

Location-Based Credit Cards Offers

Vision Document

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Executive Summary

We aim to help credit card holders to earn the savings that they already deserve. While banks are marketing a variety of credit card offers and consumers are signing up for multiple cards, an average American potentially misses out several hundreds of dollars each year from not using the right credit cards in different transactions. Advanced credit card users report to be spending hours to follow up with card offers. However, we want our users to not spend the time but gain back the savings.

We strive to building the most effortless solution for credit card holders to maximize their card rewards. Our credit card app suggests which credit card to use for the best rewards based on the store our users are in. By matching real-time location and credit card offers, we push notifications to users at the moment when they are shopping in stores. However, alternative products in the current market either 1) require users to go into the app every time they shop 2) performs poorly functionally 3) favor a certain bank's card without telling the customer 4) require users to put in their credit card credentials upfront, which doesn't feel secure for customers.

For our initial release, we will focus on offline credit card rewards with subsequent releases focusing on expanding offline transactions to include store promotions and eventually moving to include online transactions as well.

Business Requirements

Background

There are approximately 1095M credit cards in the U.S. across all types - credit, store etc and approximately 196M customers according to [this survey](#), so on average there are about 5.5 credit cards per customer. As per the [annual survey](#) by TSYS, credit card rewards was the most important factor for over 60% of the people when it came to choosing their credit card.

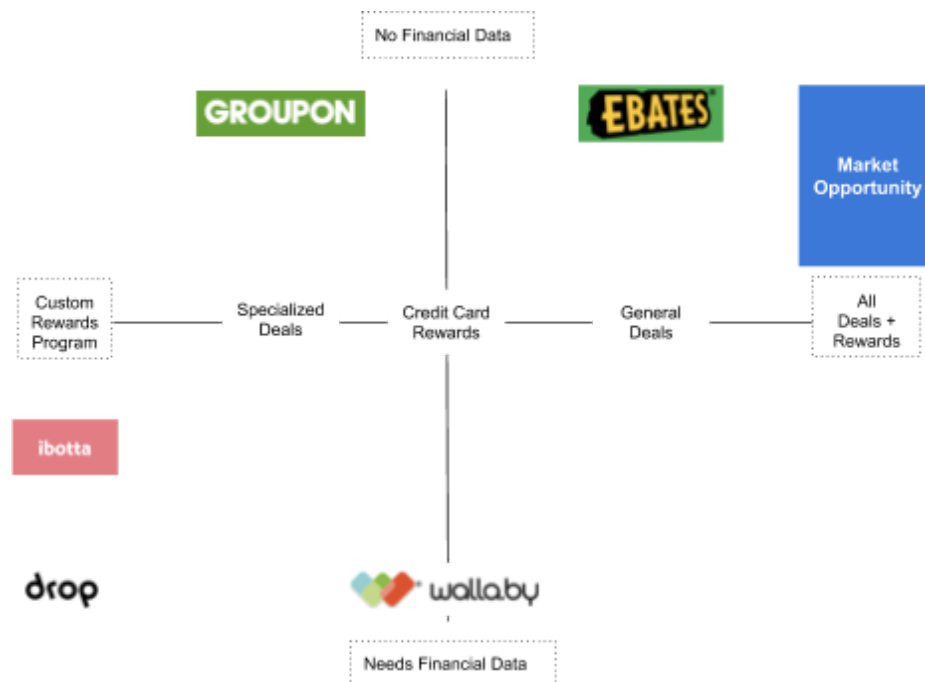
Business Opportunity

Keeping track of various credit card reward programs, in-store deals and discounts or online promotions is messy and rigorously time consuming, discouraging users to maximize their potential rewards benefits and potentially losing out on hundreds of dollars in cashback/savings each year. We think by reducing the friction significantly from this process, we can help customers maximize their rewards and pocket the otherwise wasted benefits.

Current solutions on the market that assist customers with their rewards management require users to add their credit card details on their platform and even then, most of them only provide advice and recommendations on signing up for new credit cards based on their usage patterns without giving any insight on how to maximize those rewards. With these solutions, customers pay with their financial data but get very little benefit in return.

Customer/User or Market Unmet Needs

Based on our research of existing solutions on the market and their feature sets, we discovered that on a high level they could be divided based on their type of reward program and the level of access they need to a user's financial data. We plotted some of the leading solutions below.



Based on the above market landscape, we believe there is an opportunity for a solution that offers not only Credit Card rewards but also provides information about other promotions and deals, aggregated all at one place, with little to no financial data taken from the user.

