

INSOMNIAC



Problem



We often see many people sharing their emotions and sufferings during a call to their friends or relatives. India reported an average 381 deaths by suicide daily in 2019, totalling 1,39,123 fatalities over the year, according to the latest National Crime Records Bureau (NCRB) data. Seeing suicide as a major concern in our Country we thought of doing something to prevent suicides. In order to prevent suicide, it is necessary to detect suicide-related thoughts and user's suicide ideation in real-world by sentiment analysis method.



The Utopia

Solution our project tries to solve the above problem.

Solution

We plan to make an app where if we upload any recording of audio call, we'll be able to figure out if any of the person in the call had "suicidal thoughts".

We'll be using kind of sentiment analysis to check this.



Service



The user interface will be built on Flutter where user will given an option to upload an audio file containing the conversation of the interested person. The audio file will be then sent to a Flask API deployed on Heroku. The Flask app will contain the logic to analyze the audio file. Firstly it will be converted to a text file using Speech Recognition which will then be feeded into another Machine Learning model where it will be classified as suicidal, abusive, threatening or completely normal. The result of the model will then be sent as a response to the Flutter app where it will display the response of the model accordingly.

Sample Dataset

Too bad pets are not allowed in my house anymore

I don't wanna make my pet upset for what I wanna do, it would be better if we never ever meet and love each other

The unconditional love of my dog has helped in some very low times. She is one of my only anchors right now.

Thank you, bro. I needed this post. I love you, man. Blessings to anyone else who's reading this.

My mom hates pets.

I got a knife on my table...It shines so brightly at times while doing homework due to the sun coming out...It has been grey here in Germany

I wish I had never gotten my dogs. Either my life would be completely different, or I'd be free to end it.

[removed]

[removed]

Today I saw the aftermath of what could happen if I committed suicide

When the time feels right, I think talking to your family about your feels would help.

I had a friend who commit suicide and his sister, who also had those thoughts, saw what happens after. Sure she still has those thoughts be

It was a weird silver lining for my friends family.

Tough talk happen all the time but if you get too down and out again where it crosses your mind reaching out to your family or friends is a go

It can be hard if your family doesn't take it seriously but after a death in the family they may just.

>I feel like a huge hypocrite because not too long ago I wanted to die.

Think about things this way: if you had a leg injury and you decided to drop out of a marathon because of it, would people blame you? Of course

Likewise, your depression is an illness that prevents you from being your best. This is ZERO chance you could have known that this was going to happen.

Depression is an ugly beast. It'll subside for a while but it seems to always come back once it has you. Your mom is right to a degree, you don't feel guilty.

Don't feel guilty. Depression is a sickness, you can't help the emotions you feel. I'm sorry about your uncle, and I'm sorry that your family can't understand.

Crying before I sleep, I didn't do it today but it will happen inevitably. I feel like my life is one sick fucking joke.

Python Model

```
In [78]:> for i,topic in enumerate(LDA.components_):
    print(f"top 30 words for topic #{i}")
    print([cv.get_feature_names()[index] for index in topic.argsort()[-30:]])
    print('\n')
    print('\n')

top 30 words for topic #0
['ll', 'sorry', 'hope', 'point', 'suicide', 'life', 'post', 'things', 'person', 'need', 'really', 'going', 've', 'right'
etter', 'time', 'want', 'say', 'way', 'good', 'feel', 'http', 'make', 'think', 'know', 'don', 'just', 'like', 'people']

top 30 words for topic #1
['ll', 'did', 'good', 'dont', 'say', 'come', 'got', 'black', 'little', 'white', 'time', 'dumb', 'need', 'shit', 'right',
ove', 'life', 'stupid', 'lol', 'bitch', 'know', 'really', 'fucking', 'idiot', 'don', 'ass', 'like', 'fuck', 'just']

top 30 words for topic #2
['romney', 'way', 'man', 'world', 'party', 'right', 'make', 'president', 'pay', 'vote', 'country', 'government', 'democr
'money', 'u2026', 'time', 'state', 'think', 'years', 'gay', 'just', 'don', 'people', 'obama', 'like', 'xe2', 'x80', 'xc2
```

Fututre Roadmap



Multi-user support, i.e. user can use this to detect the user who is speaking is having any suicidal thoughts or is dominating with abusive languages in group via speaker recognition(ALIZE).

With ALIZE and Deep Learning, we could plan to directly use the voice of a person and use its various voice attributes and words to map with one another and decide the mind state of human person. Voice model will be created according to the user, to ensure tailor-made experience.

A new module will be created for other programmers to use this technology in their video based, audio based communication technology. With active recognition they can easily mute the audio or dial emergency.



Thank You