Motivation

Over half of adolescents have been bullied online, and about the same number have engaged in cyber bullying. While more than 1 in 3 young people have experienced cyber-threats online, well over half of them do not tell their parents when cyberbullying occurs.

Cyberbullying can take multiple forms, and there has not been sufficient research in identifying cyberbullying behavior in social networks and media.

We present BullyBlocker, an application designed to automatically identify a case of cyberbullying by exploiting the social media data available. The application is based on a model designed for cyberbully identification that was built on previous research findings of cyberbullying in adolescents.

Design

BullyBlocker measures the intensity of online aggression a user may be experiencing by first identifying two major factors:

- Warning signs
- Vulnerability

Each factor consists of sub-factors whose values can be computed from the data available in the user’s profile.

The Computed Bullying Rank is returned to the parent/guardian of the minor.

The Bullying Rank Is divided into three normalized levels of risk intensity:

- Low Risk - [0-20]
- Medium Risk - [21-40]
- High risk - [41-59]

Benefits

Once BullyBlocker is ready for deployment, it can be used by parents to monitor their children via their social network and forewarn them if their child is a victim of online aggression.

The model used to design the application can be modified to identify other behaviors as well, such as depression or self-destructive tendencies.

Architecture

Risk Factors

- Warning Signs
- Vulnerability
- NSF (+1.2)
- IWC (+1)
- IMC (+1)
- CEP (+1)
- AGF
- NNF (+1.2)
- 15-17yrs (+0.29)
- 12-14yrs (+0.22)
- M
- F
- 12-14yrs (+0.34)
- 15-17yrs (+0.41)

Bullying Rank

Data Collection Module

Cyberbullying Identification Module

Bullying Rank Computation

Notification (email, FB App)

Permanent Storage

Parent Feedback

Parent

Child Facebook Account

Notification