Business Risks/Challenges

Money management is a sensitive matter to most people and given the recent events targeting financial information of customers at various companies and agencies, earning user's trust that their data is secure when they use this service will be one of the major challenges.

Another potential challenge in terms of technical execution will be aggregating all the deals and discounts and coming up with the most accurate recommendation, personalized to the user for every transaction. Scouting online and offline deals as the platform scales could prove to be a challenge along with forming partnerships with various stores.

Vision of the Solution

Vision Statement

The ultimate goal of the solution is to maximize the rewards and offers for the user based on the preferences.

A location based service uses location to control features and provides information based on the current location of the user. Our location based service provides accurate information about which card to use for maximizing the offers and discounts for the store/place the user is in.

Major Features and Requirements

The solution will be a mobile application for user (iOS and Android). The major features and requirements are :

1. A user will be able to login/signup using either Facebook or by creating his/her own credentials.
2. He/She will be prompted to put in the card(s) the user has, not the card number but only the card type and company(bank) from the list of cards provided by the system. For the initial release, the number of card types we support will be limited.
3. The user will choose the preferences about the push notifications, location sharing, type of stores, spending habits, shopping preferences and genre of restaurants.
4. The user can also choose if s/he wants to get information about offers for cards other than the cards they already have.
5. If the user does not want to share location always, the location will be accessed while using and the notifications will only be pushed when the user decides to open the application and look for information.
6. The user will be notified about the best offers and discounts based on the preferences that he/she entered and on the current location of the user.

Assumptions and Dependencies

For the solution to be implemented the assumptions are as follows :

1. Users are ready to share the location always or while using the application.
2. Users are willing to get push notifications.
3. Users want to maximize rewards and are eager to use the application while shopping.

The dependencies are as follows:

1. Information about credit card offers and discounts is available online and can be accessed and put into the system. Initially the information will be entered into the system only for some specific cards, but in the subsequent releases that will be automated to get in information about more cards.
2. For giving specific and relevant offers, accurate and precise system to track user's current location is needed.
3. Data analysis has to be done to understand user's preferences about the offers and stores.

Initial Product

The initial product would include the key features that we validated through user interviews to help users to maximize their rewards.

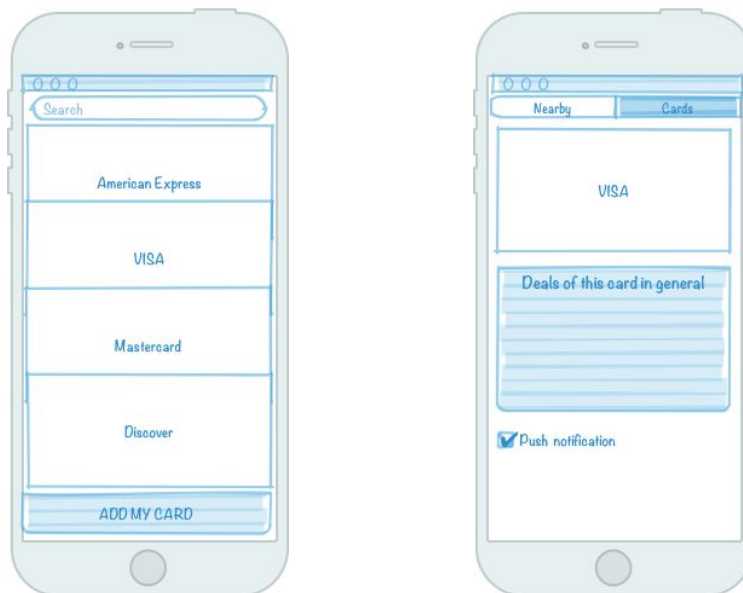
The features include (but not limited to) :

SIGN IN



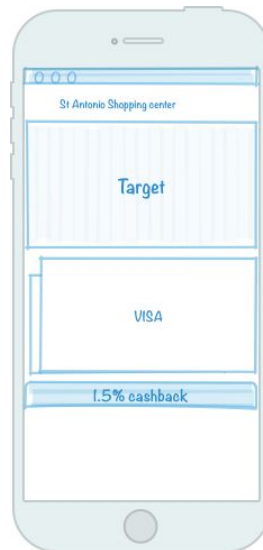
Users need to register and login in order to use our service. They can either use Facebook or Google account, or register by phone number or create user credentials specifically for our app.

