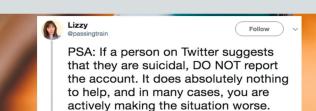
#### **Problem Statement**

Every year, around 800,000 people die of suicide (SAVE, n.d). Unfortunately, many signs of suicide are easy to miss (Ellis, 2019). This is especially seen on social media, where mentions of suicide and suicidal situations are often identified and handled incorrectly (Peterson, 2022).

#### Research

- Suicidality is a spectrum, and there are five main levels of risk: supportive, indicator, ideation, behavior, and attempt. Each category requires a different type of care.
- Social media does not handle suicidal situations in the correct way (does not identify correctly and disregards the spectrum).



Hi Shamontiel \* № ... Your account, @Maroonsista has been locked for violating the Twitter Rules.

Specifically for:

(THREAD)

#### Violating our rules against promoting or encouraging suicide or self-harm.

You may not promote or encourage suicide or self-harm. When we receive reports that a person is threatening suicide or self-harm, we may take a number of steps to assist them, such as reaching out to that person and providing resources such as contact information for our mental health partners.

If you are having thoughts of self-harm, suicide, or depression, we encourage you to please reach out to someone and request help. Our Safety Center has a list of resources you can consult for a variety of reasons, including depression, loneliness, substance abuse, illness, relationship problems, and economic problems. You can find those resources here:

https://about.twitter.com/safety/safety-partners.html#mental-health/us.

Please know that there are people out there who care about you, and that you are not alone.

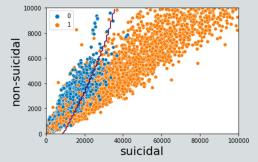
### **Procedure**

- The first part of this project was creating the ML models.
- The iOS application was then created The finalized model was then imported and implemented into the app project. After the application was finalized, data was collected and analyzed.

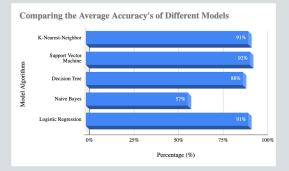
## **Data Analysis**

- Three main metrics are collected for each model: accuracy, recall, and precision.
- Five main models were created for this problem.
- The SVM model was chosen for this project because it has higher accuracy than the other models.





C→	precision	recall	f1-score	support
0	0.88	0.99	0.93	3824
1	0.99	0.82	0.90	3015
accuracy			0.92	6839
macro avg	0.93	0.91	0.92	6839
weighted avg	0.93	0.92	0.92	6839
	precision	recall	f1-score	support
0	0.88	0.99	0.93	1297
1	0.98	0.82	0.90	983
accuracy			0.92	2280
macro avg	0.93	0.91	0.91	2280
weighted avg	0.92	0.92	0.92	2280



# TalkToMe: An Application that Detects and Handles Suicidal Intentions on Social Media Through ML

