Info 6215: Summer 2-2020

**W3-Team: Project Proposal**

Team Number and Name: Project 7 (PICCSA)

List all students who actively worked on this Assignment:

1. Name: Aaradhy Sharma
2. Name: Khajan Joshi
3. Name: Jingyi Li
4. Name Sandeep Wishwala

**Project Title (Descriptive and Short):**

**PICCSA: Push Integrated Credit Cards Security App**

1. **Vision** (use Geoffrey Moore’s positioning statement from Crossing the Chasm)

For credit card users in the U.S.A. who must protect themselves from various credit card frauds, our product is a new security app that sends push notifications only if the amount is above a certain threshold or if there are many small transactions within a short time period, in order to prevent potential credit card frauds. Unlike OTP (one-time password), we offer a more simple and concise approach that would satisfy daily users.

1. **What is the Problem?** Be specific.

With over $24.6 Billion lost due to payment thefts in 2018, the United States, at 38.6% of the loss, is the most vulnerable country. Identity theft fraud is a big problem worldwide and credit card fraud was ranked as the number one type of Identity theft fraud.

Most card holders wish to transact with just a swipe and without any kind of authentication. This puts them at a great risk of being a victim of credit card fraud, as a lost card would mean that anyone with its possession can use it at will. Even with the late introduction of EMV chips for credit cards in the USA, credit card frauds are easy for fraudsters to do, with techniques such as skimming and social engineering fraud.

Two Factor Authentication or 2FA is now commonly being used by tech. giants such as Google, Amazon and Facebook to ensure users’ identities are secure. The idea behind 2FA is that just a password/PIN is not enough to confirm someone’s identity. Push notification sent to the users’ mobile device (for user’s approval) is a second form of authentication, which has been proven to be highly secure. But this technique is not adopted by credit card companies.

1. **Existing Solutions?** Be specific.

Currently, the authentication process for US credit card holders is almost non-existent. Sometimes, a signature is required. The solution comes after the fraud has happened. The user raises the complaint to his bank and the bank will then refund his money. This process is hectic and can often take a long time to resolve. For online credit card transactions, the user must add his zip code. And in some cases, the complete billing address correctly. This is also hectic. Our product’s aim is to transact in such a way that there will be no need to go through any such hassles.

1. **Target customer segments?** Be specific.

As per 2019, the number of international students enrolled in US colleges was over one million, which was 5.5% of the total US student body. For the initial phase we plan to cover international students who open bank accounts in the United States. When they start using U.S. credit cards, there is lack of care shown by international students towards their card as previously they had to go through OTP authentication in their home country. For Future, we plan to expand to the entire population of credit card users in the States, of 191 million.

1. **Total Addressable Market (TAM)?** Report as number of users and/or $

In the past year, 44% of all credit card purchases have been made by millennials. (there are approximately 80 million millennials in the U.S.) Furthermore, almost 25% of millennials plan to open a new credit card account by next year. At 191 million card holders, credit cards can be found in over 70% of all American households. In the second quarter of 2019, the total credit card lines in the U.S. grew by 10.5% to $3.83 trillion. This trillion-dollar market is only growing.

1. **References**

1 Credit Card Fraud Statistics, <https://shiftprocessing.com/credit-card-fraud-statistics/>

2 A post about credit cards being made more secure in the USA, <https://www.theverge.com/2018/4/12/17225554/credit-card-signatures-us-ending-companies-pin-emv-chip>

3 Types of payment card fraud, <https://en.wikipedia.org/wiki/Credit_card_fraud>

4 About 2FA, https://www.cnet.com/news/two-factor-authentication-what-you-need-to-know-faq/

5 More about 2FA, <https://medium.com/@Authy/push-authentication-bringing-the-most-secure-method-of-2fa-mainstream-d45aef238cc8>

6 Post about percentage of Americans with credit cards, <https://budgeting.thenest.com/percentage-americans-credit-cards-30856.html>

7 Credit card ownership statistics, <https://www.creditcards.com/credit-card-news/ownership-statistics/>