# TEXT AND IMAGE PLAGARISM DETECTION

**A Project Work-1 Internal Review Report**

***Submitted in Partial Fulfillment for the Award of the Degree Of***

**BACHELOR OF TECHNOLOGY**

**in**

**INFORMATION TECHNOLOGY**

**Submitted by**

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Certificate

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**This approval does not necessarily endorse or accept every statement made opinion expressed or conclusions drawn as recorded in the Project Work-1 Internal Review report it only signifies the acceptance of the report for the purpose for which submitted.**

**Signature:**

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**DECLARATION**

**This project work-1 Internal review report entitled “TEXT AND IMAGE PLAGARISM DETECTION” has been carried out by us in the partial fulfillment of the requirements for the award of the degree of B.TECH (IT), S.R.K.R Engineering College. We here by declare this project work/project report has not been submitted to any of the other university/Institute for the award of any other degree/diploma.**

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| --- | --- | --- |
| **S no** | **Contents** | **Page no** |
| 1 | Introduction | 8 |
| 2 | Literature Survey | 12 |
| 3 | Problem Statement | 16 |
| 4 | System Architecture | 19 |
| 5 | Preliminary Analysis | 23 |
| 6 | Feasibility Study | 27 |
| 7 | Summary | 28 |
| 8 | References | 29 |

**INDEX**

**TEXT AND IMAGE PLAGIARISM DETECTION**

**1.INTRODUCTION:**

**\*INTRODUCTION ABOUT PROBLEM YOU ARE TRYING TO SOLVE:**

Plagiarism in itself cannot be considered as a crime but as copyright violation. In the academics and other industries that are sensitive to copyright infringement, plagiarism is grave misconduct in integrity. The law cannot and usually will not punish plagiarism, but it is up to the institution on how to handle it once it happens Plagiarism detection is usually split into two which is text-based plagiarism detection and image-based plagiarism detection. For text-based plagiarism detection there are currently five techniques that is used most often in different fields. These techniques are Fingerprinting, String Matching, Bag of Words, Citation Analysis and Stylometry. String Matching is mostly used in computer science where it compares the documents words for words. Bag of words represents the documents in one or two vectors for comparison. Citation analysis is mainly used in scientific texts because it only compares the citation and reference of the documents. Stylometry check the author’s unique writing style for detection author’s ownership . For image-based plagiarism detection, there is no commonly used techniques like the text-based plagiarism detection, but they usually share the same processes and steps. When we say plagiarism checking or detection we usually mean checking only the text in the file or document for plagiarism. Most of the times when you check your documents or files for plagiarism through a plagiarism checker software they will check for images and then discard themPlagiarism basically means the wrongful stealing of an author’s work, thoughts, ideas, etc. and claiming it as your own original work. Plagiarism is considered as deceit and a breach of ethics. In academics, students that are caught with plagiarism are exposed to various level of penalties and punishment and may even lead to expulsion and we have to try to solve .

\* **INTRODUCTION ABOUT EXISTING SYSTEM**

Plagiarism is the practice of copying someone else’s work or ideas, and passing them off as one’s own original work. Not only images but, architecture, flow diagram, UML diagrams, even snapshots of test results can be plagiarized. If the author has not mentioned the credit for the original author from where he/she copied the image then it is said to be plagiarized.

\* **INTRODUCTION ABOUT PROPOSED SYSTEM:**

The proposed work mainly focus on finding the similarity between two images. Sample image is given as the reference and it is compared with the other image which is taken from any journal and comparison is done through histogram. Histogram is the best way to visualize the largest intensities of an image. It is used to find the problems which originate during image acquisition such as exposure, contrast etc. even a minute difference with the pixel is noticed by histogram

BRIEF INTRODUCTION ABOUT PLATFROM AND TECHNOLOGY USED AND WHY:

**What is Python :**

Below are some facts about Python.

Python is currently the most widely used multi-purpose, high-level programming language.

Python allows programming in Object-Oriented and Procedural paradigms. Python programs generally are smaller than other programming languages like Java.

Programmers have to type relatively less and indentation requirement of the language, makes them readable all the time.

