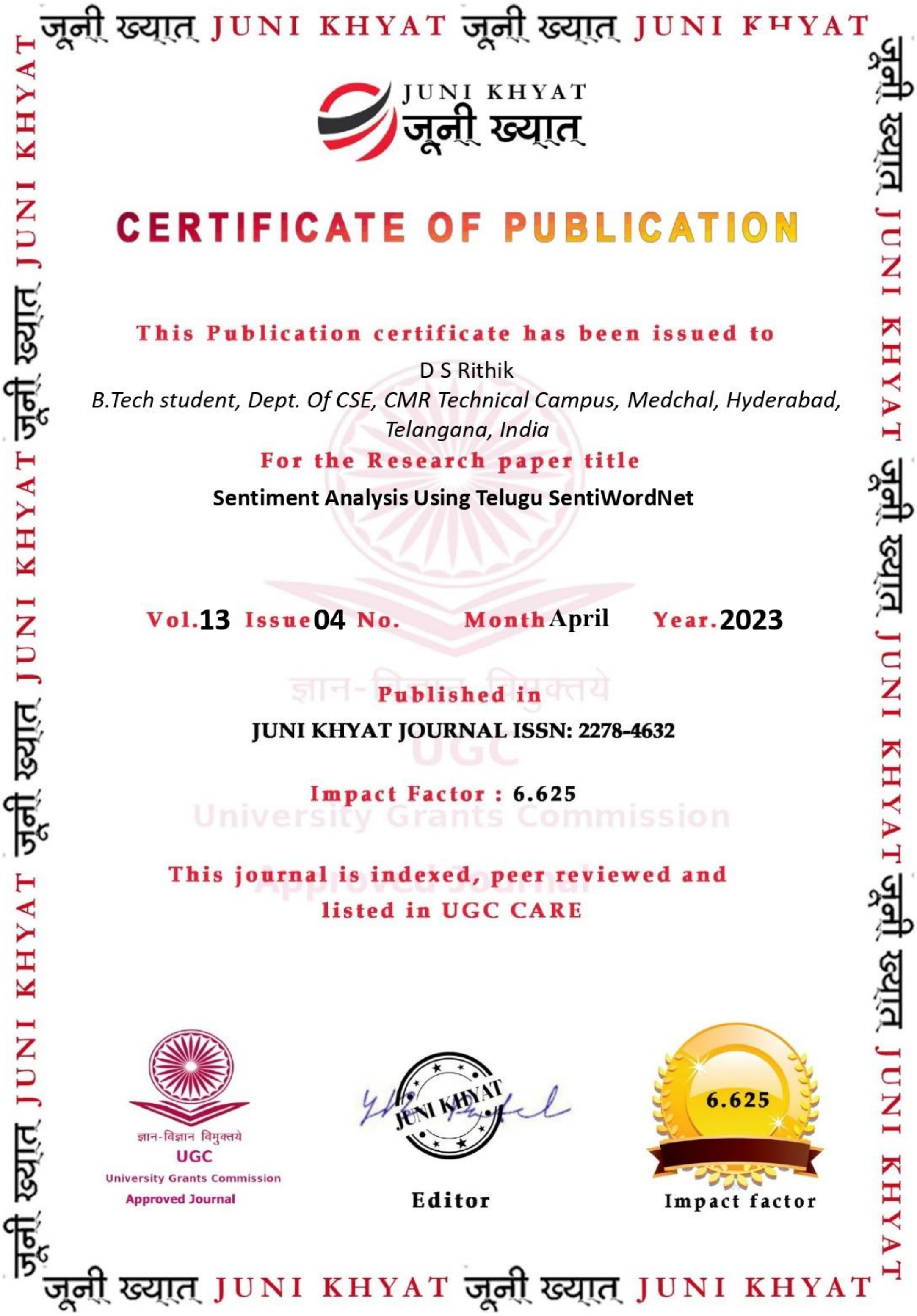

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