**Project Initialization and Planning Phase**

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| Date | 20 Sepetember 2024 |
| Team ID | 739894 |
| Project Title | Toxic Comment Classification for social media for Social Media using NLP |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) template**

Develop an NLP-based system to accurately detect and classify toxic comments in real-time on social media, enhancing user experience by promoting healthier interactions and reducing harmful content.

This solution involves data collection, preprocessing, model development, and real-time implementation, with continuous evaluation and improvements to adapt to evolving language trends**.**

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| **Project Overview** | |
| Objective | To develop an accurate and real-time NLP-based system for detecting and classifying toxic comments on social media, thereby fostering a safer and more respectful online environment. |
| Scope | To accurately detect and classify toxic comments on social media in real-time, enhancing user safety and fostering a respectful and inclusive online community |
| **Problem Statement** | |
| Description | Toxic comment classification for social media involves using advanced NLP techniques to detect and mitigate harmful comments in real-time, fostering a safer and more respectful online environment |
| Impact | Effective toxic comment classification significantly improves user safety and experience on social media by fostering a respectful and inclusive online environment |
| **Proposed Solution** | |
| Approach | Utilize advanced NLP techniques to develop a real-time system for detecting and classifying toxic comments, ensuring a safer and more respectful online community |
| Key Features | Key features include real-time detection, high accuracy, language and context sensitivity, and adaptability to evolving toxic behaviors to ensure a safer and more respectful online community |

**Resource Requirements**

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| **Resource Type** | **Description** | **Specification/Allocation** |
| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | e.g., 2 x NVIDIA V100 GPUs |
| Memory | RAM specifications | e.g., 8 GB |
| Storage | Disk space for data, models, and logs | e.g., 1 TB SSD |
| **Software** | | |
| Frameworks | Python frameworks | e.g., Flask |
| Libraries | Additional libraries | e.g., Numpy , Pandas, Matplotlib, Seaborn. |
| Development Environment | IDE, version control | e.g., Jupyter Notebook,  Google Colab, VSCODE. |
| **Data** | | |
| Data | Source, size, format | e.g., Kaggle dataset. |