

## Online Payments Fraud Detection Using ML

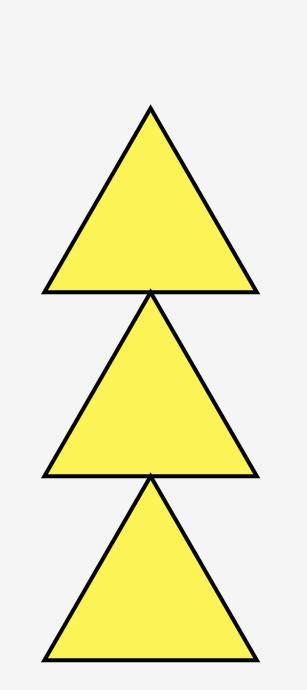
The growth in internet and e-commerce appears to involve the use of online credit/debit card transactions.

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.

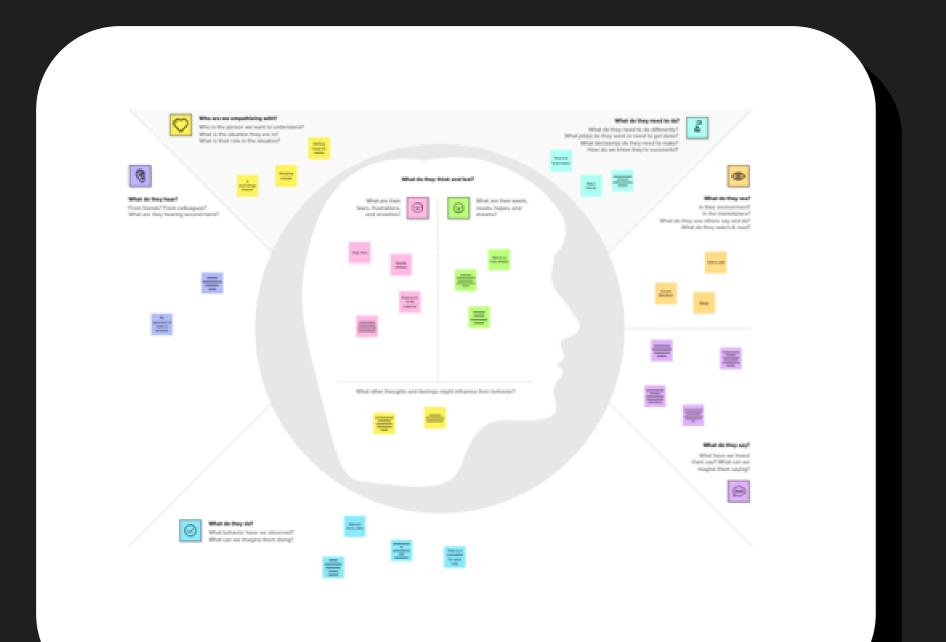
If there are any changes in the conduct of the transaction, the frauds are predicted and taken for further process. Due to large amount of data credit / debit card fraud detection problem is rectified by the proposed method.

Originally created by Dave Gray at





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Need some

inspiration?

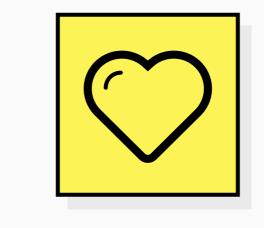
of this template to

kickstart your work.

See a finished version

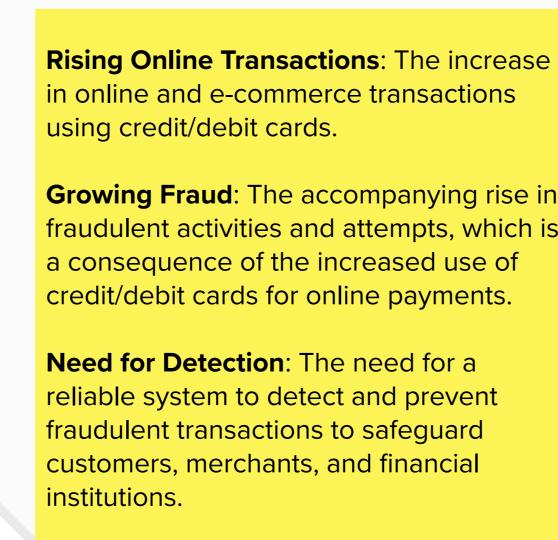
# Develop shared understanding and empathy

Stakeholders involved in online payment transactions are navigating a complex landscape where security and fraud prevention are paramount. Their behaviors, wants, and concerns are influenced by a combination of factors as **Behavior**, **Wants and Needs**, **Hopes** and Dreams & Thoughts and Feelings. These factors collectively shape their actions and strategies in response to the challenges and opportunities presented by online payment transactions, reflecting a dynamic and ever-evolving industry.



### WHO are we empathizing with?

Who is the person we want to understand?



What is the situation they are in?

