12/25/2018

Tweet Originality Checker

SWE 573 – Term Project

https://github.com/yenerunver/tweet-originality-checker

http://tweetoriginalitychecker.com

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1. Requirements Analysis

Non-functional Requirements

1. The system shall be accessible to users with active Twitter accounts.
2. The system shall be analyzing tweets of users with open-to-public Twitter accounts.
3. The system shall be user-friendly.

Functional Requirements

1. A user shall login to the system via her/his Twitter account.
2. The logged-in user shall enter a Tweet URL in order that tweet to be checked as whether original or not.
3. The system shall search the Twitter API and present possible similar tweets to the tweet that logged-in user has entered if found any.
4. The system shall present a report to the logged-in user indicating that either the subject tweet is original or not according to the similarity analysis.
5. The logged-in user shall be presented the opportunity of reporting this situation to the subject tweet's owner as a reply.
6. The system shall present previously found non-original tweets.

2. User Acceptance Test

Below cases of User Acceptance Tests were applied to company's employees on a release candidate version of the application

ID	Test Cases	Pass/Fail	Tested By	Date Tested
1	Login with a Twitter account	P	Yener	12/25/2018
2	Analyze a publicly open Turkish tweet by entering URL of the tweet	P	Yener	12/25/2018
3	See results of the tweet's originality	F	Yener	12/25/2018
4	See results of similar text generation	P	Yener	12/25/2018
5	Report a stolen tweet by pressing Report button on a tweet's analysis page	F	Yener	12/25/2018
6	Run analysis on generated similar texts	F	Yener	12/25/2018
7	Logout from the system	P	Yener	12/25/2018

3. System Manual

a. Objectives

This tool is for checking a tweet's originality. The response of this tool is labeled as either Original or Stolen. Stolen responses detailed with the origin of the base tweet.

b. Functional Uses/Operational Capabilities

The application is currently uses two main libraries for functional purposes; Python Twitter (https://github.com/bear/python-twitter) for Twitter API operations and Gensim Doc2Vec (https://github.com/RaRe-Technologies/gensim) for text generation purposes. Currently, Twitter API is used with a Standard Plan and Gensim Doc2Vec model is trained with 10.000 sample sentences from economy related news in Turkish from various newspapers.

c. System Requirements

This application is developed using Flask (Python) library, deployed on an Apache 2.4 virtual server. Since this is a web application with mostly text based content, the system only requires users to use modern browsers, such as Chrome 52+, Safari 12, Edge 18, Firefox 61+, Internet Explorer 11, Opera 53+ etc.

d. Special requirements

In normal operational status, the server of this system requires 1 GB of RAM and two processor cores. When training a Doc2Vec model, using a high-power machine (with properties such as 4x Xeon Processor and 32 GB of RAM) is suggested for model training in a reasonable amount of time.

4. User Manual

This section provides a general walkthrough of the system from initiation through exit. The logical arrangement of the information shall enable the functional personnel to understand the sequence and flow of the system.

a. Logging On

A Twitter user can log in to the system via Twitter Login. Click on the “Login with Twitter” button on the “Welcome” page for logging in to the system. Twitter Authorization page will show up. Click on “Authorize” button to give access to the system.

b. Analyzing a Tweet

Logged in users can analyze publicly open tweets by pasting the tweet’s URL into the form in “Index” page. Click on the “Submit” button after pasting the tweet URL.

c. Showing Analysis

Publicly accessible tweets of Twitter users can be analyzed depending on their originality. In the “Analysis” page, original tweet details are shown.

If the tweet is stolen from another tweet, the original tweet is shown below the subject tweet.

Also, a Doc2Vec algorithm is used for similar text generation according to the subject tweet’s text content. Results of this generation process is shown below analysis section. Every generated text has an option to run “Analysis” again with a button called “ANALYZE!” beneath them.

