

FAKE WEBSITE DETECTION

A MINI PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

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INTERNAL EXAMINER

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ABSTRACT

Now a days, we are seeing most of them have lost their money by some fake websites. Even though there are many websites or apps to identify whether it is a fake website or not but most of them are still getting trapped in this fake website. So, i planned to create a website to identify whether it is fake website or not. So, just copy the link of that website and paste in our website, so you can see the information, regarding that website, it identifies if it is fake or not and also, its gives us information regarding that website.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

There is a potential that more assaults will occur while the data is being downloaded and uploaded. Therefore, we develop AES-based cyber security for safe data transfer. During the data uploading and downloading there is a chance of occurrence of additional attacks. So, we build cyber security algorithms for data transmission securely.

1.2 Project Scope and Objective:

1.2.1 Scope of the Project:

The Scope of the project is that helps detect fake and fraudulent websites. The Internet is a global marketplace where businesses across the globe reach customers in almost any part of the world. Cybersecurity companies maintain the **fake websites** list which keeps increasing day after day

1.2.2 Objective of the Project:

It is a free tool that provides malware scanning and blacklist monitoring for any website. Many website owners have found this tool as a resource to check their website for any malware and then they can clean their site.

CHAPTER 2

OVERALL DESCRIPTION

2 PROJECT SPECIFICATION

2.1. SYSTEM STUDY

2.1.1 EXISTING SYSTEM

The existing system means that a Manual human intervention is not that much applicable and error-prone. Legacy and Conventional Data Mining Algorithms can't deal with huge volumes of data, slower and inaccurate

The Existing System of your Project is actually separated into two software:

- One is Analyzing the given website url .
- Second is the Suggestion about the given url.

2.1.2 PROPOSED SYSTEM

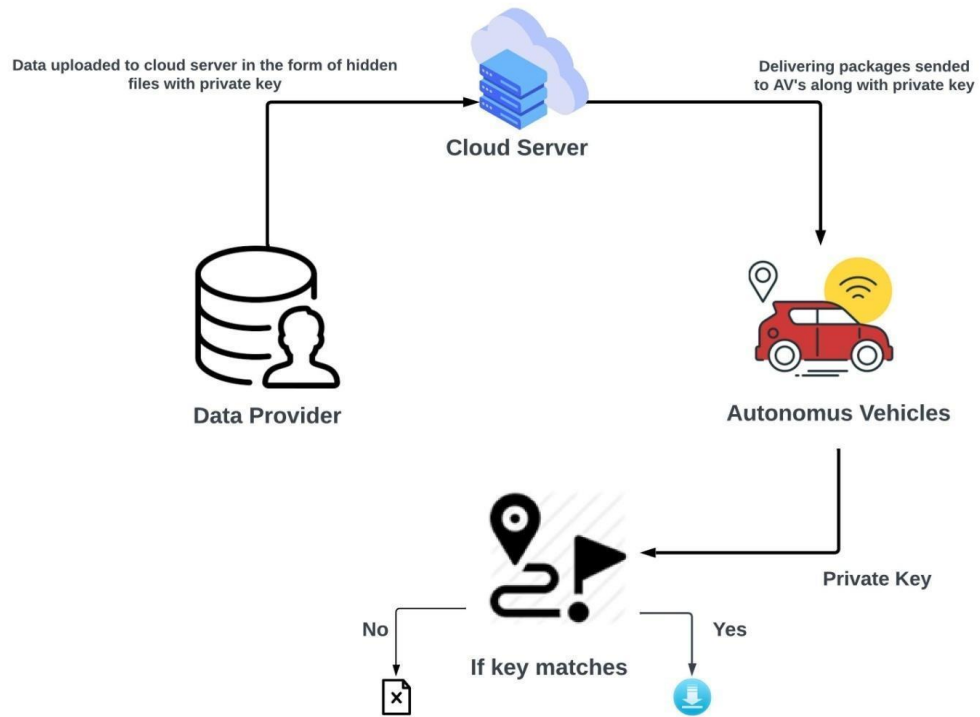
Machine Learning is cutting edge and trending for different kinds of diverse application in the society where it can deal with tons of data, refined and revised algorithms, available heavy processing power in terms of GPU