Inputting Credit Card type without entering Credit Card number



Without entering card numbers, the user can choose their cards in our database based on card type. They can also check each card's general rewards information.

LOCATION-BASED SYSTEM



When a user enters into a shop, the system would send a notification to indicate which card is offers most rewards at that location. If they don't want to receive too many push notifications, they can set preferences accordingly.

LOCATION-BASED SHOPPING NAVIGATION



Users can also check for nearby places in the map, which gives them the landscape of nearby shops and restaurants where they can use their current cards to maximize rewards.

Subsequent Releases

The subsequent releases will expand the feature set from just location based credit card offers to location based best pricing using a mix of credit cards offers and store promotions. We will also eventually expand the feature set to include not only offline shopping but also online shopping.

Future Possible Fields:

According to the user research, there are also several areas that we would like to explore in future releases:

1. Online Recommendation

Our survey shows that more and more people prefer to shop online nowadays. Tracking for credit card rewards while shopping online is time-consuming and that is where we want to step in : automatically tell people the right method to pay at the right online website. We can provide this functionality in the form of a web browser extension.

2. Cooperation opportunity with Banks

Banks might become our potential partners. In our app, in addition to giving recommendation of which current card should be used, we can also recommend new cards that can save more if they apply. More opportunities can be explored after we dig deeper into the market analysis and user research.

3. Recommendation for the nearest stores

According to the research, one of the reasons some customers can't make best use of the credit card rewards because they don't actually track the rewards offered by their cards at specific stores. Based on a user's current location, we can recommend which nearby stores are offering rewards for the current cards a user has.

4. Overseas Expansion

There are so many banks that issue credit cards in America, let alone in other countries. Even though our current focus is the American market, our customers might have multiple credit cards from other countries. One of our persona is international students who carry their native visa cards here and they definitely have needs for rewards. In the future, one of our vision might be the bridge between stores and oversea banks.

Limitations

The limitation of our product would include:

1. Location tracking, especially for an indoor location within a shopping mall could be challenging so the app will need to guess estimate and show multiple retail locations instead of just one.
2. Out efficiency to maximize rewards might get limited depending on user's appetite for push notifications. If the user disables all push notifications, then the only instance where the app will work if they manually check the app before each transaction.
3. Access to card rewards data, especially for some store cards or specialized rewards programs could be difficult to acquire.

Business Context

Business Vision and Revenue Streams

We identified following as potential sources of revenue:

1. Revenue through Ads from Shops & Restaurants: We plan to have Ads from shops and restaurants announcing the discounts they offer for different credit cards. As our application can detect the location of the customer, we believe shops and restaurants will be interested in advertising about the latest offers they have for users.



2. Revenue through Ads from Credit Card Issuers(Banks and Financial Institutions): We plan to have Ads from Credit card issuers (Banks and Financial Institutions) advertising about different offers they have for different credit card types. They can also advertise about different credit cards they offer so that users can know about all the credit card types that are out there.



3. Licensing/usage revenue from B2B customers by integrating our rewards engine within their credit card apps.

Different Stakeholders

1. Banks and Financial institutions: We will need information from Banks and Financial institutions about different credit card types they issue and the offers each credit card type provides.
2. Shops and Restaurants: We will need information from Shops and Restaurants if there are any shop specific offers they provide for customers.
3. Users: When the user is about to sign into our app for the first time, we will need the users to input the type of credit card (bank name and credit card type, not the credit card

number) they have. Similarly, if the user gets a new credit card, then the user needs to update that new credit card type in our application.

User Benefits

1. According to different studies, credit card users lose out on hundreds of dollars every year. By using our location based application, credit card users can save that money as they will know which credit card to use to avail the offers.
2. With the kind of information that our app provides, Users will also know which bank or financial institution is issuing credit cards with best offers. If a user is unsatisfied with the offers his current credit card has, he or she will know which is the right card to apply for based on the information in our app.

Operating Environment

1. **Business Factors:** We need banks and financial institutions to provide us information about credit card offers they provide for different credit card types. Similarly, we will need restaurants and shops to provide information about their shop specific offers. We need to make sure that this information is regularly updated. We will need a mechanism for these offers to be updated regularly so that the information about offers is always accurate.
2. **Technology Factors:** We will need to make sure we integrate with both Google Android and Apple iPhone ecosystems. Users will need good mobile internet speeds (3G, 4G/LTE) to use the app while shopping.
3. **User Privacy:** We need the user to input only credit card issuer name and credit card type. We do not request for the user credit card number thereby ensuring user privacy. We need to track the user location whenever user is using the App. We will need to make sure that this location information is kept private and is not shared with third parties.

