



# Loyalty Card Fraud Risk – Dark Web

.....

# History & Background



## Independent firm with Entrepreneurial Mindset

- 90+ year history
- Offices in Toronto, Montreal, and Chicago
- 500 total professionals, with 40+ practitioners specialized in Risk



## Thought Leadership

- Risk practice has made a significant impact over past 4+ years
  - Experience working with technology companies
  - Seasoned team with former Big 4 leaders
- Currently providing high tech clients with audit/compliance services



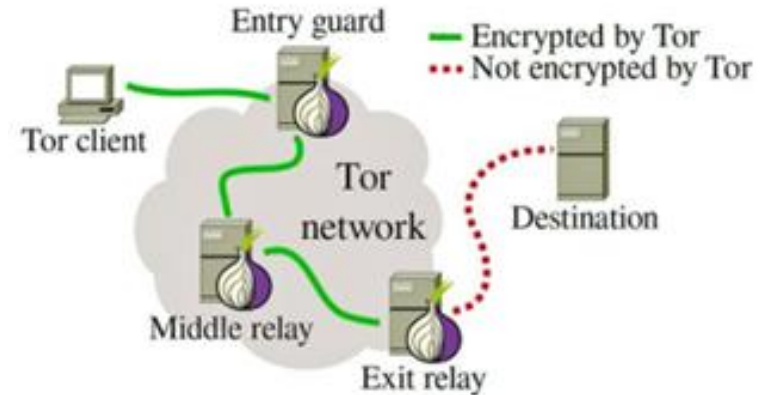
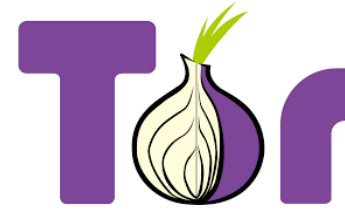
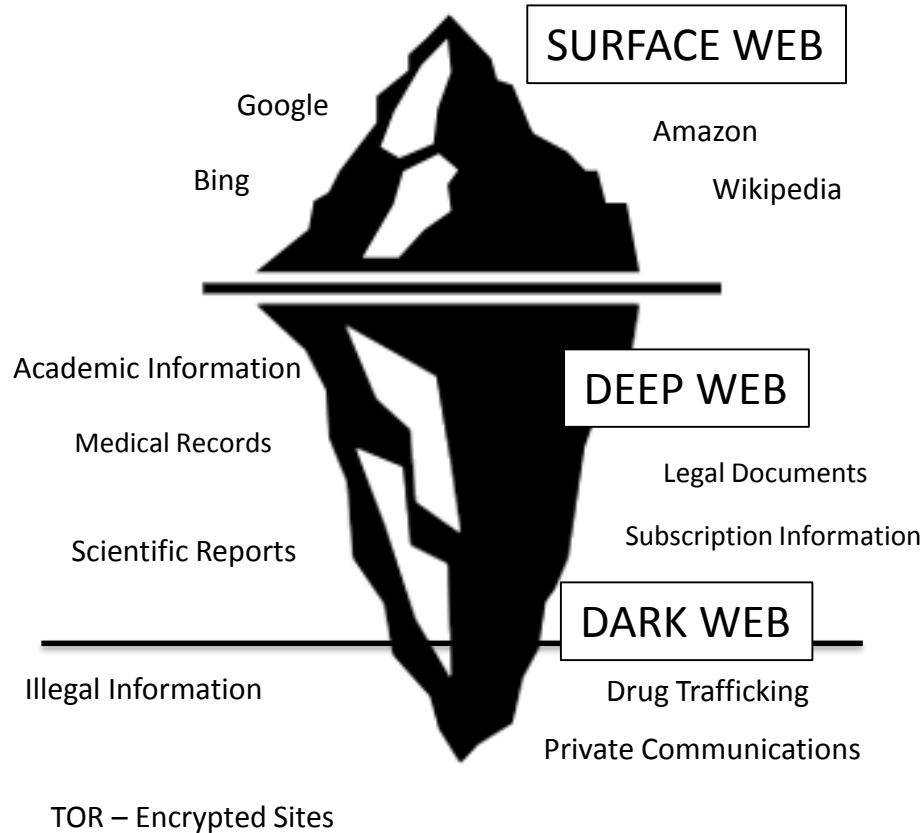
**Will Xiang** (<https://www.linkedin.com/in/willxiang>)