Python language is being used by almost all tech-giant companies like – Google, Amazon, Facebook, Instagram, Dropbox, Uber… etc.

The biggest strength of Python is huge collection of standard library which can be used for the following –

* + [Machine Learning](https://www.geeksforgeeks.org/machine-learning/)
  + GUI Applications (like Kivy, Tkinter, pyqt etc. )
  + Web frameworks like Django (used by youtube, Instagram, Dropbox)
  + Image processing (like Opencv, Pillow)
  + Web scraping (like Scrapy, beautifulsoup, Selenium)
  + Test frameworks
  + Multimedia

**Advantages of Python :-**

Let’s see how Python dominates over other languages.

## 1. Extensive Libraries

Python downloads with an extensive library and it contain code for various purposes like regular expressions, documentation-generation, unit-testing, web browsers, threading, databases, CGI, email, image manipulation, and more. So, we don’t have to write the complete code for that manually.

## 2. Extensible

As we have seen earlier, Python can be**extended to other languages**. You can write some of your code in languages like C++ or C. This comes in handy, especially in projects.

## 3. Embeddable

Complimentary to extensibility, Python is embeddable as well. You can put your Python code in your source code of a different language, like C++. This lets us add **scripting capabilities**to our code in the other language.

## 4. Improved Productivity

The language’s simplicity and extensive libraries render programmers**more productive** than languages like Java and C++ do. Also, the fact that you need to write less and get more things done.

## 5. IOT Opportunities

Since Python forms the basis of new platforms like Raspberry Pi, it finds the future bright for the Internet Of Things. This is a way to connect the language with the real world.

When working with Java, you may have to create a class to print **‘Hello World’**. But in Python, just a print statement will do. It is also quite **easy to learn, understand,** and**code.** This is why when people pick up Python, they have a hard time adjusting to other more verbose languages like Java.

## 7. Readable

Because it is not such a verbose language, reading Python is much like reading English. This is the reason why it is so easy to learn, understand, and code. It also does not need curly braces to define blocks, and **indentation is mandatory.** This further aids the readability of the code.

## 8. Object-Oriented

This language supports both the **procedural and object-oriented**programming paradigms. While functions help us with code reusability, classes and objects let us model the real world. A class allows the **encapsulation of data** and functions into one.

## 9. Free and Open-Source

Like we said earlier, Python is **freely available.** But not only can you[**download Python**](https://data-flair.training/blogs/install-python-windows/) for free, but you can also download its source code, make changes to it, and even distribute it. It downloads with an extensive collection of libraries to help you with your tasks.

#### 10. Portable

When you code your project in a language like C++, you may need to make some changes to it if you want to run it on another platform. But it isn’t the same with Python. Here, you need to**code only once**, and you can run it anywhere. This is called **Write Once Run Anywhere (WORA)**. However, you need to be careful enough not to include any system-dependent features.

## 11. Interpreted

Lastly, we will say that it is an interpreted language. Since statements are executed one by one, **debugging is easier** than in compiled languages.

Any doubts till now in the advantages of Python? Mention in the comment section.

# ADVANTAGES OF PYTHON OVER OTHER LANGUAGES :

## 1. Less Coding

Almost all of the tasks done in Python requires less coding when the same task is done in other languages. Python also has an awesome standard library support, so you don’t have to search for any third-party libraries to get your job done. This is the reason that many people suggest learning Python to beginners.

## 2. Affordable

Python is free therefore individuals, small companies or big organizations can leverage the free available resources to build applications. Python is popular and widely used so it gives you better community support.

**The 2019 Github annual survey showed us that Python has overtaken Java in the most popular programming language category.**

## 3. Python is for Everyone

Python code can run on any machine whether it is Linux, Mac or Windows. Programmers need to learn different languages for different jobs but with Python, you can professionally build web apps, perform data analysis and [**machine learning**](https://data-flair.training/blogs/machine-learning-tutorials-home/), automate things, do web scraping and also build games and powerful visualizations. It is an all-rounder programming language.

