

# Document Fraud Detecting System

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**Abstract:** “Document Fraud Detecting System” deals with detection of fraud documents as well as copied contents from the existing documents. The system has a wide range of applications. This can be implemented in various fields. The proposed system is implemented for colleges, where documents submitted by students are checked for fraudulent activities. Whenever a fraudulent activity is detected a warning is sent to the student. The existing system contains lots of paper work. It is difficult to detect any fraudulent documents and also it is a tedious work to find copied contents from the internet. In the proposed system the admin can register the staffs and students. The students can submit their assignments to the staff. The staff verifies the assignments by comparing existing assignment and the system detects whether the assignments submitted by the students are copied or not. Whenever a fraudulent activity is identified a warning is sent to the student. If the document is genuine the staff can give suggestions about the document to the students. Then the student can rewrite their assignments according to the suggestions and submit their hardcopy. Document fraud is an intentional act designed to obtain a financial advantage or an undue service. To be efficient as possible, fraud detection must combine several complementary analysis methods, which together allow an optimal appreciation of the authenticity of the elements. Document fraud has become the third largest criminal industry world. Prevention of fraud and abuse has become a major concern of many organizations. Fraud detection involves a static approach, which searches for inconsistencies in the compositional profile of the object, and a dynamic approach which examines the aging process.

**Keywords:** HTML, CSS, JavaScript.

## I. INTRODUCTION

Fraud means the representation of false information which is not true. In this world right now, there are many types of frauds going on and we have to work on the detecting machine or algorithms so that we can find out the fraud. Machine Learning consists of many algorithms that can be used in fraud detection such as Random Forest, Local Outlier Fraction, Isolation Forest, Naïve Bayes, K-nearest Neighbor, Hidden Markov Model, Neural Networks, etc. that can be used in fraud detection. It's act of academy stealing someone's work such as; copying words from a book or a scientific paper and publish it as it's his/her work, also stealing the ideas, images, videos, and music and using them without permission of providing a proper citation. When someone is using a portion of an article or work published before without citing that he is doing so, and its portion would be significant, identical or nearly identical also it may cause copywriters issues as the copy write of the old work will be transferred to the new one. Now the blogs, facebook pages and someone website are copying and pasting information violating many copy writes, so there are many tools that are used to prevent plagiarism such as disabling the write click to prevent the copying, also placing the copy write warning in every page in the website as manners of pictures and the use of DCMA copy write law to report for copying in fragment and violation of copy writes. This report would send to the website owner or the ISP posting the website and the website will be removed.[1]

There are mainly three modules:

1. Admin
2. Staff
3. Student

In this paper, we have 3 logins such as for admin, staff, student. The admin has the overall control of the system. Admin can register staffs and students, view staffs and students details, delete staffs and students, view the assignment details. The staff can give the assignments topic and view the assignments, detecting copied documents and can give a warning message to student if the document is copied otherwise view document and give suggestions. The student can submit their assignments to staff, view warning message from staff if the document is copied, view suggestion from the staff and make changes according to the suggestions and can later submit their hardcopy. It uses React as front end, Laravel as backend and MYSQL as database. And also, it provides accuracy, reliability, ease of access and data security.

## II. METHODOLOGY

The first step in fraud detection methodology is to define the problem clearly. This involves identifying the types of fraud that the organization is most vulnerable to, the data sources that are available for analysis, and the specific objectives of the fraud detection program. The next step is to collect and preprocess the data. This involves collecting data from various sources such as transaction records, customer data, and other relevant data sources. The data is then cleaned, transformed, and preprocessed to prepare it for analysis. Feature engineering involves the selection of relevant features from the data. This step is critical in developing a robust fraud detection model as it helps to identify the features that are most predictive of fraudulent activities. This step involves selecting an appropriate model for the fraud detection task and training the model using the preprocessed data. There are various machine learning algorithms available for fraud detection, including logistic regression, decision trees, random forests, and neural networks. Model validation involves testing the model's performance using a separate dataset. This helps to evaluate the model's ability to generalize to new data and ensures that the model is not over fitting to the training data. The final step in fraud detection methodology is deploying the model in the production environment. The model is integrated with the organization's existing systems and processes to monitor and detect fraudulent activities in real-time.[2]