Vice President

- CPA, CA, CITP, CAMS
- Focused on Cyber Security

# What is the Dark Web?

RICHTER



# How to access the Dark Web?

RICHTER

1) Download and install TOR Browser



2) Get a VPN and use it

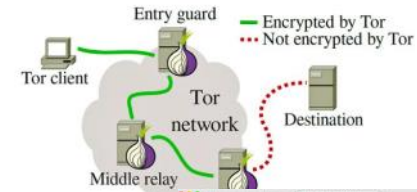


3) Use Google (regular web) to search what .onion sites you want to go to

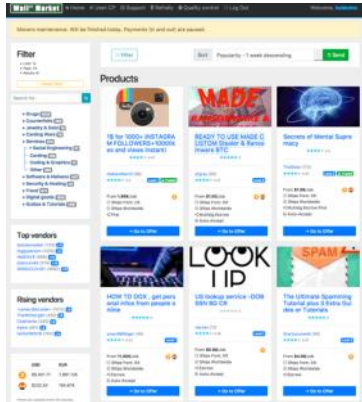
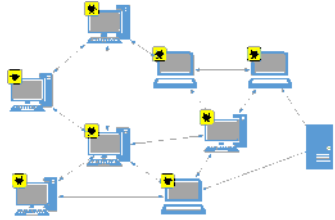
Name	URL	Description	Goods/Services	Need Registration	Need Login	Status	Category	Access
#1 Dream Market	<a href="https://dreammarket.onion/">https://dreammarket.onion/</a>	Dream Market is a marketplace for Drugs, Digital Goods and Other Services.	Drugs, Digital Goods	No	No	Online	Marketplace	Drugs
#2 Silk Road 3	<a href="https://silkroad3.onion/">https://silkroad3.onion/</a>	Silk Road 3 is the Tor's most well-known marketplace. Products are sorted in categories. They sell Cannabis, Stimulants, Ecstasy, Opoids, Benzos, Dissociatives, Psychodelics, Prescription, and Other products.	Drugs, Weapons	No	No	Online	Marketplace	Drugs
#3 Hydra	<a href="http://hydra.market/">http://hydra.market/</a>	Hydra is a marketplace for Drugs sorted in categories. There are a lot of Cannabis, Stimulants, Ecstasy, Psychodelics, Opoids, Benzos, Dissociatives and Depressants.	Drugs	No	No	Online	Marketplace	Drugs
#4 Pink / Tachikaze Market	<a href="https://tachikaze.onion/">https://tachikaze.onion/</a>	Tachikaze is a marketplace for Drugs sorted in categories. Tachikaze is a marketplace for Drugs sorted in categories. Tachikaze is a marketplace for Drugs sorted in categories.	Drugs, Digital Goods	No	No	Online	Marketplace	Drugs
#5 WallStreet Market	<a href="https://wallstreetmarket.onion/">https://wallstreetmarket.onion/</a>	WallStreet Market is one of the newest markets on the darknet and is particularly specialized in digital goods.	Drugs, Digital Goods	No	No	Online	Marketplace	Drugs
333	<a href="https://333market.onion/">https://333market.onion/</a>	Only old users have access to join this website for cash	-	No	No	Online	Uncategorized	-
333	<a href="https://333market.onion/">https://333market.onion/</a>	Only old users have access to join this website for cash	-	No	No	Online	Uncategorized	-

Dark Web News is an example with over 7800 links

4) Navigate through TOR browser to the Dark Web destination of your choice



5) Many marketplaces or forums you will need to register with. Don't use your actual name or email.



