



# Domestic Violence - Algorithms



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# How it all works

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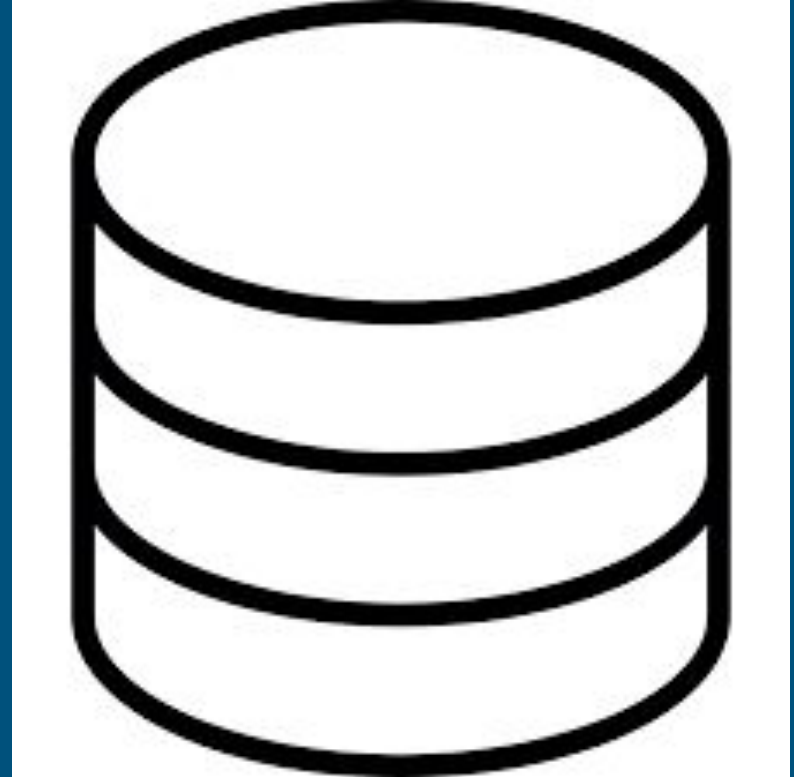
- End user (11-14 year old) receives texts
- App in background analyzes each individual message with potentially harmful keywords
- Considers keywords and categorizes as:
  - Threat
  - Abuse
  - Discrimination
- End user him or herself determines whether or not the message is deemed good or bad
- Notification warns end user that the conversation may be unhealthy to him or her

# The Database

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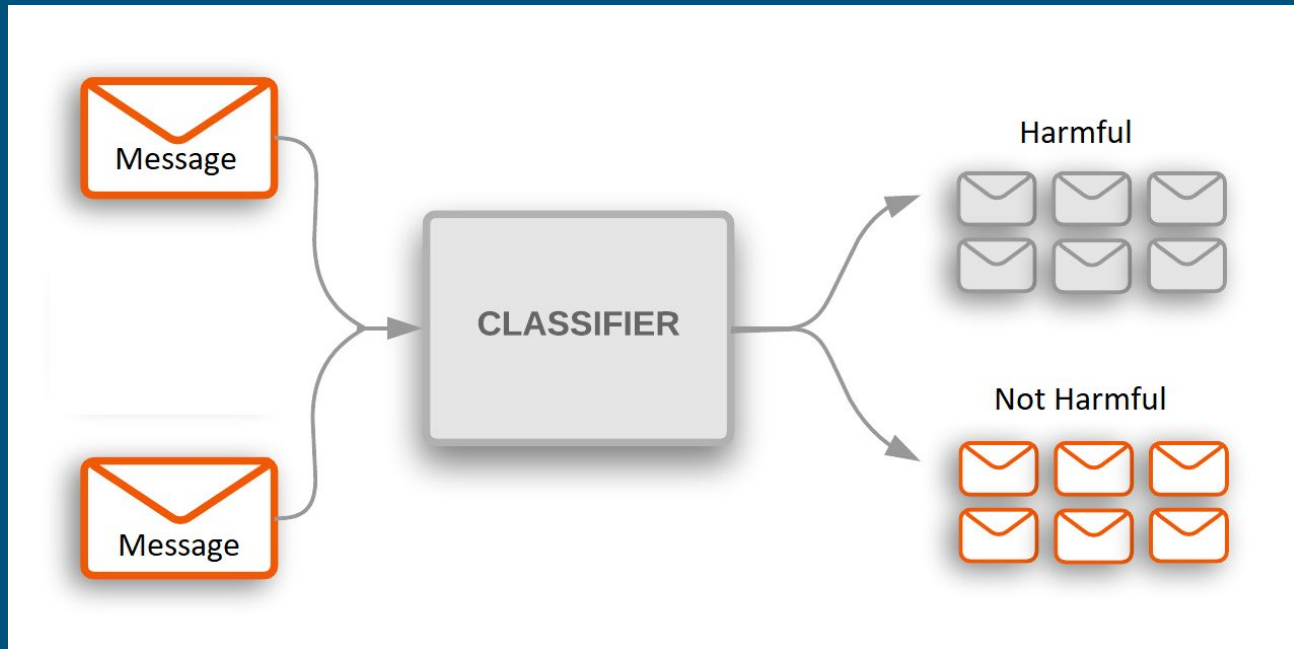
## Local and Global versions

