# DELL EMC Application

## Part 1 – Team

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Male team members: 4, Female team members: 0.

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Faculty Advisor Signature:

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## Part 2 – Project

Project Title: Detecting Cyber-bullying activities Over Social Media

General ideas: 1) Cloud Computing 2) Big Data 3) Artificial Intelligence

Specific areas: 1) Applications of natural language understanding 2) Deep Learning   
3) Pattern Mining 4) Data Mining Applications

What is the main problem that you are solving?

We are solving the issue of cyber-bullying, which is bullying taking over on social media platforms (Facebook, Twitter, etc.), mainly it's about harassing people whether it's a direct message or an offensive post aimed at someone.

What is the importance of this problem?

Its importance is measured by how much it's needed and throughout our research we've entangled some rather interesting data, according to the National Crime Prevention Council more than 1 in 3 young people have experienced cyber threats online. As well as having over 25% of adolescents and teens have been bullied repeatedly through their cell phones or the Internet as stated in I-Safe Inc.

What are the current solutions?

The current solutions are quite handful, most popular one is having the post removed or deleting the direct message if possible, some posts could be reported but it may take sometime until it's removed or it may not be removed at all, reporting the user himself for harassing and even blocking.

How will your solution solve the problem? What is new?

What is new is that we will innovate an application that will act as a messenger between the users and if any suspicious cyber-bullying activity arises in between the chats of users, then the user will have full control on what to do on the message, at first the message will be blurred and flagged, he'll have the option to inspect it, read it, report it, rate it if the need arises considering that there has been cases where false positive ratings were too high affecting the overall results

What is the expected impact of your solution from various perspectives (social, commercial, environmental, etc)?\*

From a social perspective we hope that everybody would acknowledge that cyber-bullying has been manifesting out youth for quite some time due to them being involved in one social media communication or another, and hopefully come to an end and slow reverse its rapid progression.

From a student perspective we hope that our project could be considered as a subsystem for a social media platform and hopefully have it integrated at some point or another.

Give a high level functional description of your solution. How will it be used?

Our main functions will be including the ability to send receive messages between clients, extract features, classification process, and updating the classifier, sending a notification for the user.

Give a high level technical description of your solution: architecture, technology, integration, innovative components, etc.

Our solution mainly runs around classification using machine learning classifiers, after a long process of pre-processing and feature extraction, but hopefully we intend to move our project more and more into deep learning to achieve either innovation or better results.

Give a high level description of your solution development environment, platform, tools, etc.\*

Our main goal here is developing a desktop application using python programming language which is currently under development as we speak, further more an android application developed using android studio while using the uprising capabilities of cloud computing.

How will you manage your product development cycle, your quality assurance process, your solution deployment logistics, etc?

Our development cycle is rather fluid and agile, mainly focusing on the important parts of our project as well as documentation process (SRS ,SDD, Survey & Comparative papers). A concept is drawn initially, design and prototype creation, development and testing of the project or part of it, deployment into the public version, maintenance, and then start all over again.

Quality Assurance is managed by following the rules of conduct and ethics of coding/programming and abiding by the timeline at hand.

Give the most relevant plans that you have developed for your project (for example, time schedule, resource plan, training plan, risk management, contingency plan, etc.)

It will be furthermore shown and illustrated in the pdf file attached