# Is my information being sold on the Dark Web?

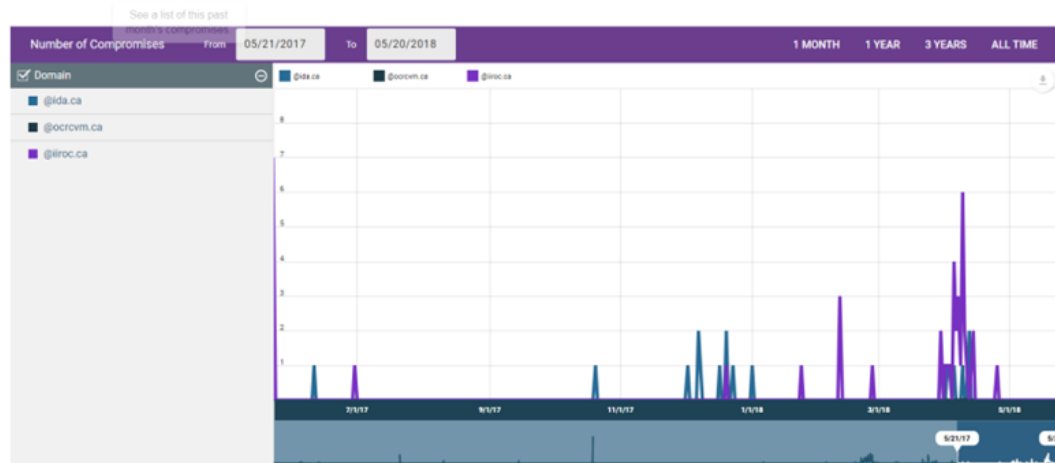
RICHTER

## Cyber Threat Overview

1  
Compromises Past Month

42  
Compromises Past 6 Months

53  
Compromises Past Year



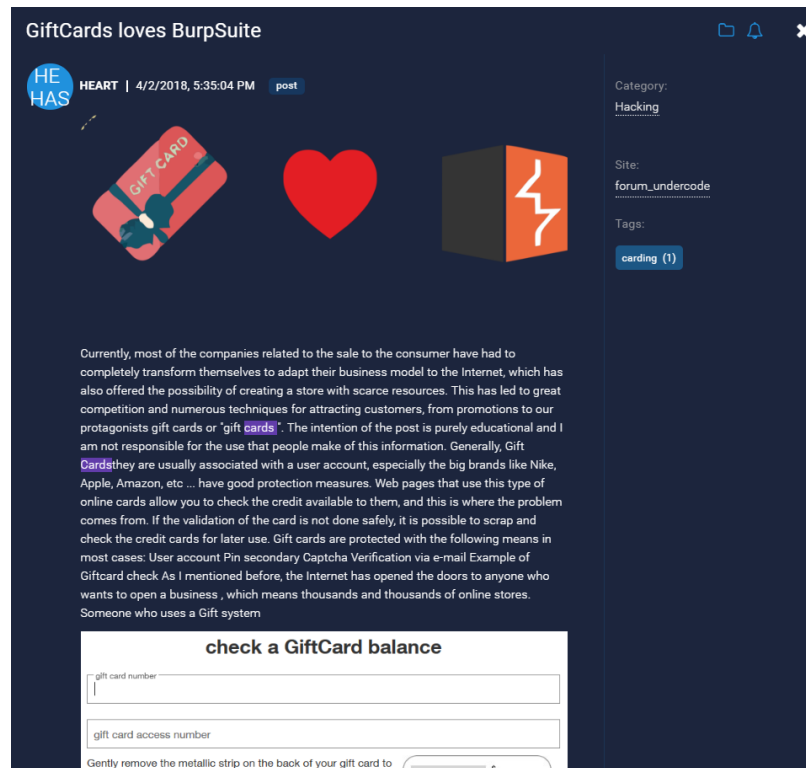
Date Found	Email	Password Hit	Source	Type	Website	PII Hit
04/25/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	
03/23/18			id theft forum	Not Disclos...	Not Disclos...	

# Gift Card Fraud

Very similar attacks to those that are perpetrated against online banking.

Using tools like BurpSuite, hackers are able to find web application vulnerabilities through functions like check gift card balance utilities.

Many sites are still not using secondary validation measures, like account pins, captcha or email.