# DISADVANTAGES OF PYTHON :

So far, we’ve seen why Python is a great choice for your project. But if you choose it, you should be aware of its consequences as well. Let’s now see the downsides of choosing Python over another language.

#### 1. Speed Limitations

We have seen that Python code is executed line by line. But since [Python](https://www.python.org/) is interpreted, it often results in **slow execution**. This, however, isn’t a problem unless speed is a focal point for the project. In other words, unless high speed is a requirement, the benefits offered by Python are enough to distract us from its speed limitations.

#### 2. Weak in Mobile Computing and Browsers

While it serves as an excellent server-side language, Python is much rarely seen on the **client-side**. Besides that, it is rarely ever used to implement smartphone-based applications. One such application is called **Carbonnelle**.

The reason it is not so famous despite the existence of Brython is that it isn’t that secure.

#### 3. Design Restrictions

As you know, Python is **dynamically-typed**. This means that you don’t need to declare the type of variable while writing the code. It uses **duck-typing**. But wait, what’s that? Well, it just means that if it looks like a duck, it must be a duck. While this is easy on the programmers during coding, it can**raise run-time errors**.

#### 4. Underdeveloped Database Access Layers

Compared to more widely used technologies like **JDBC (Java database Connectivity)** and **ODBC (Open database Connectivity)**, Python’s database access layers are a bit underdeveloped. Consequently, it is less often applied in huge enterprises.

#### 5. Simple

No, we’re not kidding. Python’s simplicity can indeed be a problem. Take my example. I don’t do Java, I’m more of a Python person. To me, its syntax is so simple that the verbosity of Java code seems unnecessary.

This was all about the Advantages and Disadvantages of Python Programming Language.

# HISTORY OF PYTHON : -

What do the alphabet and the programming language Python have in common? Right, both start with ABC. If we are talking about ABC in the Python context, it's clear that the programming language ABC is meant. ABC is a general-purpose programming language and programming environment, which had been developed in the Netherlands, Amsterdam, at the CWI (Centrum Wiskunde &Informatica). The greatest achievement of ABC was to influence the design of Python.Python was conceptualized in the late 1980s. Guido van Rossum worked that time in a project at the CWI, called Amoeba, a distributed operating system. In an interview with Bill Venners1, Guido van Rossum said: "In the early 1980s, I worked as an implementer on a team building a language called ABC at Centrum voor Wiskunde en Informatica (CWI). I don't know how well people know ABC's influence on Python. I try to mention ABC's influence because I'm indebted to everything I learned during that project and to the people who worked on it."Later on in the same Interview, Guido van Rossum continued: "I remembered all my experience and some of my frustration with ABC. I decided to try to design a simple scripting language that possessed some of ABC's better properties, but without its problems. So I started typing. I created a simple virtual machine, a simple parser, and a simple runtime. I made my own version of the various ABC parts that I liked. I created a basic syntax, used indentation for statement grouping instead of curly braces or begin-end blocks, and developed a small number of powerful data types: a hash table (or dictionary, as we call it), a list, strings, and numbers."

# WHAT IS MACHINE LEARNING : -

Before we take a look at the details of various machine learning methods, let's start by looking at what machine learning is, and what it isn't. Machine learning is often categorized as a subfield of artificial intelligence, but I find that categorization can often be misleading at first brush. The study of machine learning certainly arose from research in this context, but in the data science application of machine learning methods, it's more helpful to think of machine learning as a means of building models of data.

Fundamentally, machine learning involves building mathematical models to help understand data. "Learning" enters the fray when we give these models tunable parameters that can be adapted to observed data; in this way the program can be considered to be "learning" from the data. Once these models have been fit to previously seen data, they can be used to predict and understand aspects of newly observed data. I'll leave to the reader the more philosophical digression regarding the extent to which this type of mathematical, model-based "learning" is similar to the "learning" exhibited by the human brain.Understanding the problem setting in machine learning is essential to using these tools effectively, and so we will start with some broad categorizations of the types of approaches we'll discuss here.

