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Student Education Background Verification for TPGIT College

Dinesh Kannan[1], Sreerambabu[2], MohammedRiyaz[3], Kalidasan[4]
[1]Head of the Department, [2, 3]Assistant Professor, [4]PG Scholar

Abstract: ***One of the most fundamental aspects of background checks is an education verification process. Market conditions are becoming increasingly harsh, forcing individuals to resort to any means to get a job. A significant number of job seekers are misrepresenting their qualifications to attract the attention of potential employers. It is not easy to detect unethical acts such as the falsification of studies, fake institutions, or false claims which makes it necessary to carry out background checks. An average of two to 2.5 million students graduate each year in India. It is all the more important to introduce rigorous education verification procedures given such a large influx of graduates. Companies and institutions, since they have their databases for verifying information on individuals, also use third-party education verification services. We are developing and building a new system called TPGIT to check students' educational activities using email logs in this project. TPGIT is an innovative, cloud-based service that automates the student verification process in colleges and universities. For this purpose, incoming emails are extracted and grouped according to the process model they belong to. Then, the emails of each process model are divided into subgroups and assigned a label indicating the type of business activity. These tasks are performed by using an unsupervised learning technique in conjunction with semantic similarity measurement methods. In addition, this method enables the labelling of emails with activity names that can be used for activity detection in new incoming emails, triggering an automatic response to the verifier. The tool is evaluated based on the relevance of the extracted emails.***

Index Terms: Education Background checking, E-mail filtering, Verification, Unsupervised learning technique, Semantic similarity measurement method.

I. INTRODUCTION

An educational background check confirms an applicant’s educational credentials. It verifies attendance and degrees from high schools, colleges, and vocational schools. The search confirms that an applicant's education, degree, training, or certification information is true and identifies potential discrepancies before you hire them. This service, also called an Education Background Check or Education Check, is used to verify educational experiences at high schools, universities, colleges, and vocational schools. This verification has become very important because recently many workers have been submitting fake degree certificates in order to get their dream job or to get better pay or a higher position. Recently, a senior executive of a reputed company was removed from his post when it was found that his IIM degrees were fake. The recent fake pilot scam also underscores the need for proper verification of training by trusted third-party vendors. Often, the easiest way to verify a student’s education is to ask the applicant for an official transcript from his or her college or college. Another option is to hire a third-party verification service to conduct an educational background check. To do this, ask the prospective student to provide the following:

- full name, including maiden name or any aliases used while in college
- The name and address of the institution from which the degree was earned
- The date of graduation (month and year should be sufficient, for example, 08/2005–05/2009)
- Title and field of study of the degree
- A signed consent form from the applicant

Once this information is gathered, a third-party provider can verify the education, often using the Student Clearinghouse or checking with the institution’s admissions office. One of the benefits of using a third-party vendor is that many vendors can integrate with your applicant tracking service so you can keep all applicant records in one place.

II. RELATED WORKS

A. Unsupervised Feature Learning For Spam Email Filtering

The proposed solution is to use unsupervised feature learning for spam email filtering.

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This involves extracting features using DBOW and DM models, reducing the features using cosine similarity and Autoencoder, and improving classification accuracy and computational efficiency. The approach outperforms traditional methods in terms of accuracy and speed.

B. A Study of Machine Learning Algorithms on Email Spam Classification

The solution proposed in the paper is to use machine learning algorithms for email spam classification. The paper investigates the applicability of seven different machine learning algorithms, including Support Vector Machines and Naïve Bayes, and compares their performance on the TREC Public Spam Corpus dataset. The inclusion of N-Grams in the pre-processing phase is also explored to improve the accuracy of the classification models. The paper shows that the machine learning approach is effective for spam email classification and provides insights into the performance of different algorithms.

C. Email Classification Research Trends: Review and Open Issues

Email classification research has focused on improving the performance of classifiers in categorizing emails into different types, such as spam, phishing, and others. Some proposed solutions include using image-based features to analyse images in emails, addressing language barriers by considering emails in different languages, incorporating URL and JavaScript features to detect phishing attempts, managing noise and duplicate cases to improve accuracy, and reducing false positives. These solutions aim to enhance the precision, recall, accuracy, and overall performance of email classifiers.

III. PROPOSED SYSTEM MODEL

The proposed TPGIT portal of this project enhances the smart university by saving time and effort as it receives all student verification emails from external parties inside and outside the country. In addition, it helps to ensure that the achievement is tracked accurately and can be prevented from being falsified. In this case, the following proposed approach uses email content only to build a keyword corpus, together with some text processing to handle the obfuscation technique. For clustering tasks, content-based filtering KNN algorithms are widely used. The simplest algorithm to store and analyse all cases in existence on the basis of similarity measures is considered as K nearest neighbors.

