HEALTHCARE PROVIDER FRAUD DETECTION

THE EAGLES - CONSULTANCY FIRM

ABOUT US

Welcome to The Eagles, where excellence in data science meets unrivaled expertise. As the leading data science consultancy, we are proud to bring together a powerhouse team of the six most renowned data scientists, all certified by Moringa School

PROJECT OVERVIEW

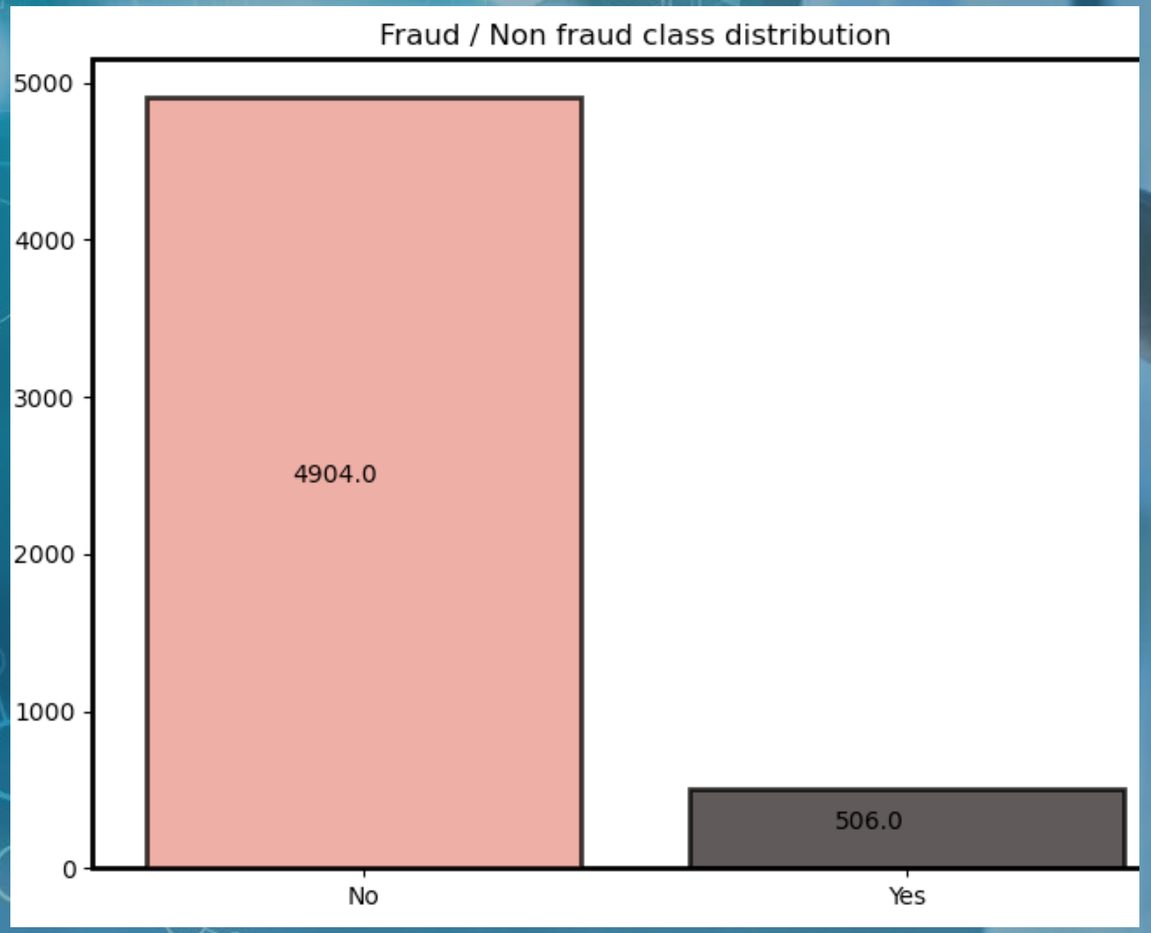
In the realm of healthcare, ensuring the integrity of financial systems and preventing fraud is of paramount importance. At The Eagles, we are dedicated to tackling this challenge head-on through our expertise in healthcare fraud detection.

Our approach involves leveraging state-of-the-art technologies, such as predictive modeling and anomaly detection, to uncover fraudulent schemes that may otherwise go unnoticed. By integrating these advanced techniques into our fraud detection system, we can help healthcare organizations proactively identify and prevent fraudulent activities, safeguarding financial resources and protecting the integrity of the healthcare system.

BUSINESS UNDERSTANDING

Healthcare fraud comes about in many forms. common examples:

- Claims raised on services not provided
- Duplicate submissions of claims for same services
- Overcharging of covered services by their providers(hospitals)
- Billing for a uncovered services



GOALS AND OBJECTIVES

Objective n° 1

Predict the potentially fraudulent claims

Objective n° 2

Discover variables helpful in detecting the behaviour of potentially fraudulent providers

Objective n° 3

Pattern recognition

DATA UNDERSTANDING

01

INPATIENT DATA

This data provides details about the claims filed for those patients who are admitted in the hospitals.

02

OUTPATIENT DATA

This data provides details about the claims filed for those patients who visit hospitals and not admitted in it.

