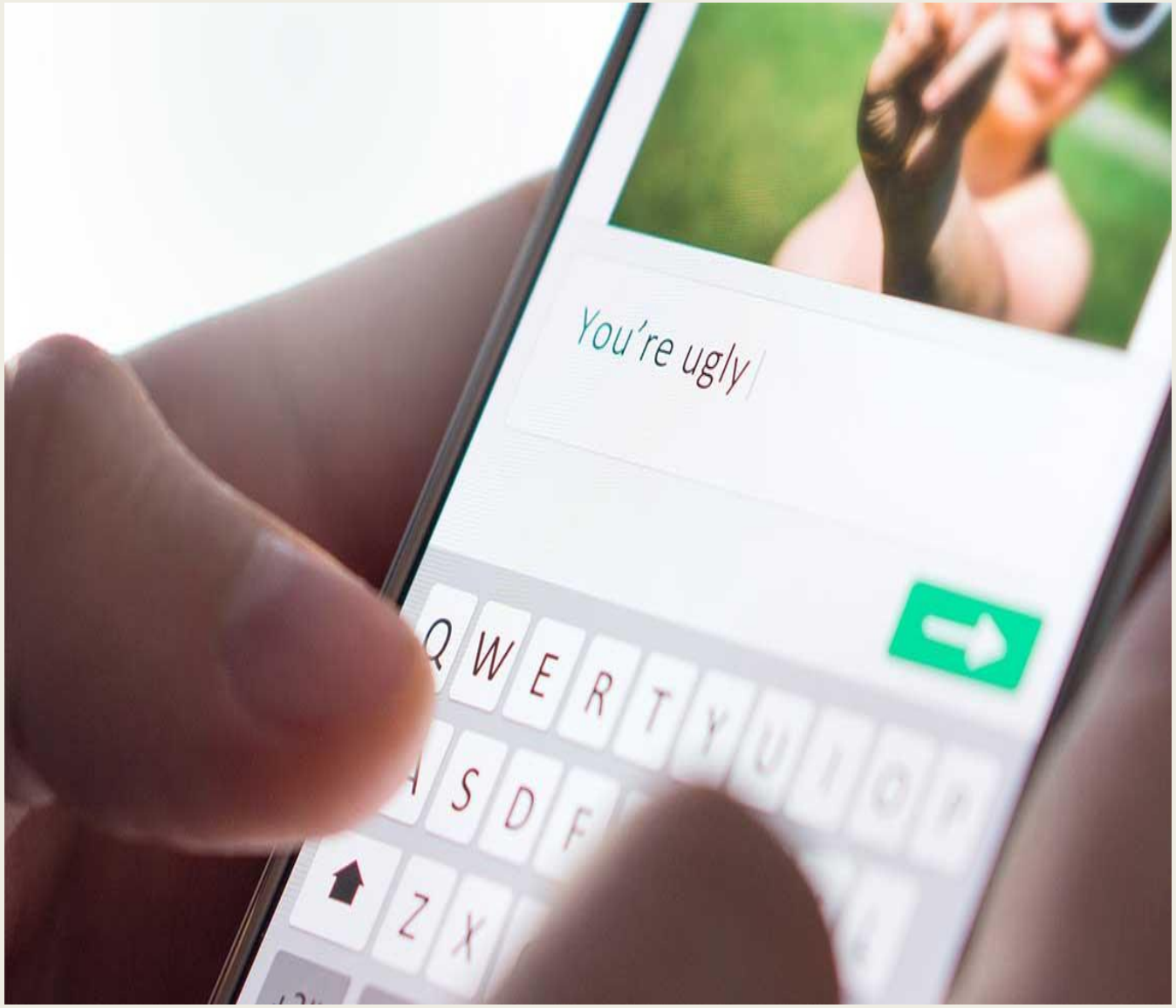
USING MACHINE LEARNING TO IDENTIFY NEGATIVE SOCIAL MEDIA POSTS.

LATEEFA TIAMIYU

CAPSTONE PROJECT

FALL 2019

WHY?



Sources: yp.scmp.com , https://www.baytoday.ca/ , https://www.cbsnews.com/news

In the news...

Disturbing events related to cyberbullying in recent months and years have raised great concern among parents, youths and educators regarding the everyday lives of children in online spaces — as well as how they develop their capacities to judge right and wrong.

As teen suicides increase across the country, experts and parents say bullying and social media have both contributed to the rise. But in many cases, people who die by suicide also had mental health issues.

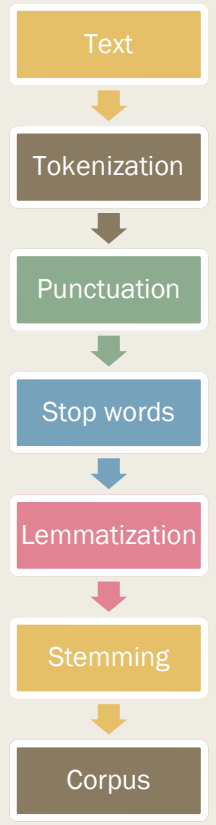
Objectives

- Investigate and identify patterns of negative words commonly used on social media platforms
- Create machine learning model(s) that can predict if a user’s post is negative before it is posted online

Approach

- The data
- Pre-processing
- Natural Language Processing
- Feature Engineering
- Model Selection
- Evaluating results

NLP pre-processing steps



spaCy

Natural Language ToolKit

python

Possible Challenges & Solutions

- Cleaning out unusual texts

Example: “@user isz that youuu?ð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dð\x9f\x98\x8dâ\x9d¤ï¸ \x8f “

  - *Regular expression (regex)*

- Handling sarcasm
  - *Assume sarcasm does not exist?*

Next Steps…

- Start with the data cleaning
- Decide on the machine learning model(s) that is best fit to the available data
- Scrap the appropriate social media platform for testing the models' performance