Rising Online Transactions: The increase Growing Fraud: The accompanying rise in fraudulent activities and attempts, which is

### What do they HEAR?

What are they hearing others say? What are they hearing from friends? What are they hearing from colleagues? What are they hearing second-hand?

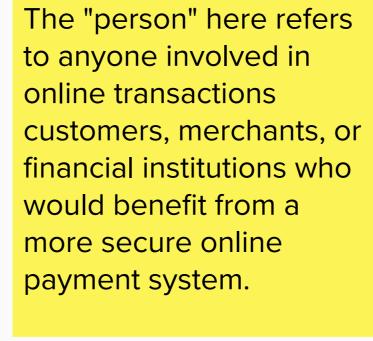
They hear about best practices in online payment security, such as encryption methods, secure payment gateways, and authentication techniques from industry experts and peers. Emerging Threats:
Stakeholders often receive information about new and evolving fraud tactics and cybersecurity threats. They learn about emerging trends in online payment fraud from sources like cybersecurity experts and industry reports. They hear about changes in regulations and compliance requirements related to online payments and data security fron industry associations, government agencies, and legal experts. Industry players share case studies and success stories on how they have effectively tackled online payment fraud, offering insights into successful strategies.

### **Security Practices**: Colleagues share information about

security best practices, such as secure payment gateways, encryption methods, and multi-factor authentication.

**Fraud Trends**: Colleagues discuss and share insights about emerging fraud trends, including common tactics used by fraudsters and methods to detect and prevent fraud.

Insights into the strategies adopted by competitors in the industry to enhance online payment security and customer News about collaborative initiatives among financial institutions, merchants, and industry associations to share information and combat fraud collectively. **Educational Resources**: Information about training programs, webinars, and resources offered by industry associations and organizations on online payment security and fraud Market analyses and insights on the growth of ecommerce, mobile payments, and digital wallets that impact the online payment landscape.



What do they THINK and FEEL?

What other thoughts and feelings might influence their behavior?

The level of trust and confidence they have in

online payment systems, merchants, and financial institutions can greatly influence their

willingness to engage in online transactions.

Fears of fraud, data breaches, and financial loss

an make individuals and organizations more

cautious in their online payment behavior.

Balancing the desire for convenience in online

payments with the need for robust security

measures often leads to trade-offs and

Trust and Confidence:

Fear and Anxiety:

Convenience vs. Security:

( )

**PAINS** 

Trust Issues: Anxieties about

platforms with their financial

Lack of Control: Frustration

over the limited control they

have in preventing fraud.

information.

Reputation and Brand Image:

customer trust and loyalty.

Regulatory Compliance:

**Cost Considerations:** 

Businesses are concerned about their

reputation and brand image, as incide

of fraud or data breaches can harm

The cost of implementing security

measures and managing chargebac

can influence behavior, especially for

Adherence to regulations and data

protection laws is a significant driver

legal and financial consequences.

behavior, as non-compliance can result

trusting online merchants and

What are their fears,

frustrations, and anxieties?

**Unauthorized Transactions**: Fear of

unauthorized or fraudulent transactions

on their credit/debit cards, resulting in

Data Breaches: Concerns about their

exposed in a data breach, potentially

personal and financial data being

Complex Security: Frustration with

make online transactions less

complex security measures that can

leading to identity theft.

financial losses.

convenient.

### Enhanced Vigilance: Customers may need to be more vigilant about reviewing their card statements and reporting a suspicious transactions promptly.

**GAINS** 

financial assets.

Swift Resolution: They need

swift and hassle-free

resolution of any issues

fraudulent transactions.

**Privacy**: Customers want

their privacy to be respected

and their personal data kept

related to unauthorized or

What are their wants,

Security: Customers want their online

payments to be secure and free from

Convenience: They hope for convenient

complete trust in online merchants and

experiences without complex security

Trust: Customers dream of having

payment platforms to protect their

personal and financial information.

fraudulent activity to protect their

and seamless online payment

needs, hopes, and dreams?

Use of Secure Platforms: Choosing to do business with online merchants and platforms that have robust security measures in place.

Implementing Security Measures: Learning and implementing personal security measures, such as using strong and unique passwords and enabling twoto their bank.

and convenient for their needs.

### What do they need to DO?

What job(s) do they want or need to get done? What decision(s) do they need to make?

> **Monitoring Transactions:** Customers should regularly monitor their card statements and report any suspicious transactions

Selecting Payment Methods: Customers may choose between different payment methods and decide which one is most secure

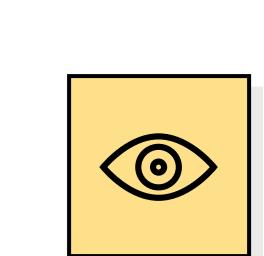
**Industry News and Publications:** They may follow industry-specific news websites journals, and publications that cover topics like online payments, cybersecurity, and fraud

Keeping an eye on government and regulator updates related to online payments and data security, such as new laws or guidelines affecting

**Cybersecurity Reports:** Reviewing cybersecurity reports and studies ublished by organizations and security firms to understand the latest threats and vulnerabilities

**Evolution of E-commerce**: The marketplace is more businesses and consumers engaging in online opportunities and challenges for all stakeholders **Increasing Payment Options**: Customers have a wide range of payment options, including credit/ debit cards, digital wallets, and various online payment gateways. This diversity of payment methods offers convenience but also creates more avenues for potential fraud. Rising Cybersecurity Threats: With the increasing use of technology, the marketplace has seen a rise in cybersecurity threats. Fraudsters are becoming more sophisticated in their tactics, making it necessary to

adapt fraud detection methods accordingly.