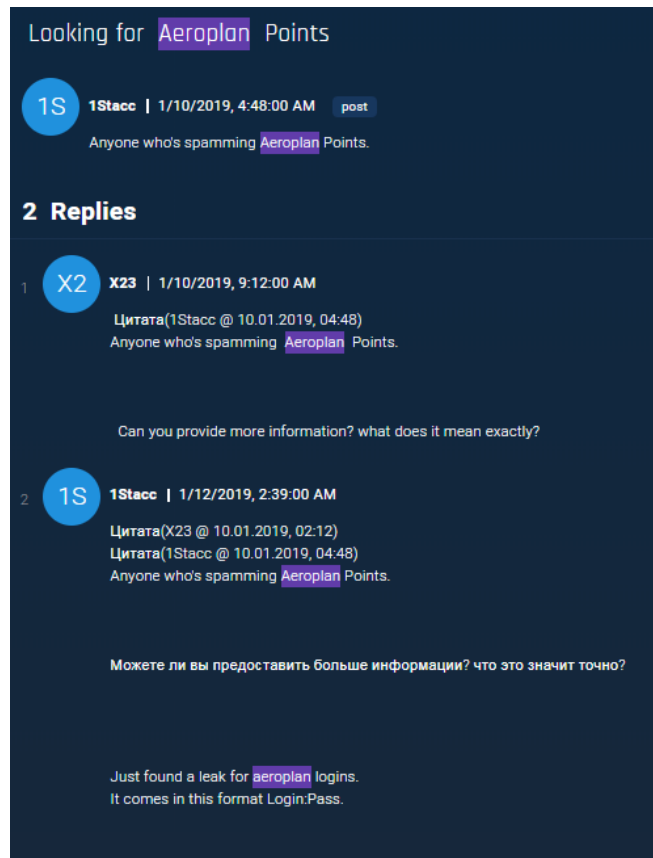


# Loyalty Card Fraud

A hacker gets a hold of the consumers loyalty account (as illustrated on left).

They sell the login information to other fraudsters who in turn redeem an e-gift card.

They use a service like cardcash.com, or cardswap.ca to get cash.



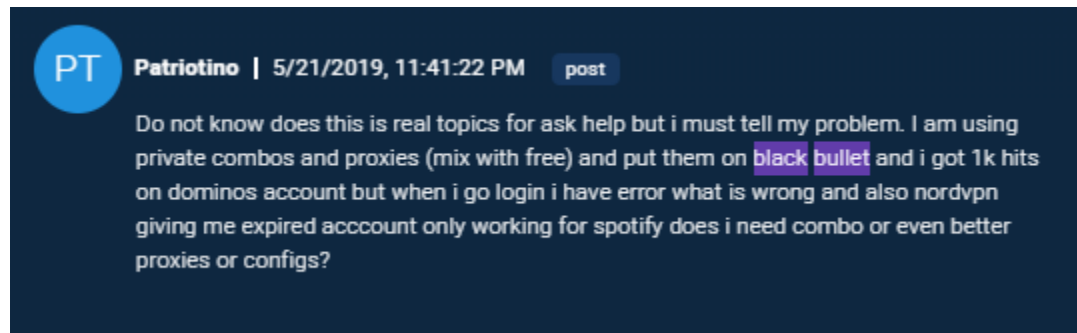
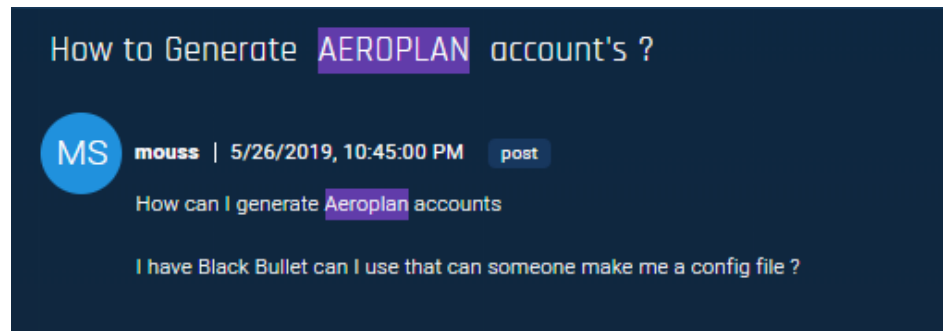


# Loyalty Card Fraud

RICHTER

A hacker will use brute force tools like Black Bullet to get access to Aeroplan accounts.

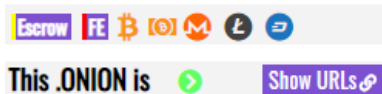
And Dominos Pizza account, because hackers get hungry after booking flights.