Project Priorities

1. We plan to release iPhone app first and then proceed to releasing Android app.
2. Priority is to have credit card offers first which means we need information from the banks and financial institutions regarding the credit cards offers they provide at different shops. Once we have the credit card offers, we then want to include any shop/restaurant specific discount offers.
3. Another priority item for our app is to make location based tracking system work accurately within a shopping mall or other indoor environments.

Appendices

Appendix A: Personas

1. Andrew - High Income Single

Description:

"Educated high income single male who loves to spend on experiences."

Background:

| Age | Work | Family | Education | Salary | Location |
|-----|-----------------------|--------|-----------|---------|----------|
| 28 | Software Professional | Single | Masters | \$100k+ | Seattle |

Keywords:

Intelligent, Adventurous, Ambitious, Curious, Impulsive, Unclear

Life Goals:

- Travel, experience different cultures, meet people
- Learn and grow from the best in their work domain
- Give back to the society

Product Experience Goals:

- Seamless user experience
- Does what it says - effectiveness
- Early adopter for right solution

Product Experience Frustrations:

- Doesn't do what it says
- Spam emails and Ads
- Bad user experience

Personality:

| Introvert | Thinking | Sensing | Judging |
|-----------|----------|---------|---------|
| ★★★ | ★★ | ★★★★☆ | ★★★★★ |

Motivation:

| Learning | Fear | Growth | Power | Social |
|----------|------|--------|-------|--------|
| ★★★★★★ | ★★ | ★★★★★★ | ★★★★ | ★★★★☆ |

Preferred Channels:

| Traditional Ads | Online & Social Media | Referral | Guerrilla Efforts & PR |
|-----------------|-----------------------|----------|------------------------|
| ★★ | ★★★★★ | ★★★★★★ | ★★★ |

Bio:

Andrew is a young, educated professional who is well versed with technology. He is usually up to date with various tech products and services out there. Andrew is a high income earner and doesn't plan on saving money for any specific goal for the next few years. Andrew wants to explore the world, travel to different places and spend money on experiences. Andrew loves to buy latest and interesting products, sometimes even an impulse purchase.

2. Stephen

Background:

| Gender | Age | Work | Family | Education | Annual Salary | Location |
|--------|-----|--------------------------------------|-------------------------------|-----------|---------------|----------|
| Male | 32 | Software Engineering Project Manager | Married with a child of age 4 | Masters | \$1,20,000 | LA, CA |

Spending behavior:

- Has 3 credit cards and 3 other retailer specific cards like Costco card etc. Uses credit cards while shopping online or offline.
- Does 50% of shopping online and 50% of shopping offline.
- Most of the monthly salary goes for house rent, food expenses , child expenses, gas for the car , other household expenses etc.
- Some money is spent on family outings, going to restaurants etc.
- Prefers shops offering discounts.

Wants & Needs:

- Wants to save money for buying a home and also wants to save money for child's education and any future medical emergency. Hence, wants to save as much money as possible.
- Even saving few hundreds of dollars annually is valuable.
- Currently, needs to keep track of credit card offers by going to respective card issuer websites or apps.
- Misses out on the offers by using wrong credit card as there is no time to keep track of individual credit card offers.

3. Rakesh Kabra

Background:

| Gender | Age | Work | Family | Education | Location |
|--------|-------------|-------------------------|--------------|-----------|----------------------|
| Male | 50-55 years | Full-time (Non-Tech) | Two children | Masters | Urban, California |

Personality Traits:

- Very Patient
- Calm and Quiet
- Listens to people
- Can make his point as well
- Simple
- Family oriented

Spending Habits:

- Groceries and household items
- Travel and tickets (business and personal and family) – 2 or 3 times an year
- Restaurants – 2 or 3 times a week
- Clothes and accessories – for self and family
- Movies and Entertainment
- Offline shopping – 90% of the times
- Maintenance and gas for cars
- Maintenance of the house

Other Preferences:

- Likes food, spending time with family and friends, listening to music, celebrating festivities
- Dislikes people who lie and cheat, bossy people at work place
- Likes to be involved with NGOs for social work

Financial Responsibilities:

- Financial support for the family
- Education funding for children
- Wife not working
- Owns a house – not paying for loans anymore
- Owns 2 cars - not paying for loans anymore
- Fulfil family's needs