## III. EXISTING AND PROPOSED SYSTEMS

The existing system contains lots of paper work. It is difficult to detect any fraudulent documents and also it is a tedious work to find copied contents from the internet. The current system consists of lots of paper works and need more manpower. The verification process is very time consuming. Due to lack of resources most staff are unable to detect fraudulent activities. In the proposed system the students can submit their assignments to the staff. The staff verifies the assignments by comparing existing assignment and the system detects whether the assignments submitted by the students are copied or not, Whenever a fraudulent activity is identified a warning is send to the student. If the document is genuine the staff can give suggestions about the document to the students. Then the student can rewrite their assignments according to the suggestions and submit their hardcopy.[3]

### A) Limitations of the Existing System

- Manual Paperwork
- Fraud Detection Difficulty
- Limited Accessibility
- Time-Consuming Verification
- Lack of Scalability
- Ineffective Communication

To overcome the drawbacks on the existing system a new system has to be implemented. In the proposed system,

### B) Advantages and Features of the Proposed System

- Efficiency
- Fraud Detection
- Scalability
- Accessibility
- Secure Data Storage

#### IV. BACKGROUND

##### Technologies used in this Project:

React.js, more commonly known as React, is a free, open-source JavaScript library. It works best to build user interfaces by combining sections of code (components) into full websites. Originally built by Facebook, Meta and the open-source community now maintain it. One of the good things about React is that you can use it as much or as little as you want! For example, you can build your entire site in React or just use one single React component on one page. React.js is built using JSX – A combination of JavaScript and XML.

Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

SQL Server 2008 was released on August 6, 2008, announced to the SQL Server Special Interest Group at the ESRI 2008 User's Conference on August 6, 2008 by Ed Katibah (Spatial Program Manager at Microsoft), and aims to make data management self-tuning, self-organizing, and self-maintaining with the development of SQL Server Always On technologies, to provide near-zero downtime. SQL Server 2008 also includes support for structured and semi-structured data, including digital media formats for pictures, audio, video and other multimedia data.

Overall, document fraud detection is a constantly evolving field, and it is essential to stay up-to-date with the latest technologies and methodologies to stay ahead of fraudsters. Implementing a robust and efficient document fraud detection system can help organizations protect their assets, reputation, and comply with regulatory requirements.[4]