# Loyalty Card Fraud

This fraudster is selling a technique to run up unlimited PC Optimum points.

If it doesn't work, no worries, there is a refund policy and payment will be in escrow.



## About Nightmare Market:

Nightmare Market is an online darknet market founded in late 2018. The marketplace sells a variety of content, including drugs, stolen data, and counterfeit consumer goods, all using the Bitcoin, Bitcoin Cash, Monero, Litecoin, Dash, and Zcash cryptocurrencies. Nightmare Market currently supports escrow, with disputes handled by staff. The market also has accompanying forums, hosted on a different URL, where buyers, vendors, and other members of the community can interact.

## TUTORIAL PC OPTIMUM 100\$ GLITCH

MA

MAKEKOTA | 4/11/2019, 10:05:19 AM product

Features:

Product class: Digital Product

Quantity left: Unlimited

Views: 2

Visibility: Public

Ends In: Never

Payment: Escrow

Unit price: USD 103 | 0.02020876 BTC | 1.30462318 LTC

Product Description:

TUTORIAL TO GENERATE PC OPTIMUM POINTS

GET UNLIMITED PC OPTIMUM POINTS

Tags: canada, bank, login, drop, wire, transfer, cibc, rbc, desjardins, money, fast, tutorial, id, template, visa, mastercard, amex, discovery, quebec, ontario, nova scotia, manitoba

Refund Policy:

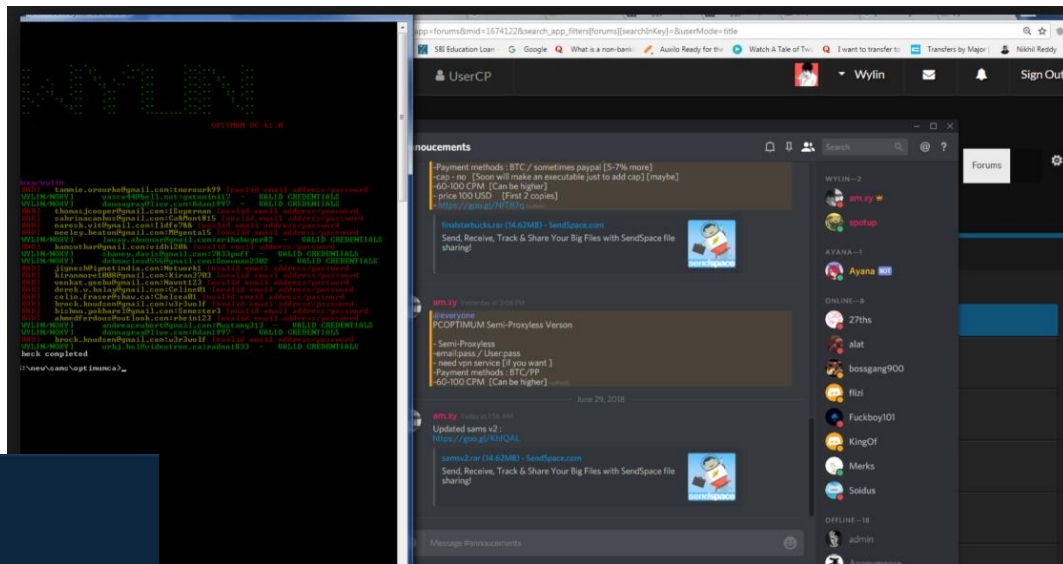
REFUND

Terms &amp; Conditions:

There is no Terms &amp; Conditions for this product.

# Loyalty Card Fraud

This is a buyer looking to purchase compromised PC Optimum accounts. They can validate balances on specially developed proxies [Discord] before they buy.



WTB: PC OPTIMUM ACCOUNTS

KD

kidgoku | 4/10/2019, 7:37:53 AM post

Looking to purchase any and all values over 10,000.