4. Zibo. G

Information:

| | |
|---|--|
| Ability to use smart devices | Proficient. Crazy fans to new technologies. |
| Age | 26 |
| Bio | A second-year Stanford Master student majoring in EE. Coming from Asia. Single now. Looking for a full-time job in the software industry, hoping to go to one of the big names such as Google and Facebook. He wants to stay in the Silicon Valley to gain working experience and earn money. In spare time, he loves traveling and cares about flight rewards; he also loves to buy cool technology stuff and go to concerts. |
| Day in the life | Very busy. In addition to studying, he has to go to different job fairs and social networking events to meet people and find a job. |
| Motivation of Applying for credit cards | 1. a card that has \$100-200 sign up bonus; 2. a card with 1% cashback for everything; 3. a card for airline accumulative points. |
| Occupation | Student. Likely to be a software engineer in the near future. |
| Things I Say | I'm super busy, but I want my life to be colorful and new. |
| Unique Qualities | Care about how to spend money wisely and optimize purchase. Have 4-5 credit cards. The percentage of online and offline shopping is 1:1. For offline shopping, he usually spends money on Groceries and restaurants; for online shopping, he prefers to buy technological stuff. |
| Gender | Male |

Goals:

| Priority | Goal Description |
|----------|---|
| ★★★★★★★★ | Spending less money if it is convenient and time-efficient. |

| | |
|---------|--|
| ★★★★★☆☆ | Getting a sense of achievement and satisfaction after purchasing a high-quality stuff with relatively low price. |
|---------|--|

Pain Points:

| Priority | Pain Point Description |
|-----------|--|
| ★★★★★★★★★ | Won't spend much time looking for the small coupons, but still, have the need to spend less if it is convenient and instant. (For example, subscribe email for a particular store; subscribe a website who would notify him if there is a collection of coupons) |
| ★★★★★☆☆ | Love high-quality things, but won't spend money on it if it is sold at full price. Looking for a way to a big discount actively to get it if possible. (For example, a card for accumulative points that can exchange for a flight ticket) |

5. Sophie

Backgrounds:

| Gender | Age | Work | Family | Education | Location |
|--------|-----|----------------------|-----------|-----------------|----------------------------|
| Female | 29 | Baker at Whole-Foods | \$ 30K/yr | Culinary School | East Palo Alto, California |

Information:

- Uses an Android Smart-Phone.
- She has 2 credit cards and 1 debit card.
- She does 90% of her shopping offline and 10% online.
- Nearly half of her income goes to rent. The second
- Biggest portion of her spending is grocery.
- She is a member of a dancing class. She goes to the dancing class twice a week.

Goals:

- Financial stability
- She likes bakery but she hopes to change a higher-income job to be financially stable. She's going to a bootcamp to learn coding.

Motivators:

- Savings
- She tries to save as much as possible in her spending. She doesn't eat out but cook at home. When she goes grocery shopping, she buys the on-sale items. She mostly buys essential things, such as food and other living necessities.
- She wants to know how she can save the most.

Challenges:

- She has little savings for buying a house
- Switching to a higher-paying job is difficult
- To save at stores, it's hard to quickly know which credit card has the best deal.

6. Jane - Young Female Student

Background:

| Gender | Age | Work | Family | Education | Location |
|--------|-------|----------------------|-----------|-----------|----------------------------|
| Female | 18-23 | Baker at Whole-Foods | \$ 30K/yr | Bachelor | East Palo Alto, California |

Information:

- Major: psychology
- Uses an iPhone
- Equipped with 1 credit card and 1 debit card
- Half of shopping online and half of shopping offline
- About clothes, creams and cosmetics take 30% ~ 40% of per month expense.
- The budget is limited.

Goals:

- Becoming an attractive fashionable girl Jane is beautiful and she enjoys the beauty.
- Jane likes the feeling of being a star among the groups, so she spends a lot of money on clothes and cosmetics.

Challenges:

- The living expense is not enough for Jane to buy all kinds of clothes and cosmetics.
- Though her family is high-income family, her parents control her per month expense.

Motivations:

- Large discount savings.
- Jane's attitude toward coupon distributes in two extremes. She shows no interests in daily consumption discounts, such as coffees, meals, transportation and so on. However, she is pretty interested in coupon of clothes, creams, cosmetics which make up a large part of her per month expense.

Appendix B: Interview Transcripts

Interviewer: Amol Patil

A: Do you shop more online on in-store, in general?