A. Admin

The administrator manages and monitors various aspects of the site's operation, maintenance, and performance. The process may include adding students and maintaining the database. Assigning the staff and maintaining the staff details. Can view the principal details.

Admin-Admin can add students and view their details.

Staff-Admin can add the staff details and maintain the staff details.

Report-Displays the email details and should report to the authority.

B. Staff

Staff are individuals who are employed by an organization or company to perform various tasks and responsibilities. Depending on the needs of the organization, they may be full-time or part-time employees. The term "employees" generally refers to non-managerial employees who work in various departments or functions within an organization. Staff can verify student disclosures in emails from the organization involved in the review process.

- In addition, staff can review the information and forward it to the principal.
- They can maintain a manual record.

C. Principal

The principal of a college is a senior administrative position responsible for overseeing the operations, academic programs, and general administration of the institution. It is important to note that specific duties and responsibilities may vary depending on the size, type, and organizational structure of the college. The principal works closely with other administrators, faculty, and staff to jointly contribute to the success of the school and create an enriching educational environment.

- The principal may verify and view the student's name, matriculation number, and year of graduation.
- The principal may verify the father's name and the student's behavior.
- He can also view the details at any time

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D. Company

A company is a legal entity established for the purpose of conducting business activities. It can be a small company or a large multinational corporation. Companies operate in various industries and sectors, providing products or services to customers or clients. They usually have a hierarchical structure with different management levels and departments responsible for specific functions.

- The company can register in the portal and pay the amount through the payment portal.
- After the payment verification, an email with username and password is automatically generated.
- After registration, the company can view the student's data and issue the certificate.

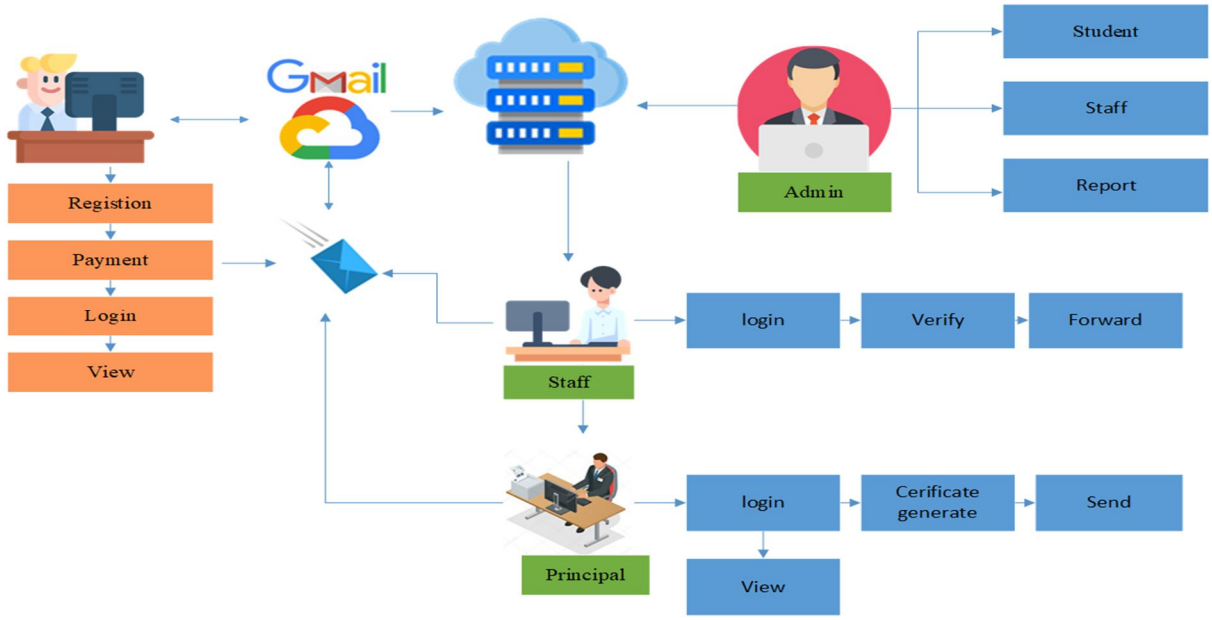


Figure 1-Architecture Diagram

IV. RESULTS

A. Generating Certificate

Providing the conduct certificate of the student who studied in that Institution or College to the required company.



CONDUCT CERTIFICATE

This is certify that Thiru/Tmt/Selvi ..... Gokul Kannan S .....

.....son/Daughter of..... Sokkar .....

..... Madurai ..... District is well known to me

personally for the past..... 2 .....years.His Personal Conduct &

Character is..... Good ..... He/She not related to me.