Please contact me via discord: \*suf#6460\*

# Loyalty Card Fraud

RICHTER

A seller on a dark web market [dreammarket] selling an airmiles account with 400 point minimum for \$32.65

The screenshot shows a product listing on a dark web market. The header at the top reads "AIRMILES.CA ACCOUNT TRAVEL CAR RENTAL AND MORE AUT" in a light blue font. On the right side of the header are three icons: a speech bubble, a folder, and a bell. Below the header, the seller's name "LIBERTYRESERVE" is displayed next to a blue circular profile picture containing the letters "LI". To the right of the name is the timestamp "2/6/2019, 7:37:06 PM" and a blue button labeled "product". The main text of the listing reads: "HI YOU'RE PURCHASING 1 FRESH AIRMILES ACCOUNT WITH 400 POINT MINIMUM TO THE ACCOUNT YOU'LL RECEIVE THE ACCOUNT IN THIS FORMAT:". Below this, there are two lines of text: "EMAIL PASSWORD" and "BALANCE". Further down, it says "FE YOUR ORDERS TOO MANY PEOPLE ARE NOT FINALIZING !!!!!". At the bottom, it states "ALWAYS FRESH ACCOUNT." and "AUTO DELIVERY IF NOT IN STOCK I DELIVER WITHIN THE SAME DAY ENJOY THE FIRE.". On the right side of the listing, there are three sections: "Category:" with "Digital Goods" and a link to "Accounts"; "Site:" with "market\_dreammarket"; and "Price:" with "\$32.656". There is also a "Tags:" section at the bottom right.

AIRMILES.CA ACCOUNT TRAVEL CAR RENTAL AND MORE AUT

LI LIBERTYRESERVE | 2/6/2019, 7:37:06 PM product

HI YOU'RE PURCHASING 1 FRESH AIRMILES ACCOUNT WITH 400 POINT MINIMUM TO THE ACCOUNT YOU'LL RECEIVE THE ACCOUNT IN THIS FORMAT:

EMAIL PASSWORD  
BALANCE

FE YOUR ORDERS TOO MANY PEOPLE ARE NOT FINALIZING !!!!!

ALWAYS FRESH ACCOUNT.  
AUTO DELIVERY IF NOT IN STOCK I DELIVER WITHIN THE SAME DAY ENJOY THE FIRE.

Category:  
Digital Goods > Accounts

Site:  
market\_dreammarket

Price:  
\$32.656

Tags:

# Loyalty Card Fraud

A seller on a dark web market named DreamMarket, selling hacked GOL Airline accounts that will allow the redemption of points for many other airlines, including Air Canada.

## Redeem Emirates Flight (GOL Airline Account)

DP

dopedge | 10/3/2017, 4:50:01 AM product

This purchase is for hacked miles account with appropriate package. Email login access will be provided on first-come first-served basis (no guarantee), please do not tell me you want the email access or your order will be cancelled.

GOL airlines is the new gem! WHY? (you can do a test search at [www.smiles.com.br](http://www.smiles.com.br))

Because it can redeem flights from many "hard to get (rare)" airlines:

+++++

AIRFRANCE/KLM (rare)

QATAR AIRWAYS (rare)

Aerolineas Argentinas (rare)

Etihad Airways (rare)

TAP (rare)

AEROMEXICO (rare)

Emirates (rare)

KOREAN AIR (rare)

+++++

Delta

Alitalia

CopaAirlines

AIR CANADA

+++++



## Risk

- Loyalty cards are becoming more popular as a target for fraud as credit card fraud is becoming more difficult. (Jump from 4% - 11% year over year by 2017<sup>1</sup>)
  - Perishable good (i.e. Airplane tickets) has a shorter detection window
  - User awareness relatively low
  - Transactions can be easily anonymous
- Reliance on Convenience Increases, for example:
  - 40% of global travel bookings are made online
  - 1/3 of millennials prefer to book travel last minute

Tackling Trust vs Convenience

<sup>1</sup>Source: <https://blog.siftscience.com/2018/loyalty-program-fraud/>





*Compromises will affect the core value proposition in the loyalty or gift card model*



- **Expectations:** 93% of customers expect loyalty programs to have fraud detections in place
- **Relationship Killers:** 17% of customers will likely end the relationship with the loyalty program after breach
- **Grapevine Effect:** 37% of customers will tell, on average, 24 other users

# What can be done?

Reliance on rule-based monitoring programs

- Negate individual behavior patterns
- Predictability countered by malicious actors

Reliance on manual intervention

- Sample based approach will be difficult to detect time sensitive fraud

## Monitoring

- Proactive monitoring of actors

## New Technologies

- Machine Learning
- AI







**Discussion**

Thank You

