AI based System for Fake Profile Detection on Matrimonial Websites

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Abstract: These days, using matrimonial services might help people to discover their true partner. The popularity of fake accounts on these platforms, however, has intensified into a significant issue for both users and service providers. The detection of fraudulent profiles is a critical problem for the reliability and validity of marriage services. The method outlined in this article makes use of AI to identify fake matrimonial site profiles. The technology uses machine learning algorithms to identify and report problematic accounts. The recommended strategy can improve the reliability and validity of websites that deal with marriage by lowering the likelihood of fraudulent activities.

I. INTROUDCTION

As more individuals hunt for their future spouses, the number of people utilizing matrimonial websites has increased. As more fake accounts appear on these platforms, customers and service providers are becoming more and more worried. Fake accounts have the potential to harm marriage websites' reputation and reliability since they might legitimize illegal activities like fraud and identity theft. Because of this, preserving the authenticity and reliability of marriage services depends on being able to spot bogus accounts.

The solution to this problem is to develop an AI-based method for identifying fake accounts on marriage-related websites. A system like this may analyze user data using cutting-edge machine learning methods and look for patterns that point to the existence of fake profiles. This artificial intelligence (AI)-based method for identifying fake accounts on matrimonial websites has the potential to improve user security and confidence in these services, making it safer and more dependable for people to choose their life partners.

II. METHODOLOGY

The proposed system employs the following methodology:

Data collection: The system collects data from user profiles on matrimonial sites, including profile pictures, personal information, and social connections.

Feature extraction: The system uses various techniques to extract features from the collected data, including text-based features. For preprocessing it uses encoders.

Model training: The system employs machine learning algorithm, such as Random Forest, to train a classifier that can distinguish between real and fake profiles.

Fake profile detection: The system uses the trained classifier to identify and flag suspicious profiles based on the extracted features.

The proposed system is evaluated using a dataset of 1,000 user profiles collected from a popular matrimonial site. The dataset contains both real and fake profiles, with a ratio of 60:40, respectively. The system is trained and tested on the dataset using machine learning algorithm, such as Random Forest.

There are mainly three modules in proposed system such as:

Profile Validator-responsible for overseeing the training phase of the application, including uploading the training dataset, initiating the training process, creating a model, and viewing training results.

Profile Checker - responsible for overseeing the evaluation phase of the application, including uploading the test dataset and viewing test results.

Profile Verifier - responsible for registering with personal details, logging in, uploading a test data, and checking recommendations for the presence of fake profiles on the matrimonial websites.
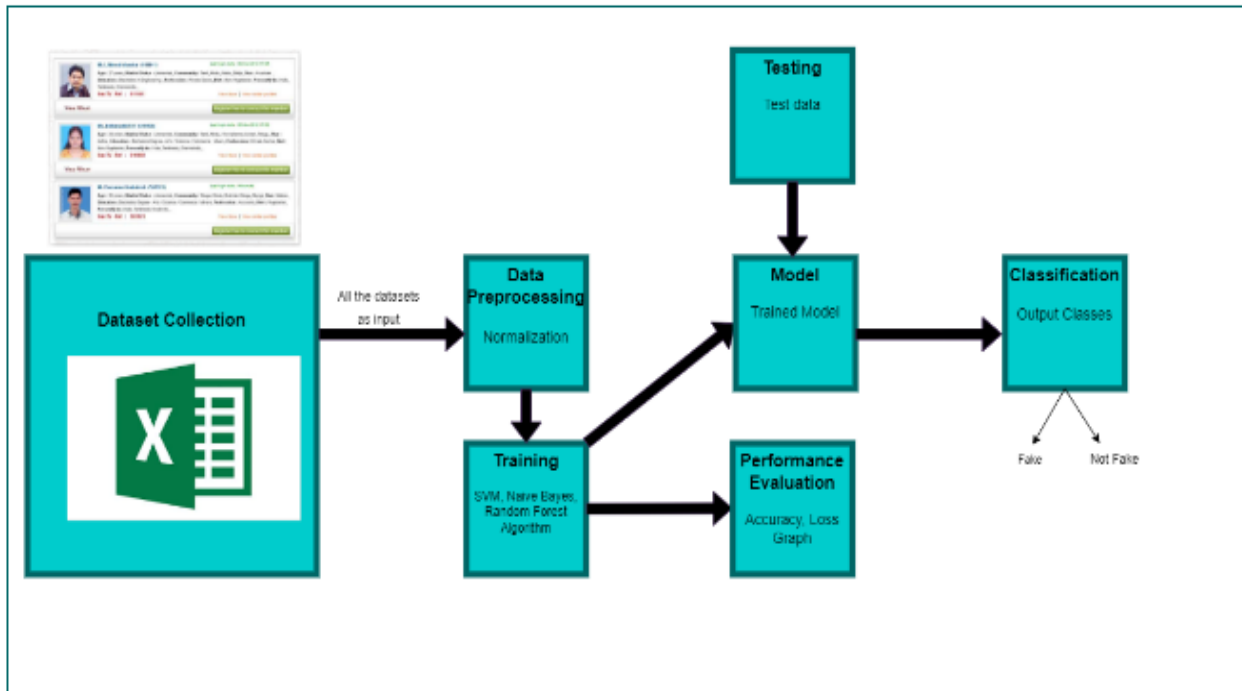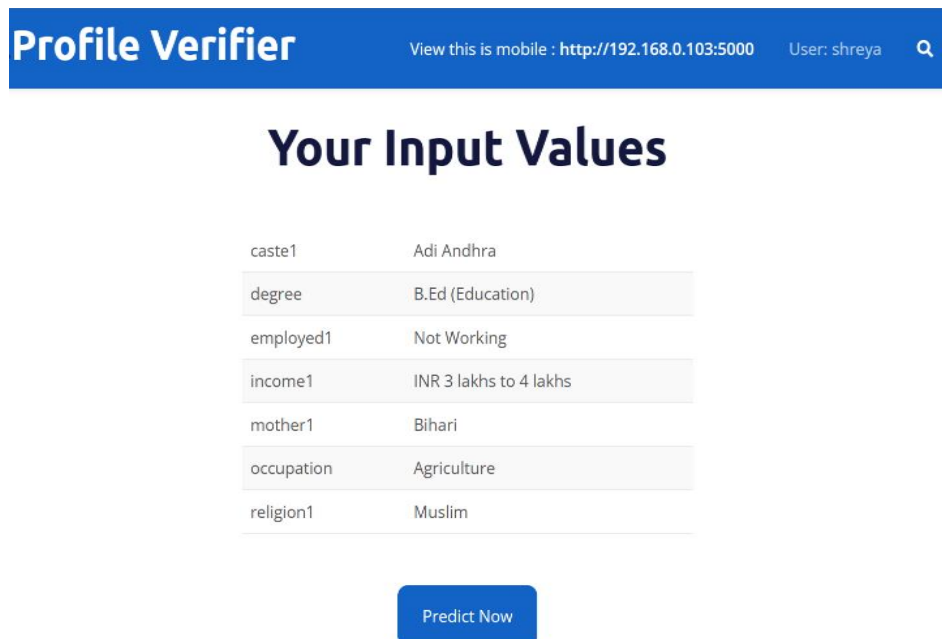

