Fake News

Requirements Analysis

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**1. Description**

Fake News has been around since the first newspaper was published. But with the quick evolution of social networks and news web pages it has become more dangerous than ever.

It is a practice used by many important figures to influence what the common people think.

This project focuses on researching and implementing techniques of detecting news articles and then analyzing them to decide if it’s fake news or not. The application will be provided to the end-user as a browser plugin that will display the analysis results of the content that the user is viewing.

Every page that the user visits will be checked as soon as it is loaded. The client component will communicate with a server component that will analyze the content provided by the client.

If the web page contains indeed a news article then further analysis will be done. If it doesn’t contain an article then the plugin will not display anything.

The application will be composed of a client side component (the plugin itself) and a server side component that will contain the modules necessary for the classifications and will expose and API for communicating with the client.

**The main objective is to research, implement and provide ways for the user to defend himself against possible malicious information and help him shape his own opinion on a certain topic based on accurate information.**

**2. Approaches and behaviours**

* User: to insure a proper environment of the plugin, by saving the extension on the browser that is going to be used, as well as granting access on relevant websites in the context of determining whether or not a news is fake.
* Client: offering details to the user related to the correctness of the article, by showing the data in an easy to understand manner. The client retrieves the text from the website and sends it to the server, waiting for the result. Once received, the client displays it in a pleasant and efficient approach for the user to make a decision.
* Server: manages the information from the moment the user accesses a website that requires analyzation, through checking if it contains what we call news, and then determining its authenticity. In the end, it processes the data through the best analysis, forwarding it in a specific format.

**3. Actors and Objectives**

**User**: to be able to make a decision whether or not a news is fake.

**Client**: to offer to the user the description of the result made by the server in a detailed manner, extracting the data and displaying the result in an efficient way.

**Server**: to analyze the data received from the client with fast algorithms, providing the result in an optimal time through the best filter.

**4. Use cases**

The following scenarios describe the way that the components that make this project interact with one another.

**5.1. Getting the data from the browser**

* The Chrome Plugin client will take the HTML code from the page as soon as it’s loaded and will send it unprocessed to the server.

**5.2. Extracting the text from the HTML code**

* The text extraction component will receive the raw HTML code and will analyze it based on the source that is providing this content.
* If the content is read from a social media platform, the component will use an algorithm to extract the text.
* If the content is from a web browser the component will use a second algorithm to extract the content, title, author and other elements of the article.
* Then, this text extraction component will send the data to the filtering component.

**5.3. The news filtering step**

* This component will receive the processed text and with the help of machine learning algorithms will classify it if it's a news article or not.
* If the text is not a news, a response will be sent to the client to stop waiting for a result, otherwise the text will be further sent to the classification component.

**5.4 The classification step**

* This component will use multiple criteria to analyze the text and will return to the client the argumentation for the result. If the component will classify the text as a fake news the response will contain explanations for its decision.

**5.5 Displaying the response**

* The client will receive the response from the server and will display it to the user.