Machine Learning Based fraud detection system

Team Details

Vaibhavi Meshram (Team Captain) email: vaibhavi.meshram@cumminscollege.in

My name is Vaibhavi Meshram and I am a fourth year student at Cummins College of Engineering for Women, Pune. I am an enthusiastic coder and web developer. I also take interest in the AI domain, having worked on many projects and taken part in many competitions.I am also pursuing an Honors degree in Data Science in addition to my Engineering degree. I aspire to work in a multinational firm where I can use my skills to contribute to the exciting technological advances.

Srija Gubbala email:srija.gubbala@cumminscollege.in

I am a hardworking and eager Student in MKSSS's Cummins College Pune, also pursuing Honors Degree in Data Science.I am currently working on a web development project**.**I am looking to use my strong logical and analytical skills to build my career.

My recent achievement is securing 2nd place in Code n' Conquer 2.0 Hackathon. Programming Languages known : C ,C++, Core JAVA, HTML , CSS and JavaScript.I aspire to use my good communication ability to convey innovative ideas to diverse audiences of varying technical expertise.

Shivani Patil email: shivani.sanjeev.patil@cumminscollege.in

My name is Shivani Patil and I am a Fourth year E&TC student at Cummins College of Engineering for Women,Pune.I am currently working as a Software Development Intern at WhiteCode Technologies wherein I hone my Web development skills.I am skilled in HTML,CSS,Wordpress,C++ , machine learning and deep learning domains. I am on a constant lookout to learn new skills.I have made many projects and participated in many competitions that showcase an array of skills.

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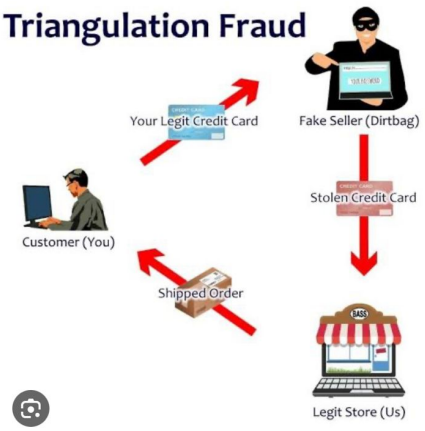
ABSTRACT

Theme Chosen: Machine learning-based fraud detection system.

Idea: Triangular Fraud Detection using Decision Trees.

Triangulation fraud is a type of online scam where fraudsters use an intermediary to receive and forward stolen goods or merchandise purchased with stolen credit card information.
Triangulation fraud, on the other hand, is a recognized type of online fraud that exploits vulnerabilities in e-commerce and highlights the importance of fraud prevention and detection measures in the retail sector.The objective is to detect triangular fraud so that credit card firms' consumers are not charged for products they did not purchase.



High–level Architecture:

- The model employed must be simple and fast enough to detect the abnormality and label the transaction as fraudulent as soon as possible .The dimensionality of the data might be decreased to safeguard the user's privacy.Thus,we will be using a decision tree to build our model.
- Based on fraud detection, the decision tree will have at most two stages. First is to build a decision tree using the training data provided, and then to use decision rules to classify incoming transactions.
- Decision trees typically employ iteration to solve sub-problems by breaking a complicated problem into several simple ones.

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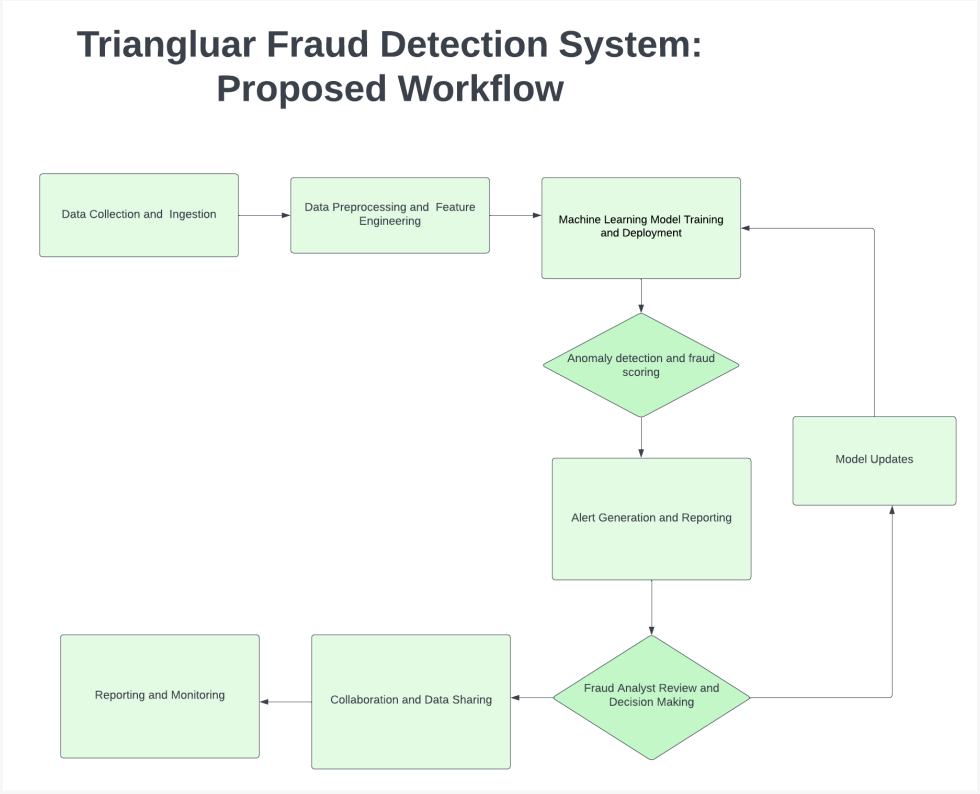
Implementation plan:



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LIBRARIES USED

1. Numpy
2. Matplotlib
3. Pandas
4. Seaborn
5. Sklearn

GITHUB REPOSITORY

https://github.com/team-18ssv/Team--18-Triangulation-Fraud