Interviewee: Online

A: How much would you say is the split between online vs offline?

Interviewee: About 80-20

A: How often do you look for deals or discounts when you shop?

Interviewee: Most of my purchases are out of my desires. I buy when I need stuff. It is never the case that I find a coupon interesting and then I make a purchase. It's always when I do need anything. And if I do, then I need it ASAP. Something like that. I become so impatient sometimes that I if I need it right now, then I won't waste any time for sales weekend or anything like that. Last month I bought a bunch of things and a lot of my friends were like, no you should have waited, you can get good deals on Black Friday and stuff and you can find deals there. But I was not willing to wait that long.

A: How many credit cards do you have?

Interviewee: Four

A: Why did you apply to more than 1 credit card?

Interviewee: Mostly credit line and sometimes good upfront advantages - if you are enrolled in this card then you get a bunch of points and then you can redeem those points for other things like travel and stuff.

A: Since you have multiple cards, do you keep track of these rewards that you mentioned?

Interviewee: I am not like super active in knowing what the current programs are offered. Sometimes what I think is the upfront advantages - sometimes there are programs like you can get 5% cashback on groceries and restaurants, I just make sure that once in a while I check what rewards are offered and try to modify the usage accordingly. Sometimes, I am inclined to use Chase Sapphire card a lot more than Chase Freedom / Discover because of their cashback.

A: Okay, then would it be fair to say that *sometimes* you check the rewards offered by the credit cards?

Interviewee: Yes, absolutely. Not on a monthly basis but sometimes you get know through Ads or through your friends. Like I do not actively research on a monthly basis, how to modify your credit card usages.

A: You mentioned Ads, what kind of Ads - online, offline?

Interviewee: Online Ads.

A: You also mentioned friends - between friends and online ads, is there more trustworthy source or preferred source between the two?

Interviewee: I won't be able to differentiate which of these factors lead to my behavior modifications, but that these things only make me aware and then if I have time or don't forget about those rewards by the time I am making a purchase, like, sometimes I would go to bank's website to activate those cashback/rewards

A: When you make any purchase, say in a physical store, while making the purchase, do you look for any deals or coupons before making the payment?

Interviewee: No, very honestly no, but I know it's not always the most profitable thing to do or money saving thing to do but I don't generally look up any coupons before buying, except for when ordering pizzas.

A: Interesting, any specific reason you look for coupons when ordering pizzas and not other purchases?

Interviewee: Yea, so the thing is, I don't search for 3rd party sites, e.g. Groupon is mentioned in general for deals. But Dominos has a section for coupons on their site itself and when I am buying pizzas from Dominos, and I hit coupons tab and select the relevant one.

A: Would it be fair to say that because there is very little friction to look for those coupons when ordering from Dominos, you consider checking them out?

Interviewee: Yes, because I am logged into Dominoes site anyway and they have a prominent Coupons tab there and they have pretty good deals too.

A: What kind of stores do you generally shop more often or spend the most? Interviewee: I think most of my purchases are on Amazon, especially electronics and when I moved to Seattle, I didn't have any car, otherwise I would drive to nearby BestBuy because of the price match thing, I can be certain that what I buy there would be the same price as on Amazon.

A: What about other non-electronics purchases, for instance groceries, apparel etc? Interviewee: For grocery Safeway from my building downstairs. Apparel, gaming are online. I do eat out a lot.

A: Do you use any other payment methods and if yes, how often do you use? Interviewee: Recently, some of the apps have started Android Pay integration, and I have my most preferred credit card hooked up with Android Pay. If not credit card then Android Pay. Otherwise, I do not use PayPal or Amazon Payments or any other.

A: How do you feel about push notifications in general?

Interviewee: I find them annoying

A: What is your general setting for push notification for a new app?

Interviewee: I will give you an example - I downloaded this app called Groupon and it sends notifications about deals in my area but then it became so frustrating that I ended up deleting the app. If I have to buy a DLSR then I will check Groupon once rather than getting these notifications.

A: I think that's all the questions I had, thank you very much for time.

Interviewer: Krishna

Krishna: How many credit cards do you have?

Stephen: I have 9 credit cards and one Macy's store card. The 9 credit cards belong to different banks and financial institutions like Chase, Bank of America, American Express etc.

Krishna: As you have more than one card, in what situation did you apply for different cards?