#### V. RESULTS AND DISCUSSIONS



Figure 1: Home Page

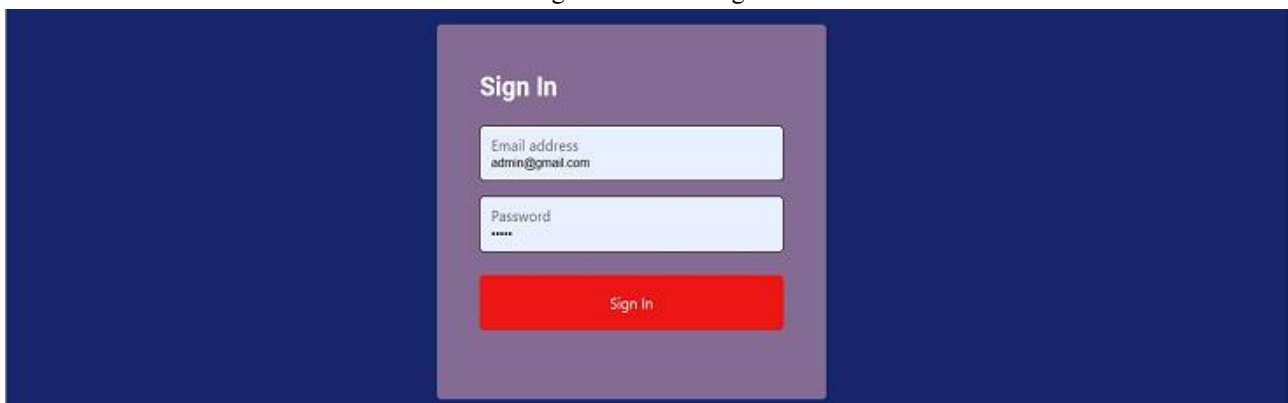


Figure 2: Sign In page

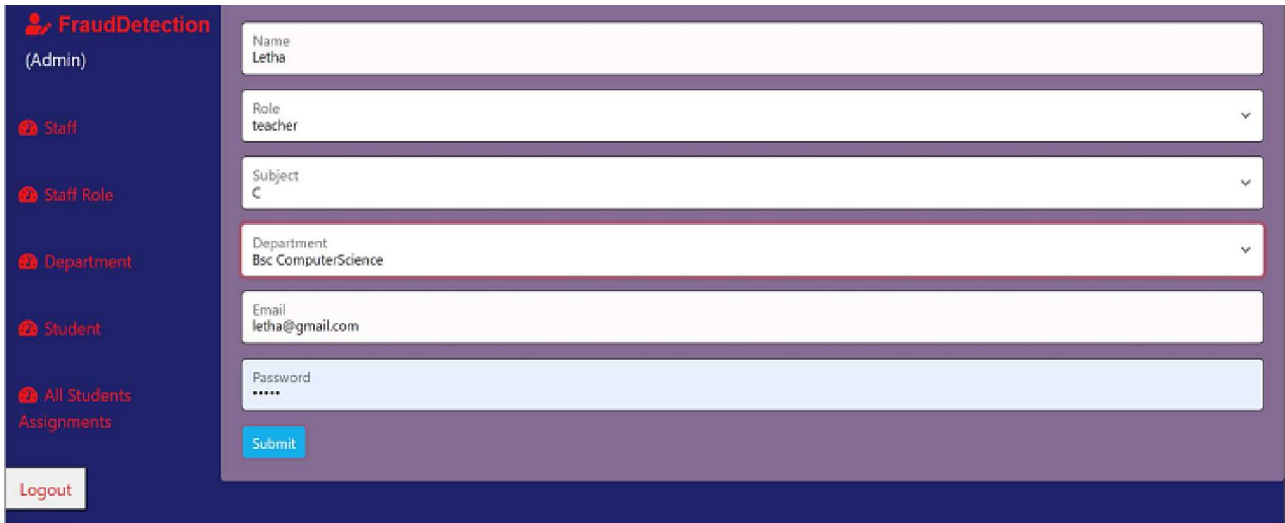


Figure 3: Add Staffs

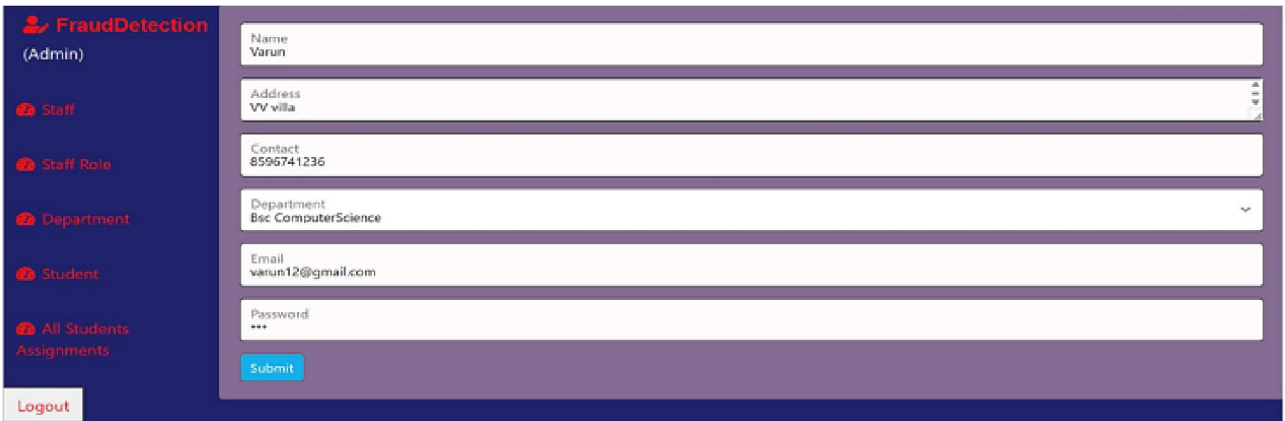
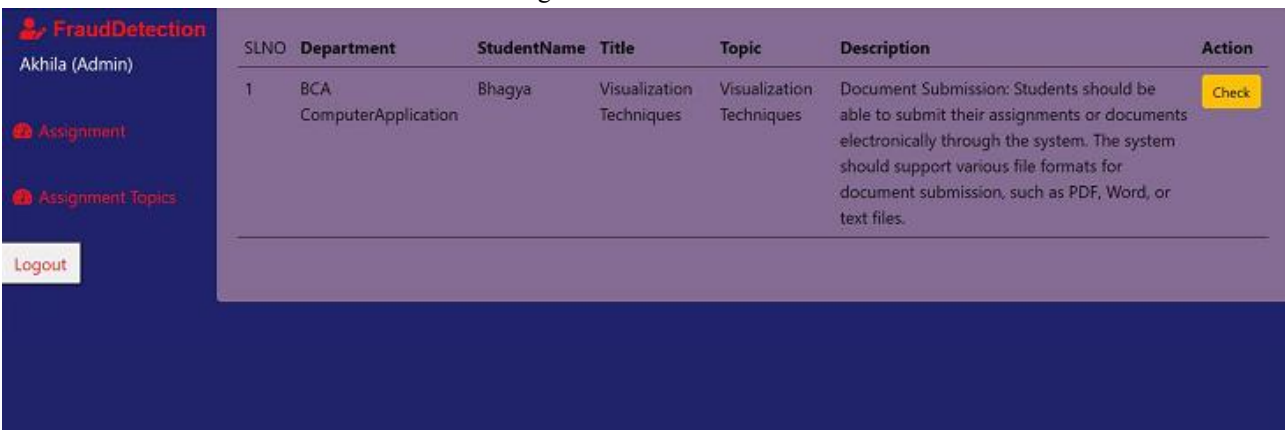


Figure 4: Add Students



SLNO	Department	StudentName	Title	Topic	Description	Action
1	BCA ComputerApplication	Bhagya	Visualization Techniques	Visualization Techniques	Document Submission: Students should be able to submit their assignments or documents electronically through the system. The system should support various file formats for document submission, such as PDF, Word, or text files.	Check

Figure 5: Check Assignment



Figure 6: Add Assignments

## VI. CONCLUSION

In conclusion, document fraud detection is an essential aspect of modern-day security and compliance systems. The increasing use of digital documents has increased the likelihood of fraudulent activities, which can result in significant financial and reputational losses. Therefore, it is essential to implement robust document fraud detection systems that can detect and prevent document fraud. The use of advanced technologies such as artificial intelligence, machine learning, and computer vision has made document fraud detection more accurate and efficient. These technologies can analyze various aspects of the documents, such as text, images, and metadata, to identify potential fraud. Furthermore, future enhancements in document fraud detection systems could include integrating blockchain technology to create a tamper-proof digital ledger of documents. This can provide an additional layer of security and transparency to the document verification process.

Overall, document fraud detection is a constantly evolving field, and it is essential to stay up-to-date with the latest technologies and methodologies to stay ahead of fraudsters. Implementing a robust and efficient document fraud detection system can help organizations protect their assets, reputation, and comply with regulatory requirements.

- **Advanced Machine Learning Techniques:** One of the key areas of improvement for document fraud detection is the use of advanced machine learning techniques such as deep learning and natural language processing. These techniques can help in detecting more sophisticated fraud patterns and improve accuracy.
- **Integration with Blockchain Technology:** Blockchain technology can help in creating a secure and immutable record of documents. This can help in preventing document fraud by providing a tamper-proof record of the original document.[5]

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