2.2 USE CASE DIAGRAM



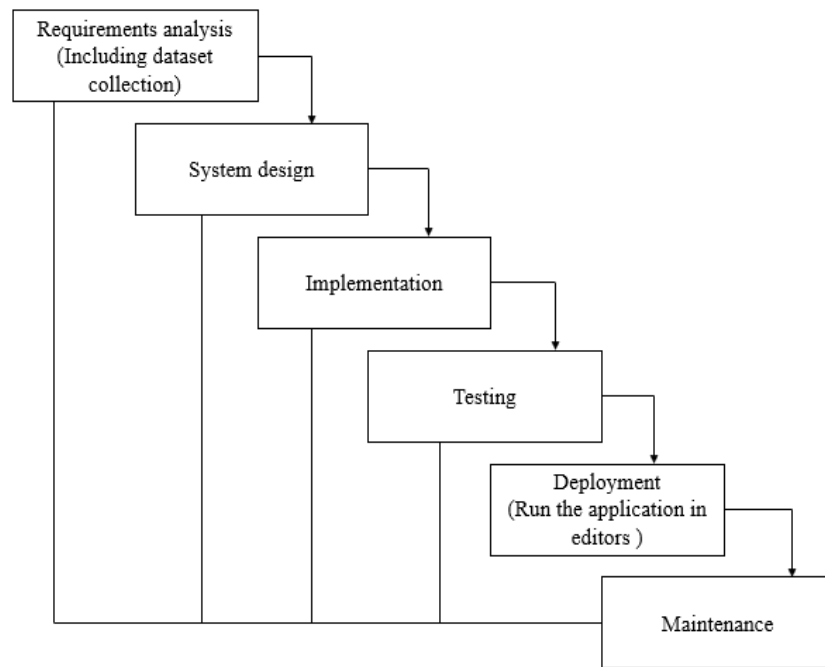
Use case diagram is used to show which operations are performed by the user and which operation are performed by the system.

2.3 DESIGN



2.4 SYSTEM ARCHITECTURE

Because it is implemented in a step-by-step fashion, the Waterfall model is the one we utilize for my challenge.



- This section contains an exhaustive list of all potential specifications for the device that will be created.
- This device design makes it possible to establish hardware and device prerequisites and aids in determining the structure of the entire machine.
- using design process inputs, the device is first advanced in small packages referred to as gadgets, which can be incorporated within the subsequent phase. Every unit is evolved and tested for its capability, which is known as Unit checking out.
- There are a few problems that occur in the consumer environment. Patches are issued to fix certain issues. Additionally, a few newer versions of the product are issued to improve it. To bring these changes to the customer environment, maintenance is done.

CHAPTER 3

EXTERNAL INTERFACE REQUIREMENTS

3.1 USER INTERFACE

Any popular OS that will allow the use of a browser to view and access web pages. In order to make the user comfortable, we have displayed all the main details in our menu bar itself.

3.2 HARDWARE INTERFACE

Any kind of internet connection like WIFI, modem data etcetera, to allow the browser interfaces to connect to the website. The website can be accessed through any devices like computer, laptop, tablet, etc.

Hardware Requirements:

- CPU: Intel i5 processor with 64-bit operating system
- RAM: 8 GB
- STORAGE: 1 TB Storage
- INTERNET: wireless adapter (Wi-Fi)

3.3 SOFTWARE INTERFACE

Some of the software interfaces which you can use to access our website are

- Operating System : Windows 10
- Server-side Script : Python 3.9+
- IDE : PyCharm
- Libraries Used : Pandas, IO, OS, Random, Flask.

CHAPTER 4

TESTING

4.1 TEST PLAN

Scope - The scope of the testing is to make the user to go through all the web pages easily.

4.1 TEST PROCEDURE

The test plan is shown below

Name of the test	Things to be tested
API testing	User's comfort with website should be tested.
Unit testing	Every page of the website should be tested.
Integration testing	Connection between the webpages are tested.
System testing	The functional flow of the webpages are tested.

4.2 TEST DELIVERABLES

Test Deliverables – An enjoyable and wrathful destination will be provided as the outcome.

To understand the Test Deliverables we need to understand what all the test cases are there for the software

TEST CSE ID	TEST NAME	EXPECTED RESULTS	ACTUA RESULTS	STATUS
1.	While opening ,the site should open	Site should open	As expected	Pass
2.	Options should be opened while clicking	Options should open	As expected	Pass
3.	On pressing radio button	Buttons should navigate	As expected	Pass
4.	On pressing chat button	Admin should reply for the chat	As expected	Pass

CHAPTER 5

FUTURE ENHANCEMENTS

AI makes it possible to find words and patterns that indicate fake news in huge volumes of data, and tech companies are already working on it. Google is working on a system that can detect videos that have been altered, making their datasets open source and encouraging others to develop deepfake detection methods.

CHAPTER 6

CONCLUSION

I conclude that this project helps the users to be aware of fake websites. I have come across with many fake websites. so I decided to implement this project.

This project identifies whether website is fake or not, and it gives warning messages, it gives information regarding the websites like what happens if you open the website.

let us be aware of these fake websites and from fake peoples.

**“Time Will Expose Everything Because Fake Things And People
Don't Last Long In Life”**

REFERENCES

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2. Y. sonmez, T. tuncer, H. gokul and E. avci, “fake websites features classification based on extreme learning machine.
3. T. peng, I. harris and Y. sawa, “detecting the fake attacks using natural language processing and machine learning.
4. M. karabatak and T.mustafa, “performance comparison of classifiers on reduced fake attacks websites dataset”.