**PROPOSE OF WORK :**

The algorithm describes about the comparison between the images. In the initial stage the two images are loaded into the work space. Later the images are re-sized in-order to get the same size for both the images so that the result will be accurate when compared. The image is also compressed in order to improve the accuracy while comparing. Image is automatically saved in a folder after compression. To over- come the weakness of having images with different colours, the image is converted into grayscale image. In the next step the similar features of the images are detected and the comparison is done using image subtraction method where each pixel value of an image is compared with pixel value of another image and finally the result will be displayed

**SCOPE OF WORK :**

In recent times, the use of internet has widely increased which is leading to easy opportunity of plagiarism, the proposed system will help in detecting the same. So the plagiarism detection will be very helpful in the future. Our system can also be used as ‘search by image

**2.LITERATURE SURVEY:**

**\* SURVEY AND STUDY OF PUBLISHED LITERTURE ON THE ASSIGNED TOPIC:**

**Plagiarism-a survey**

**AUTHORS :** **H. A. Maurer, F. Kappe, and B. Zaka**

**ABSTRACT:**

Plagiarism in the sense of "theft of intellectual property" has been around for as long as humans have produced work of art and research. However, easy access to the Web, large databases, and telecommunication in general, has turned plagiarism into a serious problem for publishers, researchers and educational institutions. In this paper, we concentrate on textual plagiarism (as opposed to plagiarism in music, paintings, pictures, maps, technical drawings, etc.). We first discuss the complex general setting, then report on some results of plagiarism detection software and finally draw attention to the fact that any serious investigation in plagiarism turns up rather unexpected side-effects. We believe that this paper is of value to all researchers, educators and students and should be considered as seminal work that hopefully will encourage many still deeper investigations.

**Introduction to qualitative research methods: A guidebook and resource**

**AUTHORS :** **S. J. Taylor, R. Bogdan, and M. DeVault,**

**ABSTRACT:**

presentation of qualitative data. Unique in the market, this book describes the entire research process — from design through writing — illustrated by examples of real, complete qualitative work that clearly demonstrates how methods are used in actual practice. This updated fourth edition includes all new case studies, with additional coverage of mixed methods, non-sociological settings, funding, and a sample interview guide. The studies profiled are accompanied by observation field notes, and the text includes additional readings for both students and instructors. More than just theory, this guide is designed to give you a real-world practitioner's view of how qualitative research is handled every step of the way. Many different disciplines rely on qualitative research as a method of inquiry, to gain an in-depth understanding of human behavior and the governing forces behind it. Qualitative research asks "why" and "how," and the data is frequently complex and difficult to measure. This book shows you how to effectively handle qualitative work, regardless of where it's being applied.

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**3 PROBLEM STATEMENT :**

**\*EXISTING SYSTEM:**

The existing methodology maybe sufficient for detecting plagiarism of images when the source and suspected image have not been rotated by a large margin, but in case of rotational changes the existing methodology will fail. The proposed methodology will ensure that even if the image is rotated plagiarism is detected if it has occurred or if an attack of rotational change has been made. Also the existing system is not efficient to detect plagiarism properly for different types of images. The proposed system will ensure that by using adaptive threshold values. The algorithm makes sure that the matching time of the images is less by reducing the search field by a significant factor each time the refinement is done

**\*PROBLEM DEFINITION :**

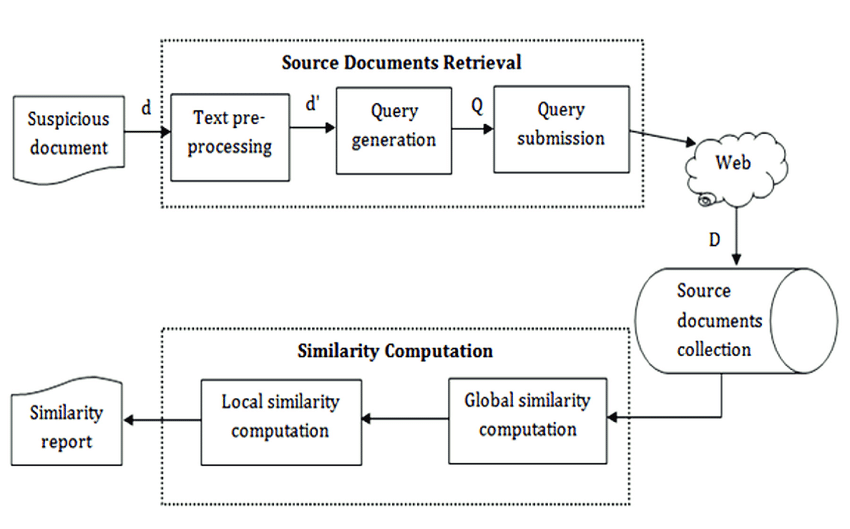
A research problem is defined as an area of concern that requires a meaningful understanding of a specific topic, a condition, a contradiction, or a difficulty. So what is research problem? A research problem means finding answers to questions or strengthening existing findings to bridge the knowledge gap to solve problems