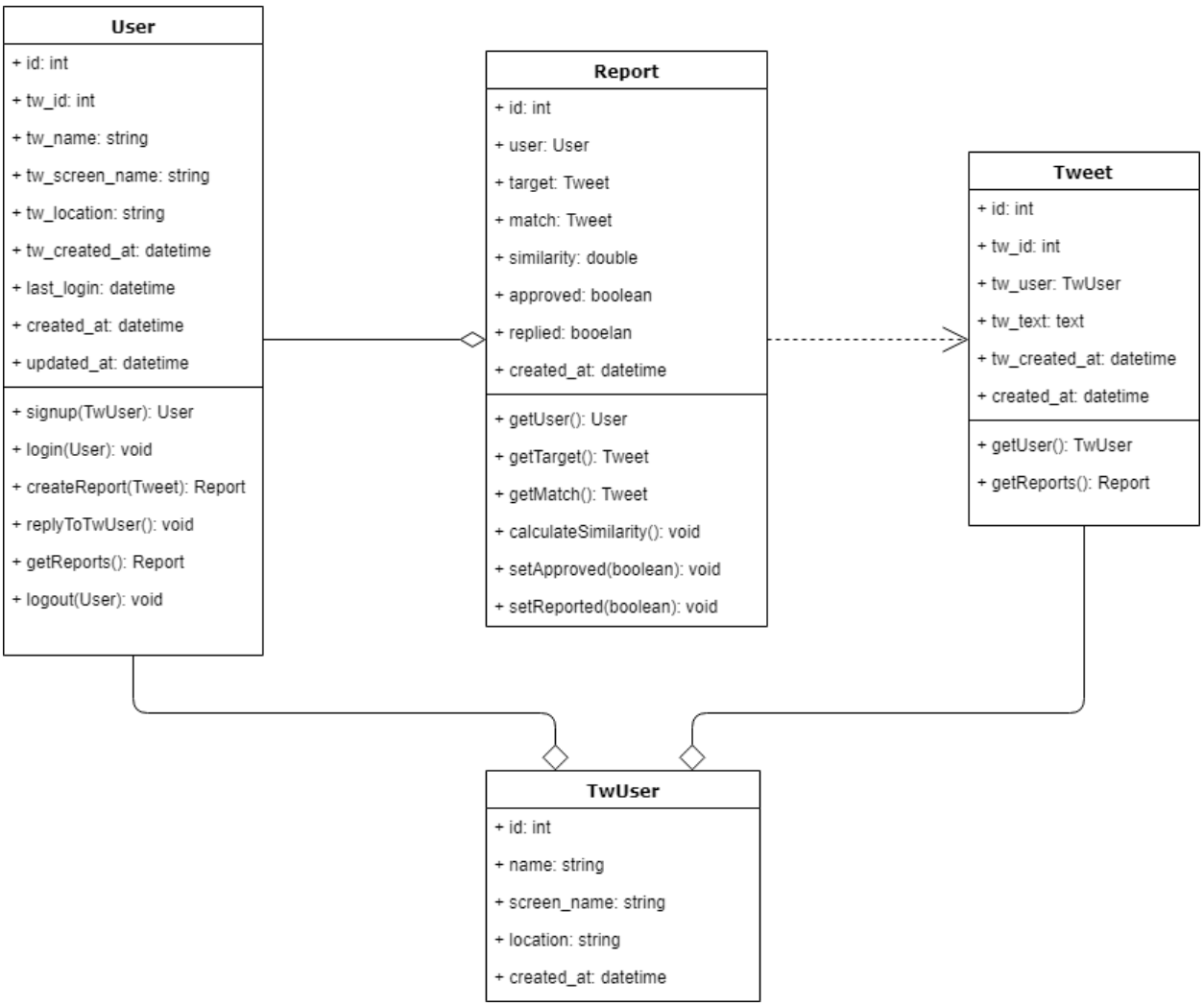
d. Reporting Stolen Tweet

If the subjected tweet seems stolen in the analysis section, a button called “REPORT!” is presented next to them. Click on this button if you want to report a stolen tweet by posting a reply tweet under subjected tweet.

