SCHOOL OF COMPUTING
Faculty of Engineering

Project Proposal Form MCST1043
Sem: 2 Session: 2024/25

SECTION A: Project Information.

Program Name: **Masters of Science (Data Science)**

Subject Name: **Project 1 (MCST1043)**

Student Name: Mohamed Tarek Torky

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Project Title: Sentiment Analysis on Islamic-Related Text Data

Supervisor 1:

Supervisor 2 / Industry Advisor(if any):

SECTION B: Project Proposal

Introduction:

In the era of social media and online platforms, people express their thoughts and opinions freely about various topics, including religion. Islam, being one of the most discussed topics globally, is often a subject of online conversations. Analyzing the sentiment of these conversations can provide insights into how Islam is perceived online whether positively or negatively. This project focuses on analyzing the sentiment of Islamic-related text data using machine learning techniques.

Problem Background:

Social media platforms and websites contain a massive amount of user-generated content related to Islam. However, this data is unstructured and difficult to analyze manually. Understanding the sentiment of such data can help identify public perception, detect hate speech, promote positive content, and study online behavior related to Islam. A system that can automatically analyze this data and classify it into positive, negative, or neutral sentiment would be highly beneficial for research and awareness.

Problem Statement:

Currently, there is limited work done on sentiment analysis focusing specifically on Islamic-related data. Manual analysis is impossible due to the large volume of online content. Therefore, there is a need to develop a simple and automated system that can perform sentiment analysis on Islamic-related text data to provide useful insights.

Aim of the Project:

The aim of this project is to develop a Sentiment Analysis System that can classify Islamic-related text data into positive, negative, or neutral categories using machine learning techniques.

Objectives of the Project:

- To collect Islamic-related text data from online sources such as social media, blogs, or articles.
- To preprocess the collected text data for analysis using natural language processing (NLP) techniques.
- To apply sentiment analysis algorithms to classify the text data and visualize the results.

Scopes of the Project:

- The study will focus on English-language text data related to Islam.
- The study will focus on online sources like Twitter, Facebook, or other open-source platforms.
- The study will present the results in the form of charts, graphs, or dashboards showing sentiment distribution.

Expected Contribution of the Project:

- The project will provide valuable insights into the general perception of Islam in online platforms.
- It will demonstrate the use of machine learning and sentiment analysis techniques in a religious and social context.
- The system can be used as a prototype for further research in analyzing religious data or combating misinformation.

Project Requirements:

Software: Python | VS Code | Pandas | MongoDB

Hardware: Laptop with minimum 4GB RAM

Technology/Technique/ Methodology/Algorithm: Natural Language Processing (NLP)

Preprocessing (Cleaning, Tokenization)

Type of Project (Focusing on Data Science):

[/] Data Preparation and Modeling

[/] Data Analysis and Visualization

[/] Business Intelligence and Analytics

[ ] Machine Learning and Prediction

[ ] Data Science Application in Business Domain

Status of Project:

[/] New

[ ] Continued

If continued, what is the previous title? .....

SECTION C: Declaration

I declare that this project is proposed by:

[/] Myself .....

[ ] Supervisor/Industry Advisor ( ) .....

Student Name: Mohamed Tarek Torky .....

Signature **Date**

SECTION D: Supervisor Acknowledgement

The Supervisor(s) shall complete this section.

I/We agree to become the supervisor(s) for this student under aforesaid proposed title.

Name of Supervisor 1: .....

Signature **Date**

Name of Supervisor 2 (if any): .....

Signature **Date**

SECTION E: Evaluation Panel Approval

The Evaluator(s) shall complete this section.

Result:

[ ] FULL APPROVAL [ ] CONDITIONAL APPROVAL (Major)*

[ ] CONDITIONAL APPROVAL (Minor) [ ] FAIL*

***** Student has to submit new proposal form considering the evaluators' comments.

Comments:

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Name of Evaluator 1: .....

Signature ..... **Date** .....

Name of Evaluator 2: .....

Signature ..... **Date** .....