**PROBLEM STATEMENT :**

The Indeed Editorial Team comprises a diverse and talented team of writers, researchers and subject matter experts equipped with Indeed's data and insights to deliver useful tips to help guide your career journey. A problem statement addresses issues in a timely and efficient manner. They help professionals break down complex situations into tangible goals that they can then communicate throughout an organisation. In every workplace, problems are inevitable. Thus, a problem statement is an effective tool to put into practice so that employees recognise issues before they disrupt multiple functions of the business. In this article, we discuss what a problem statement is, why they are important, how to write one and provide a comprehensive template and example for your reference**.**

**4. SYSTEM ARCHITECTURE :**

**\*NEAT BLOCK DIAGRAM:**



**\*MODULES EXPLANATION :**

* **1.New user Signup**

Firstly user will register in to Application.It helpful to login into Application with username and password.

* **2.LOGIN**

User will login into Application through username and password**.**

* **3.UPLOAD SOURCE FILE :**

Folder is created into Upload Source Files’ link to load all files from corpus folder

* **4.UPLOAD SUSPICIOUS FILE :**

To load suspicious file and get result.user will upload file to Upload Suspicious files the result is execute. LCS score is 1.0 which means 100% matched with corpus file so plagiarism detected and similarly not only this u may enter any text file and get result.

* **5.UPLOAD SOURCE IMAGE :**

In this module from all database images histogram will be calculated and store in array and whenever we upload new test image then both histogram will get matched.

* **6.UPLOAD SUSPICOUS IMAGE :**

we can see for database image and uploaded image we generated histogram and we can see there is no match in histogram so no plagiarism will be detected. histogram pixel matching score is 15173 out of 40000 pixels so image is not plagiarised and now upload image from “images” folder and see result. we can both original and uploaded image histogram is matching 100% so plagiarism is detected and now get below result. histogram matching score is 40000 which means all pixels matched so plagiarism is detected in above result

**5 .PRELIMINARY ANALYSIS :**

**\*BREIF ABOUT INPUT DATA:**

Plagiarism in research is being debated more than ever before. There have been considerable harms to research as a consequence of web conditions and the ability to do complicated and intelligent searches in a short period of time

**\*TYPE OF ANALYSIS DOING ON DATA :**

The first step in any plagiarism analysis is preparing the materials to be checked for the software. Plagiarism checkers require documents with machine-readable text (such as Docx, RTF, etc.) and work best if that text is cleaned up and formatted correctly.

After preparing the documents, the next step is to actually perform the automated analysis.

**\*EXPECTED OUTCOME:**

Once run through the software, what we have isn’t a report of all of the plagiarism in the work, but of all the duplicative text that the checker found.

**6. FEASIBILITY STUDY:**

**WORKING OUT A PRELIMINARY APPROACH TO THE PROBLEM RELATION TO THE ASSIGNED TOPICS**

* + **TECHNICAL FEASIBILTY**

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

* + **OPERATION FEASIBILITY**

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

* + **ECONOMICAL FEASIBILITY**

This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased

**7. SUMMARY OF PROJECTS:**

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[**https://ieeexplore.ieee.org/document/7959317**](https://ieeexplore.ieee.org/document/7959317)

[**https://github.com/topics/plagiarism-detection?o=asc&s=stars**](https://github.com/topics/plagiarism-detection?o=asc&s=stars)

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