Date:- 13-07-2023

Principal,

Figure 2-Sample output

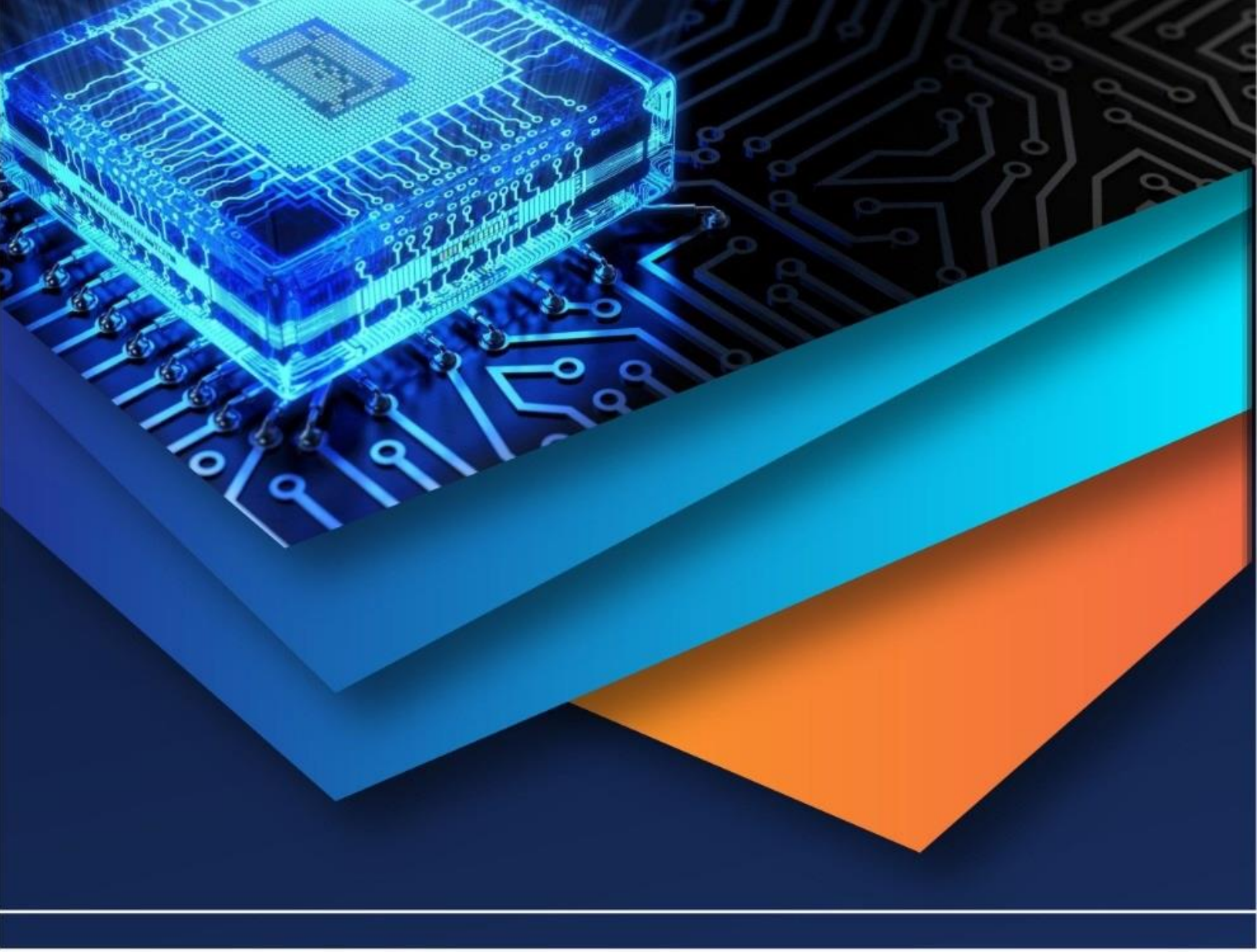
V. CONCLUSION

In this project, we succeeded in analysing and ranking the importance of student review emails based on data clusters and classification algorithms (K-NN). The data used for the machine learning algorithm is unbiased and the accuracy of the model is of the highest priority. The proposed model provides a digital solution to the current problem of manual document review. It will save time and money. The proposed solution for centralized data storage will save time in data review and a lot of money for the Postal Service. In this model, we incorporate the technological architecture of cloud computing and simplify its operation. It will make document review services more efficient, reliable, faster, and effective in terms of computing power. The automated system has proven to be more successful compared to manual systems. The student verification system redefines the manual verification system, preventing academic fraud and illegal student certificates and documents. Since the value of any degree is the reputation of the institution and the student, the student verification system will "plug in" ‘the manual verification system by using e-mail in a very short time. Therefore, our approach can easily conduct background verification of candidates by using E-mail.

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