**FAKE NEWS DETECTION**

* **DESIGN DOCUMENT**

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# Introduction

**1.1 Project Description**

The goal of this project is to create a graphical user interface (GUI) web application that could predict whether a news article is fake or not using trained models that have been trained over open-source datasets with the utilisation of Natural Language Processing (NLP) concepts based on the article text content.

**1.2 Purpose of the Document**

The aim of this document is to provide the design requirements for the application of fake news automatic detection using machine learning and deep learning algorithms.

**1.3 Scope of the Document**

This document presents the technical architecture which helps the readers to get an overall understanding of design guidelines consisting the functional and non functional requirements ,UML - use case and sequence diagrams etc. for the development of web application.

**1.4 Intended Audience**

The present document is intended to be read by the following people:

1. Researchers.
2. Students.
3. Software Development Team.

# Functional and Non-Functional Requirements

**2.1 Functional Requirements**

1. Get the news text article as input in the text box
2. When the button clicks, it predicts the text whether it is fake or real news
3. The system should have capability to read the news article
4. Pre-process the given input text
5. Extract the features from the text
6. Predict the classification using the trained model
7. Should be able to classify the given text as fake or real
8. Prediction time should be in less time.

**2.2 Non-Functional Requirements**

1. Non-dependent Platform
2. Reliability
3. Quality
4. Performance

# MosCOw - Must Have/Should Have/Could Have/Would Have

**Scope:**

* Analyze the ranking of the product’s features
* Prioritize product features, and avoid featuritis(Too Many Product Features)

Should Have

Must Have

* GUI Screen Layout and interaction components should be pleasing to the user
* User Input
* Display Prediction Output
* OS independent platform
* Completely free

Won’t Have

Could Have

* No Premium level features or payments
* Prediction duration could have less

# UML - Use case Diagram

Diagram

Description automatically generated

# UML - Sequence Diagram

Verified the input

Input the news text

System

Predict the article as fake or real

Classification

Feature Extraction

Text Preprocessing

User

# UML – Activity Diagram

Load the trained Model

Model with Good Accuracy

Preprocess the text

Feature Extraction

Predict the output

Display the result

Accept User input