- Global version is based on user averages
- Local version copied initially from global but can be edited through local database and updates global version.



# Classification

- Discrimination
- Threat
- Harassment



# Severity

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- Displays messages by severity (highest at top, lowest at bottom)
- Considers number of flagged keywords used in a single phrase
- Determine how impactful the message will be, both physically and mentally to the end user.

SEVERITY

1

2

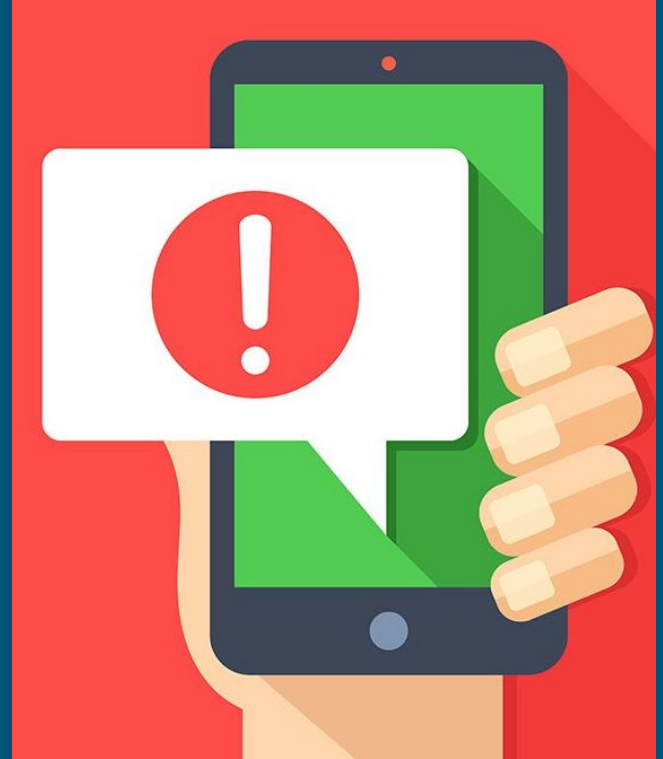
3

4

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# Notification

- Based off of the severity and categorization of the message, the application will return a message designated to help the individual in that situation
- User determines whether all phrases are harmful in their opinion
  - Can remove from database



# Efficiency

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- Easy way for user to flag a message and determine if one was actually harmful or not
- Program does not interfere with user unless it has to



# Future Improvement

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## Scalability

- Use a real database like MySQL instead of ArrayLists
- We could add a frequency counter for each specific keyword to have faster searches
- Users can add their own new keywords
- Keywords should have more than one classification
- Feature that blocks messages that have too many key phrases
- Allow for additional keywords based off user suggestions and frequency of suggestions.