03

BENEFICIARY DETAILS

This data contains beneficiary, know your customer(KYC), details like health conditions, region they belong to etc.

04

PROVIDER DATA

contains classification, whether a claim was fraudulent or not

MODELLING

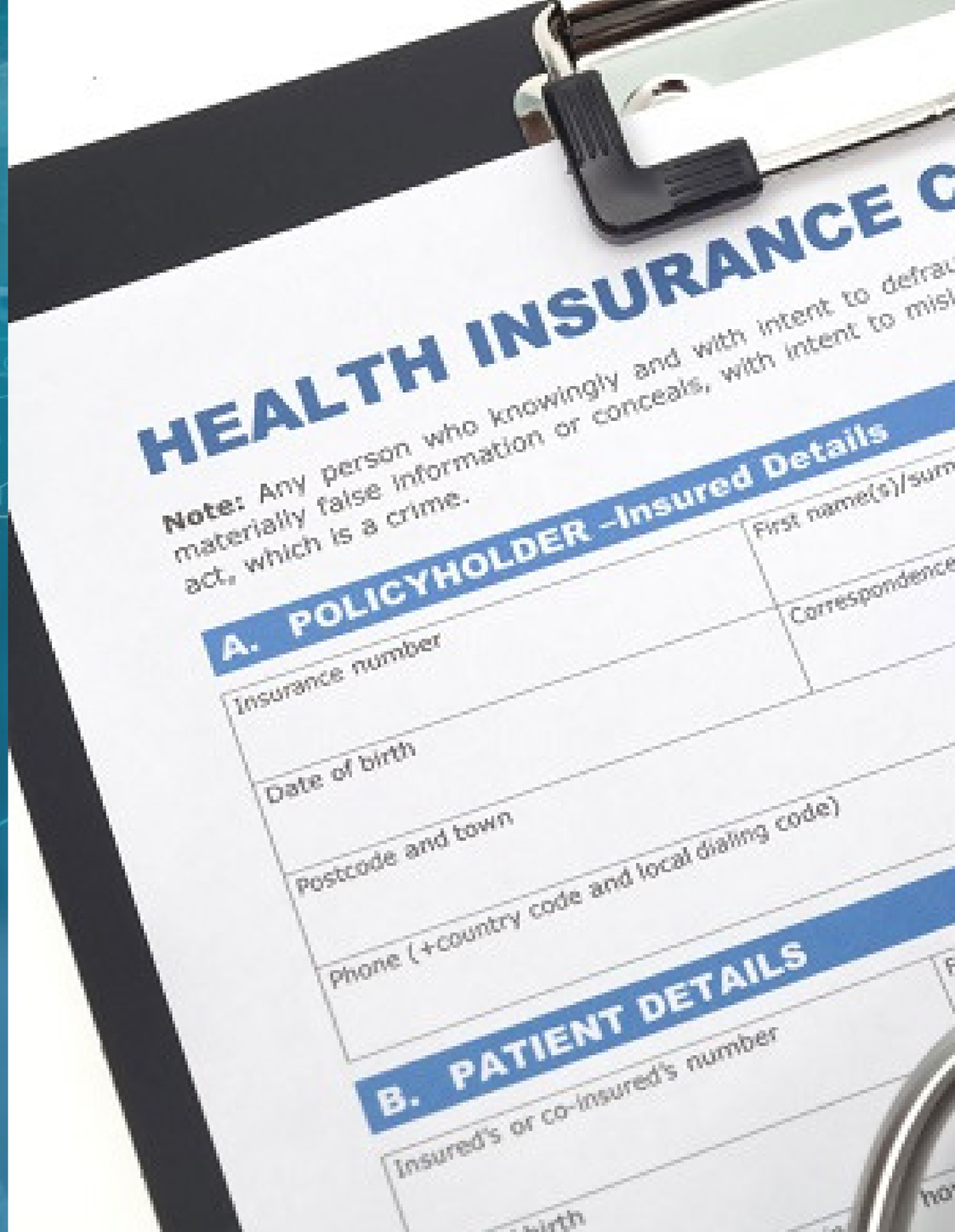
Through extensive training and evaluation, our model achieves a high accuracy rate of 90% in predicting fraudulent activities using the Random forest model .

90%

prediction accuracy

LIMITATIONS

- Data Quality and Availability
- Evolving Fraud Techniques
- Limited Historical Data
- Privacy and Legal Considerations:
- False Positives and False Negatives
- Resource Constraints:
- Human Error and Bias
- Collaboration and Data Sharing:



CONCLUSION

In conclusion, the implementation of an accutate and precise healthcare provider fraud detection project in the Kenyan system holds immense potential to address the prevalent fraud issues and promote integrity within the healthcare industry. With Kenya experiencing significant challenges related to healthcare fraud, this project serves as a vital step towards ensuring transparency, accountability, and financial sustainability

RECOMMENDATIONS

- Conduct Training and Awareness Programs
- Enhance Data Quality to minimize human error and bias
- Increase Historical Data in digital form
- Foster Collaboration and Data Sharing
- Optimize Resource Allocation

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Project repository *Link*


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Thank you!