Figure: System Architecture

III.   RESULT AND DISCUSSION

The recommended approach uses machine learning algorithms. The four main operations of the system are data collection, feature extraction, model training, and false profile identification. The system collects data from user profiles, such as social connections, private information, and profile pictures. Several techniques, including text- and image-based ones, are utilised to extract features from the obtained data during the feature extraction process.

Throughout the model training stage, machine learning techniques are applied to develop a classifier that can discriminate between real and fake profiles. The last stage of fake profile detection employs the learned classifier to identify and flag suspect profiles. The system can quickly and accurately review enormous volumes of data, making it more effective than manual review or other traditional procedures.

There is reduced chance of false positives or false negatives because the algorithm is highly accurate at recognizing bfake profiles. The system can respond to changes in the kinds of false profiles that are produced since it can learn from new data and update its algorithms as appropriate.
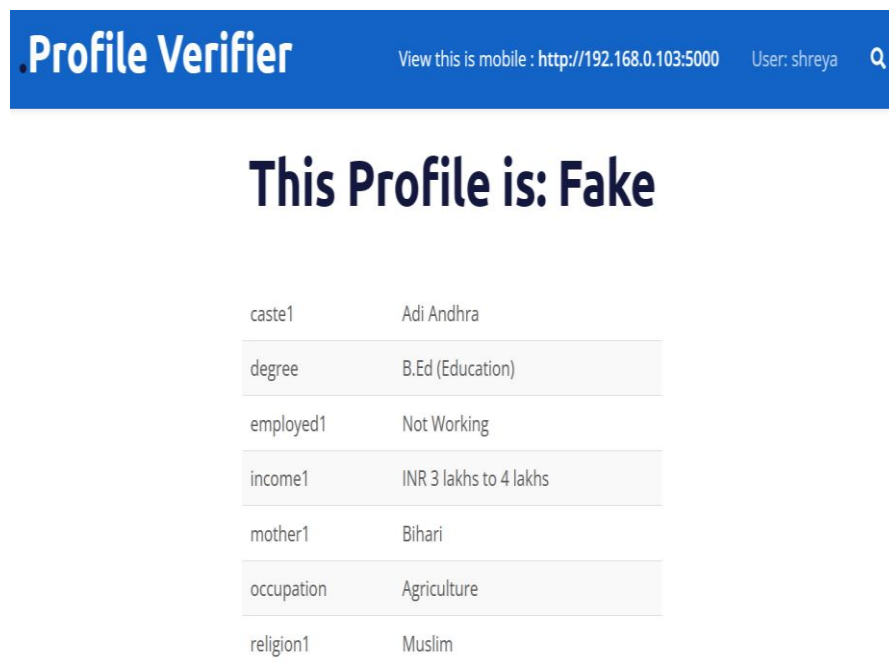
Since the system doesn't rely on personally identifiable information (PII), user privacy is maintained. Even though the system may require an initial financial investment for creation, continuing expenses for operating and maintaining the system are probably cheaper than those of human review or other traditional procedures.

1. **Input parameters for detection:**

2. **Detection of fake Profile on Matrimonial Websites:**

IV. CONCLUSION

An effective strategy to address the problem of fraudulent activity on these platforms is the recommended AI-based solution for spotting fake accounts on marriage sites. The tactic can boost the authenticity and dependability of marriage services by reducing the likelihood of fraudulent activity, making it safer and more dependable for users to find their soul mates.

Future Enhancement-

By using computer vision methods like image recognition or face recognition, the system may detect dubious or changed profile images.

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