Stephen: I applied for first credit card casually 10 years ago in 2007. Back then, I was a college student. Few months after getting my first credit card, I then applied to a second credit card so that I can pay my tuition fees on credit card as there was an offer for students. After that, I got a new card almost every year and the motive to get new cards was reward points, discounts etc.

Krishna: How do you decide which card to use for different transactions?

Stephen: Currently, I do not have any centralized system or a single app where I keep track of all the offers on all my credit cards. I currently use email alerts or SMS alerts to keep track of offers as much as I can. I login to respective card mobile apps to look into the rewards. I sometimes use the right card and get reward points and sometimes I might use the wrong card and loose out on reward points. I wish there was a single consolidated app for all my 9 credit cards where I can go and check the offers and rewards points for all my 9 cards in a single snapshot.

Krishna: Which smart phone do you have and if you have a smart phone, did you check in app store to see if there is any app that will keep track of reward points of all your 9 cards?

Stephen: I use Apple iPhone. I did do some searching a while ago, may be last year, to check if there is a single unified app where I can get a snapshot of the reward points of all my credit cards. But I did not find any such unified app for all my 9 cards. Maybe I did not do a detailed search in app store.

Krishna: What are the types of stores where you shop most often?

Stephen: I go out to restaurants regularly with my family. We go once a week to a restaurant to eat outside. Sometimes, it can be twice a week. Typically, it is not more than twice a week. I also get to travel regularly for my work. The business trips are within US. When I am travelling, I like to shop for myself and family if there are shops offering good discounts. This shopping when I travel is mostly for clothes, gift items etc. Obviously, I need to shop regularly for house hold utilities as Costco, Macy's, Walmart etc.

Krishna: How much money do you spend on car gas every month? Do you look for discounts and better prices when you go to get gas?

Stephen: I normally spend less than \$100 per month for my gas. My office is close to my home. So, the number of miles I travel per day is not huge. I don't spend more than \$100 on gas per month. Even though the money I would be saving is small, I would definitely prefer to go to a Gas station that would offer better prices and discounts.

Krishna: How often do you look for coupons, deals or discounts before you visit the stores or before you go for shopping?

Stephen: I definitely look for shops offering good deals and discounts but then again I feel there is no good centralized app that will provide all this information at one place. Especially when I travel I make sure to make note of American express card offers as I use American express card while traveling. One other thing I would like to add is the miles I get from my Air travel can be transferred from one Airline to other Airline for most part as long as different Airlines are part of a common group like Star Alliance. I would like to have a similar functionality where I can transfer the points from one credit card to another. I am not sure how feasible it is for financial institutions to make this happen but I would like to have this functionality where I can transfer the points from one card to another card like Air miles.

Krishna: How much time do you spend weekly on keeping yourself updated with the various credit card rewards/offers that your cards have?

Stephen: I do spend some time like 30 minutes or so every week keeping track of various offers but like I said earlier I did not come across a good centralized app that gives me this info for all my 9 cards at one place.

Krishna: If an app can tell you which of your credit cards would give the best rewards for the store you are in based on the location, would you download the app and use it?

Stephen: Yes, I would download the app and definitely use it as long as the app is giving me correct information regarding the rewards.

Krishna: Based on the previous question, if such an app is created and saves you a few hundreds of dollars every year by suggesting you the right credit card based on your location, how much money will you pay annually to download and use the app?

Stephen: I would prefer the app to be free but I am willing to pay up to \$12 per year for such an app. I don't think I will pay more than \$1 per month for such an app.

Krishna: You mentioned you go out to restaurants regularly with family. Do you use Yelp currently as yelp has recently introduced a feature where they give information about offers and discounts at different restaurants?

Stephen: I don't use yelp regularly. But thanks for letting me know about this feature. Next time when I use Yelp, I will use this feature.

Krishna: What percentage of your shopping is done online?

Stephen: I do about 50% of my shopping online and 50% shopping offline by going to shops or malls. My wife also roughly has the same online vs offline shopping percentages. We have a 4 year old boy, so it is always not easy to go to a shop and do shopping. So, we do quite a bit of online shopping which is about 50% of our total shopping.

Krishna: When you are doing online shopping, how do you know which is the right credit card to use to make sure you are getting maximum reward points or discounts?

Stephen: I currently do not have a way to keep track of this. When I am shopping online, if the website tells me there is some discount on a credit card type and if I have that credit card type then I will use it. Otherwise, I will just use my cards randomly while shopping online.

Krishna: Do you use Honey? Honey is a chrome extension for online shopping coupons and reward points?