SAMPLE CODING

home.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Fake Website Detection</title>
  <link rel="stylesheet" href="styles.css">
  <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/css/bootstrap.min.css">
</head>
<body style="background-image: url('images/bg/background.jpg'); background-size: cover;
background-position: center; background-repeat: no-repeat; color: white; min-height: 100vh;
/* Full height of viewport */
display: flex; align-items: center; justify-content: center;">
  <div class="container">
    <div class="row">
      <div class="form col-md" id="form1">
        <h2>FAKE WEBSITE DETECTION</h2>
        <br>
        <form id="urlForm" onsubmit="return checkUrl(event);">
          <div class="mb-3">
            <label for="url" class="form-label">URL</label>
            <input type="text" class="form-control" name="url" id="url"
placeholder="Enter URL" required>
          </div>
          <button type="submit" class="btn btn-primary">Check here</button>
        </form>
      </div>
      <div class="col-md" id="form2" style="display: none;">
        <br>
        <h6 class="right"><a id="urlLink" href="" target="_blank"></a></h6>
        <br>
        <h3 id="prediction"></h3>
        <button class="btn btn-warning" id="button2"
onclick="window.open(document.getElementById('urlLink').href)">Still want to
Continue</button>
```

```

        <button class="btn btn-success" id="button1"
onclick="window.open(document.getElementById('urlLink').href)">Continue</button>
        <button type="button" class="btn btn-warning"
onclick="refreshPage()">Refresh</button>

    </div>
</div>
<br>
</div>
<script src="script.js"></script>
</body>
</html>

```

Style.css

```

body {
font-family: Arial, sans-serif;
background-image: url('images/background.jpg');
background-size: cover;
background-position: center;
background-repeat: no-repeat;
color: white; /* Optional for text contrast */
}

.container {
margin-top: 50px;
}

.form {
padding: 20px;
border: 1px solid #ccc;
border-radius: 10px;
box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}

.form-control {
width: 100%;
padding: 10px;
margin-bottom: 20px;
border: 1px solid #ccc;
}

```

```

.form-label {
font-weight: bold;
margin-bottom: 10px;
}

.btn {
padding: 10px 20px;
border: none;
border-radius: 5px;
background-color: #4CAF50;
color: #fff;
cursor: pointer;
}

.btn:hover {
background-color: #3e8e41;
}

#prediction {
font-size: 24px;
font-weight: bold;
margin-bottom: 20px;
}

#button2 {
background-color: #ff9800;
color: #fff;
}

#button1 {
background-color: #4CAF50;
color: #fff;
}

```

Script.js

```

function isUnsafeUrl(url) {
const unsafePatterns = [
  /*(fake|scam|phishing|malicious|spoof|virus).*/i, // Keywords
  /*\..xyz$/, // Commonly used for scams
  /*\..top$/, // Another TLD often associated with fake sites

```

```

    /\.*\d{1,5}\.?$ / // Check for numbers in domain (e.g., 12345.example.com)
  ];

  return unsafePatterns.some(pattern => pattern.test(url));
}

async function checkUrlSafety(url) {
  const apiKey = 'AIzaSyDJ7OSpxg2bWqJnT-Rzcrtu1Zx30q44R8w'; // Replace with your
  actual API key
  const response = await
  fetch(`https://safebrowsing.googleapis.com/v4/threatMatches:find?key=${apiKey}`, {
    method: 'POST',
    body: JSON.stringify({
      client: {
        clientId: "yourcompanyname",
        clientVersion: "1.0"
      },
      threatInfo: {
        threatTypes: ["MALWARE", "SOCIAL_ENGINEERING"],
        platformTypes: ["ANY_PLATFORM"],
        threatEntryTypes: ["URL"],
        threatEntries: [{ url: url }]
      }
    }),
    headers: {
      'Content-Type': 'application/json'
    }
  });

  if (!response.ok) {
    console.error("API request failed:", response.statusText);
  }

  const data = await response.json();
  return data.matches && data.matches.length > 0; // Return true if matches found (i.e.,
  unsafe)
}

async function checkUrl(event) {
  event.preventDefault(); // Prevent the form from submitting

  const urlInput = document.getElementById('url').value;
  const predictionText = document.getElementById('prediction');

```

```

const urlLink = document.getElementById('urlLink');
const form2 = document.getElementById('form2');
const button1 = document.getElementById('button1');
const button2 = document.getElementById('button2');
button1.disabled = false;
button2.disabled = false;

console.log("URL entered: ", urlInput); // Add this log to see if the URL is captured
correctly
if (isUnsafeUrl(urlInput)) {
  predictionText.innerText = "Warning: This website may be unsafe!";
  urlLink.href = urlInput;
  button1.disabled = true;
  button2.disabled = true; // Disable buttons for unsafe URLs
} else {
  const isUnsafe = await checkUrlSafety(urlInput);
  console.log("Is unsafe from API: ", isUnsafe); // Debugging log

  if (isUnsafe) {
    predictionText.innerText = "Warning: This website is reported as unsafe!";
    urlLink.href = urlInput;
    button1.disabled = true;
    button2.disabled = true; // Disable buttons for unsafe URLs
  } else {
    predictionText.innerText = "This website is safe.";
    urlLink.href = urlInput;
    // Enable buttons since the URL is safe
  }
}
form2.style.display = 'block';
urlLink.innerText = urlInput; // Display the URL
}
function refreshPage() {
  location.reload(); // This will reload the current page
}

```

SCREENSHOTS