### What do they SEE?

What do they see in the marketplace? What are they watching and reading?

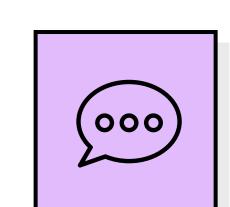
 "I'm worried about the security of my credit card information when shopping online."

 "I've had unauthorized charges on my card, and it was a hassle to resolve."

strong security features." "I wish online stores would provide

"I prefer to use payment methods with

better information on their security measures."



### What do they SAY?

What have we heard them say? What can we magine them saying?

 Secure Account Management: Customers often manage their online accounts with care, using strong passwords and enabling security features like twofactor authentication.

 Regularly Monitor Transactions: They review their credit/debit card statements and online transaction history regularly to spot any unauthorized or suspicious activity.

• Use Reputable Merchants: Customers tend to shop from reputable online merchants with established security measures and positive reviews. Report Suspicious Transactions: If they notice suspicious transactions, they promptly report them to

their financial institution for investigation and

detection systems to protect transactions. **Shift Toward Real-Time Fraud Detection:** Financial institutions are moving away from batch processing to real-time fraud detection, enabling immediate action upon detecting suspicious transactions.

**Increased Emphasis on Security:** 

Adoption of Multi-Layered Security:

Merchants and financial institutions are

two-factor authentication.

Customers are increasingly cautious about the

security of their online transactions and are often

willing to adopt additional security measures like

implementing multi-layered security approaches

that include encryption, tokenization, and fraud

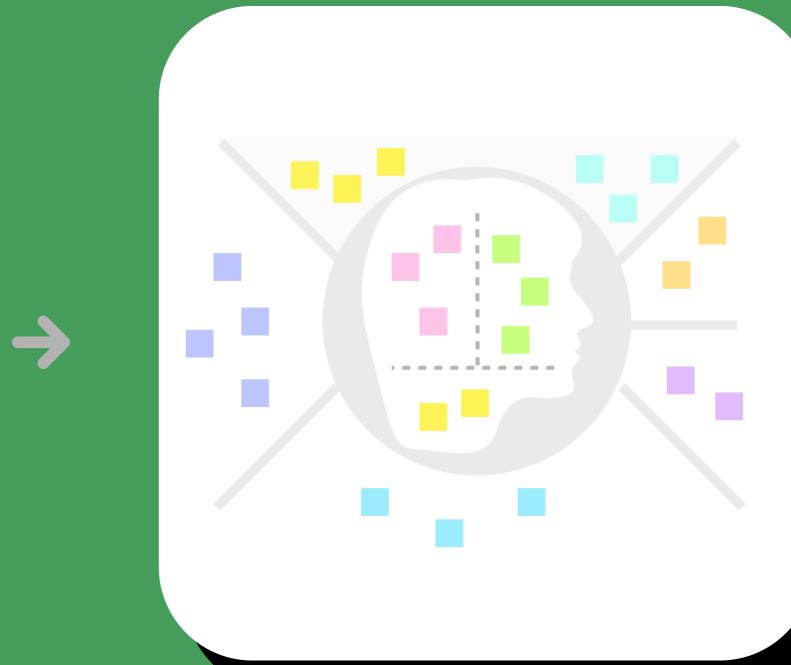
 Actively monitoring their credit card statements and transactions for any signs of unauthorized or fraudulent activity.

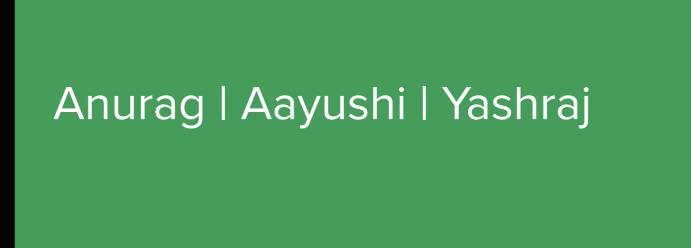
 Using secure and reputable online marketplaces and e-commerce websites for their shopping needs.

Adopting two-factor authentication (2FA)

and other security measures to enhance the safety of their online accounts. Providing feedback and reviews about their online payment experiences to raise awareness and share insights with others.









What do they DO?

What do they do today?

What behavior have we observed?

What can we imagine them doing?