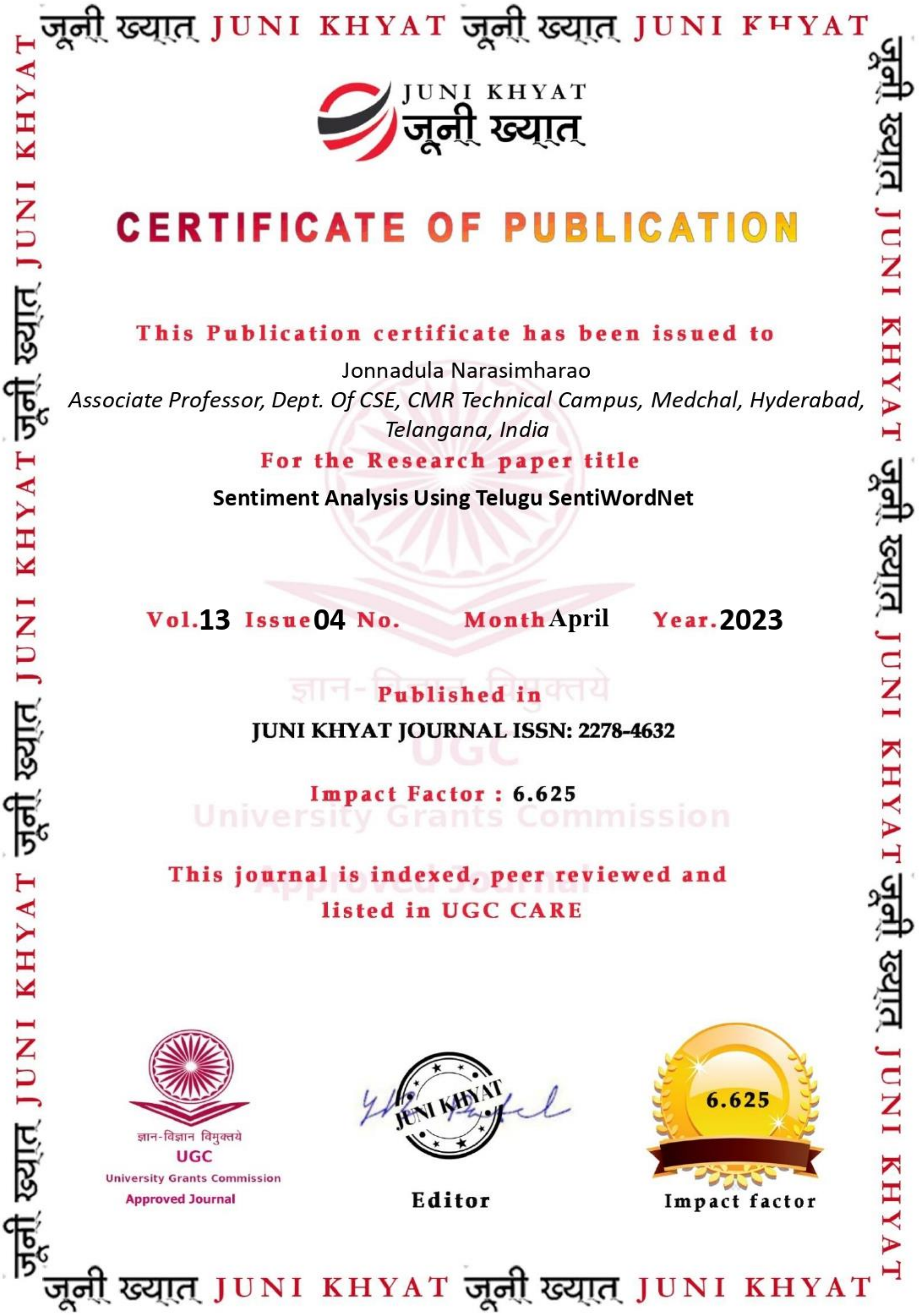

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