Stephen: I currently do not use it. I will give it a try. But if that extension asks me to enter the details like full credit card numbers of my different cards, I am not sure I would do it as I do not want to give my complete credit card details. I am not sure if that is a safe extension and what are their security features. Without knowing more about their security procedures, I would not like to give out my complete credit card details.

Krishna: Would you be fine with an App that pushes notifications about offers and discounts in the neighbourhood based on location?

Stephen: I would be fine with such an app and will use it but then I should not receive a ton of notifications as it will be impossible to go through all the notifications to find the offer of my liking. There has to be a way in the app to push notifications in a more granular fashion based on my likings and needs. Then I will use the app as the push notification results in that case will be based on my preferences.

Krishna: How often do you use a third party payment service like Apple pay, google wallet etc to make the payment at counters when you go out for shopping?

Stephen: I rarely use Apple pay and I have never used google wallet.

Krishna: Thanks for your time. You have been very patient and helpful.

Stephen: No problem. Anytime. Hope your app idea takes off and does well.

Interviewer: Priyanshi Mittal

Q: How many credit cards do you have?

A: I have more than 5 credit cards.

Q: Why have you got so many credit cards?

A: Every card seems to have different offers, reward points schemes and cashback percentages.

When I purchased the cards, the sales person told me about the benefits about different cards and I chose the cards that best suited my needs.

Q: What kinds of offers do you look at while getting the cards?

A: Some cards have very specific offers and discounts. It takes a while to get used to new cards, since I do not remember the offers. But I look for the cards that have offers, which are directly convertible to discount or cash/money. Cards offering vouchers are not my thing as I even forget to use vouchers and they expire.

Q: How would you describe your shopping needs and spending habits? Describe in terms of categories of things (Household, travel, meals etc) and offline vs online.

A: Most of my shopping and spending are for my family and household needs. We occasionally go out for meals to restaurants, mostly once or twice a week. Other than these I don't travel alone but go for family trip atleast once a year. We do go for movies and day-outs once or twice a month. I am also paying for my children's tuition and expenditure. I am not comfortable doing online shopping but sometimes my children help me shop online, 95% of the times I buy things from offline stores.

Q: How do you decide which card to use at a particular store?

A: I just use one card everywhere, I know some of the offers for that card but I am not sure about the offers of the others as I don't remember them now. I knew the offers and discounts when I got them, so I use only one regularly which I think has the maximum discount.

Q: How often do you look up for offers of your particular card online? Where do you find this information?

A: I don't check offers online and I am not comfortable looking for information online. Sometimes when I checkout I ask the cashier to help me if they have some offers on particular cards, however most of the time even they are not aware since they can't remember them for each card.

Q: How often do you use the offers available for the card and how much do you think the offer helped you save in terms of percentage or dollars?

A: As I mentioned the one card I use, has a 2% cashback on certain restaurants and shopping stores, but having said that I don't know which places are those. About savings, I think it is definitely more than \$100. I feel I can save much more if I can get the information more easily.

Q: What do you think is the best way to maximize the rewards and offers?

A: I don't know! I need a service that can help me maximize the discount and offers but everything should be convertible to cash or discounts as I don't want vouchers. The service should be easy to use and give me accurate information.

Q: If you can make an application for your phone to maximize your offers while you are at a store at a given location, what set of features you would want to have and why?

A: If I make this application I want exact and relevant information about the card and stores. The information should be sent for the nearest store or place. I really don't know how technology works but I want information about my cards without giving my card details.

Q: Currently we are in process of making a mobile application that can help solve this problem and help users get maximum offers and rewards when s/he is at a particular store. Will you like to use the application?

A: I will definitely use the application if it solves my problem of getting precise information about the offers.

Q asked by the Interviewee: Will I be notified with the information when I go to a store or I will have to check per store on the app?

A: The app will give all the options to the user to select the preferences. The user can select what type of stores s/he should be notified about, does s/he want information only about the cards the user has or notifications about the cards or offers he would also like to have. The user can also decide how many notifications he will want to have, or if s/he is not willing to get the push notification s/he can just go and check them on the app.

Q: How comfortable will you to receive the notifications?

A: I will not mind notifications but they should give me accurate information about the offer nearby and should send it only once. I will want no redundant information to be sent to me. I also would want if the app can give me offers only related to my cards, but I can search and get information about other cards too.

Interviewer: Kim

Q: How many credit cards do you have?

A: A lot. