

Ideation Phase


Brainstorm & Idea Prioritization Template

Date	18 October 2023
Team ID	Team-592699
Project Name	Project – Online payment fraud detection using ML
Maximum Marks	4 Marks

Online Payments Fraud Detection Using ML




The growth in internet and e-commerce appears to involve the use of online credit/debit card transactions. The increase in the use of credit / debit cards is causing an increase in fraud. The frauds can be detected through various approaches, yet they lag in their accuracy and its own specific drawbacks. If there are any changes in the conduct of the transaction, the frauds are predicted and taken for further process. Due to large amount of data credit / debit card fraud detection problem is rectified by the proposed method We will be using classification algorithms such as Decision tree, Random forest, svm, and Extra tree classifier, xgboost Classifier. We will train and test the data with these algorithms. From this the best model is selected and saved in pickle format. We will be doing flask integration and IBM deployment.


Step-1: Team Gathering, Collaboration and Select the Problem Statement




Brainstorm & idea prioritization


Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

 10 minutes to prepare
 1 hour to collaborate
 2-8 people recommended


 **Before you collaborate**

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.


 10 minutes

 **Team gathering**

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.


 **Set the goal**

Think about the problem you'll be focusing on solving in the brainstorming session.


 **Learn how to use the facilitation tools**

Use the Facilitation Superpowers to run a happy and productive session.

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 **Define your problem statement**







What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

 5 minutes

PROBLEM

The surge in online credit/debit card transactions, driven by the growth of e-commerce, has also led to an increase in fraudulent activities. Current fraud detection methods suffer from accuracy and operational limitations. Our solution, employing classification algorithms such as Decision Trees, Random Forest, SVM, Extra Tree Classifier, and XGBoost, aims to address these issues. By training and testing these models on substantial datasets, we select the most effective one, saving it in a pickle format for convenience. We'll further enhance user access by integrating this solution with Flask and deploying it on IBM Cloud, ultimately offering a precise and user-friendly remedy for the credit/debit card fraud detection problem in the ever-evolving digital landscape.

**Key rules of brainstorming**
to run an smooth and productive session

-  Stay in topic.
-  Encourage wild ideas.
-  Defer judgment.
-  Listen to others.
-  Go for volume.
-  If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping

2 Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Jyoshitha

Multi-Layered Authentication by otp, password, biometric, two factor authentication etc

Real-Time Transaction Monitoring by analyzing transaction patterns and triggering alerts for any unusual or suspicious activities

geolocation data for real-time user location verification to identify and prevent potentially fraudulent transactions originating from remote or unusual locations

Develop educational content to inform users about the risks of online fraud and guide them on best practices for secure transactions

Jyothika

Implement machine learning algorithms to spot unusual user actions like big or irregular transactions, promoting extra security actions for protection

Design user-friendly interfaces that make it easy for customers to monitor and control their transaction security preferences

Establish a dedicated customer support team to handle fraud-related inquiries and assist users with concerns or suspicious activities

Partner with banks and financial institutions to share data and collaborate on enhancing fraud detection and prevention

3 Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

Authentication and Verification:

- Multi-Layered Authentication: Combining knowledge, possession, and biometric factors for enhanced security.
- Geographic Authentication: Using geolocation for user location verification.

Real-Time Monitoring and Alerts:

Real-Time Transaction Monitoring: Continuous analysis of transactions and alerting for anomalies

Advanced Security Measures:

Machine Learning Anomalies: Detecting unusual behavior, especially large transactions, and triggering additional safeguards.

- Behavioral Biometrics: Continuous user authentication and fraud detection through behavior analysis.

User Involvement and Feedback:

Community Feedback Loop: Allowing users to report potentially fraudulent transactions for system improvement.

- User Education: Developing educational content for user awareness and secure practices.

Collaboration and Support:

Collaboration with Financial Institutions: Partnering with banks to enhance fraud detection and prevention.

- Enhanced AI Chatbots: Implementing advanced chatbots for real-time user support.
- User-Friendly Interfaces: Designing intuitive interfaces for user control over security preferences.

Step-3: Idea Prioritization

4 Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

Importance

Rank each idea from most critical and important to least critical and important. Rank each idea from most feasible and easy to implement to least feasible and difficult to implement.

Feasibility

Rank each idea from most feasible and easy to implement to least feasible and difficult to implement.

Advanced Security Measures

Authentication and verification

Real-Time Monitoring and Alerts

Collaboration and support

User Involvement and feedback

After you collaborate

You can export this mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

Share the mural
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.

Export the mural
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

Strategy blueprint
Define the components of a new idea or strategy.
[Open the template](#)

Customer experience journey map
Understand customer needs, motivations, and obstacles for an experience.
[Open the template](#)

Strengths, weaknesses, opportunities & threats
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
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