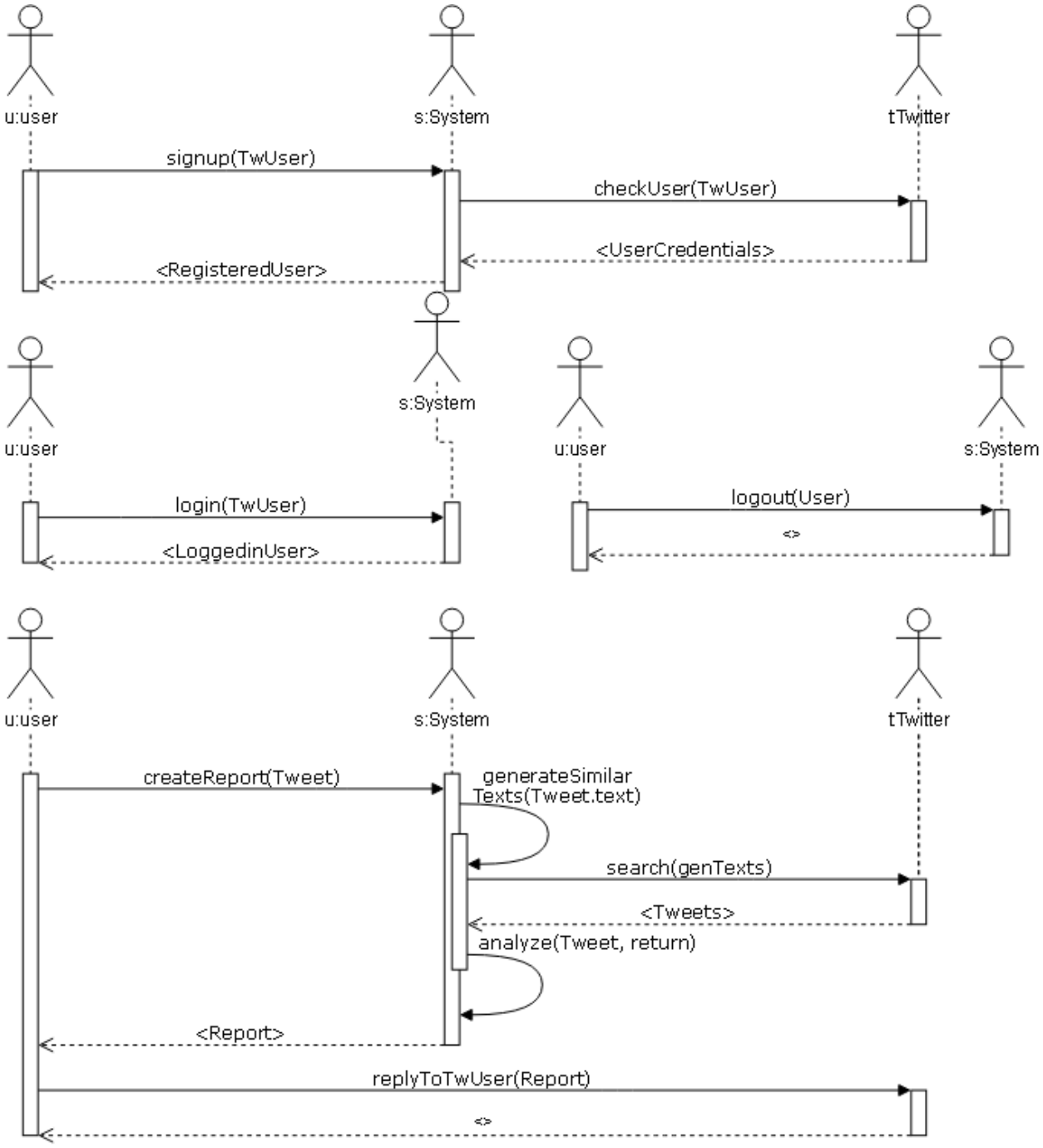
e. Exit System

Click on the “Logout” button at the top right to exit.

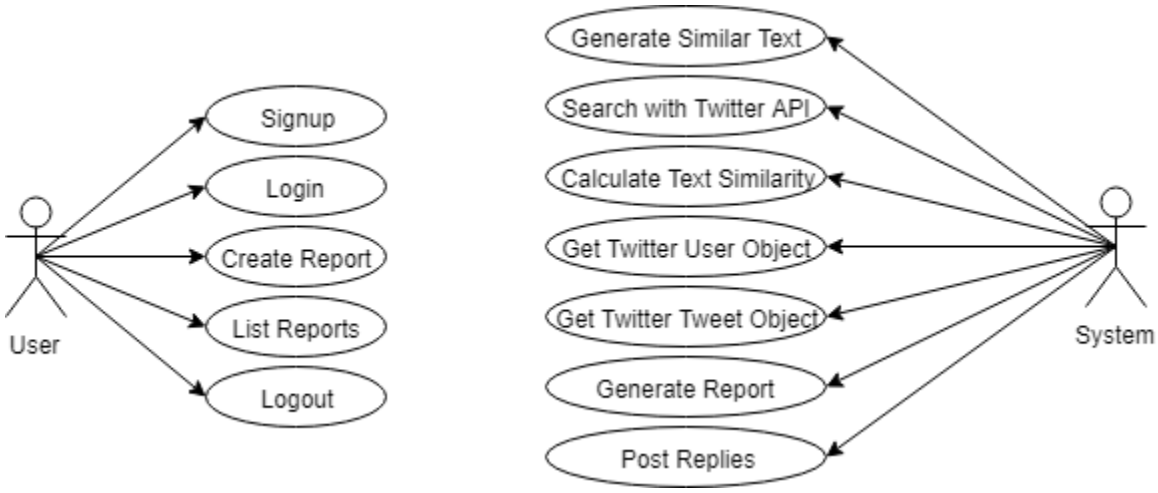
5. Class Diagram



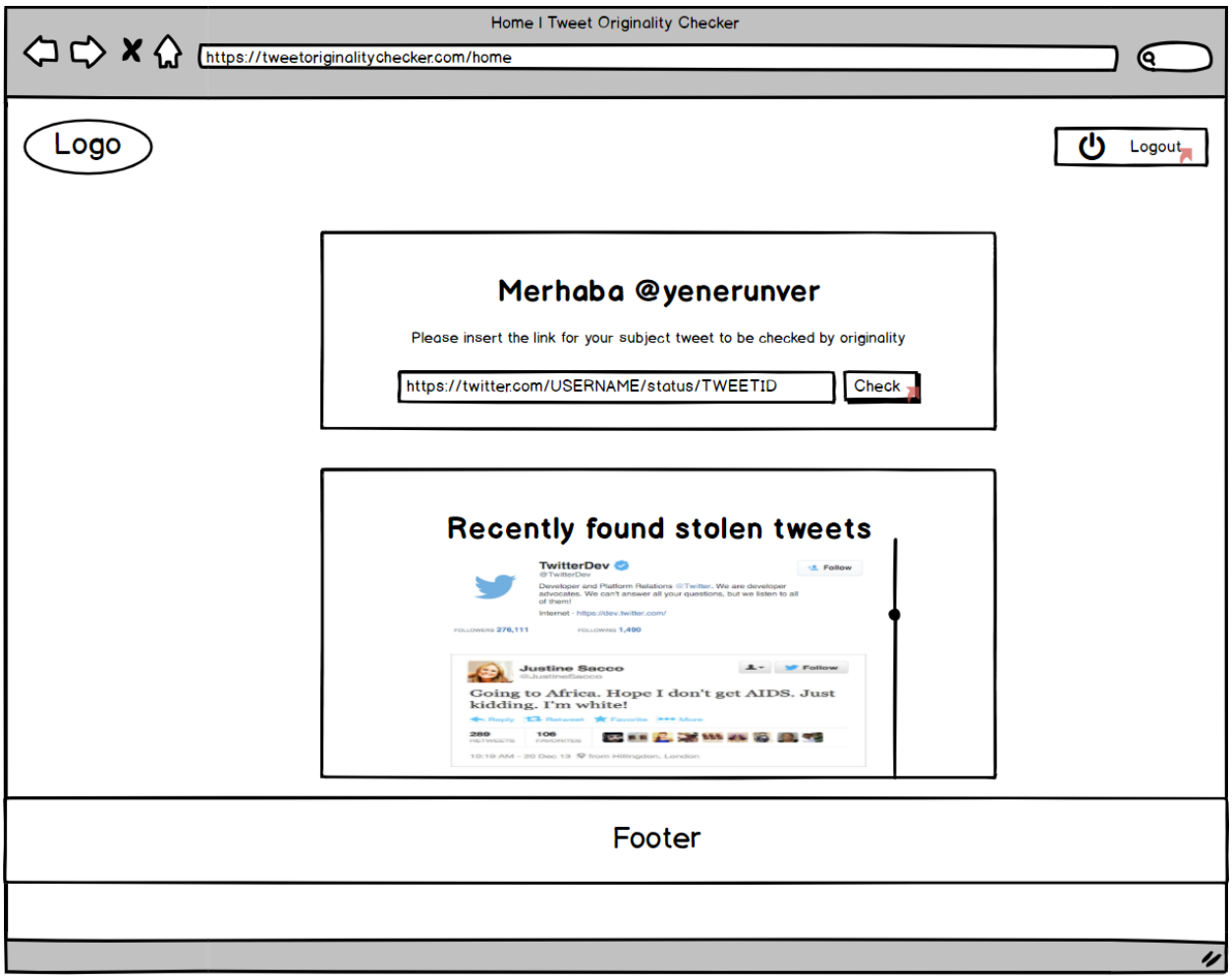
6. Sequence Diagram

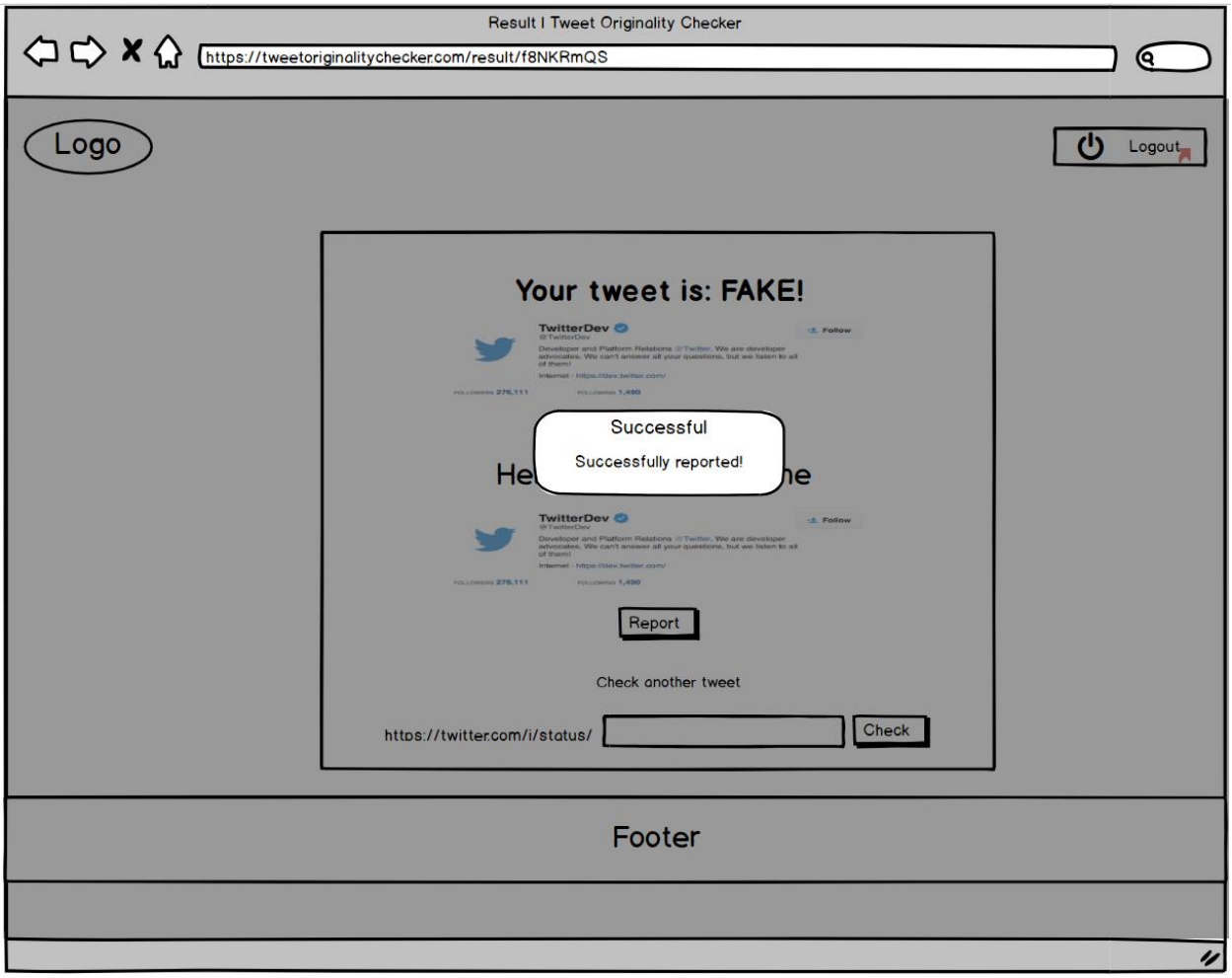


7. Use-case Diagram



8. Mock-ups


Home | Tweet Originality Checker
https://tweetoriginalitychecker.com/home
Logo
Logout
Merhaba @yenerunver
Please insert the link for your subject tweet to be checked by originality
https://twitter.com/USERNAME/status/TWEETID
Check
Recently found stolen tweets
TwitterDev
Justine Sacco
Going to Africa. Hope I don't get AIDS. Just kidding. I'm white!
Footer


Result I Tweet Originality Checker
https://tweetoriginalitychecker.com/result/f8NKRmQS
Logo
Logout
Your tweet is: FAKE!
TwitterDev
Follow
Successful
Successfully reported!
Report
Check another tweet
https://twitter.com/i/status/
Check
Footer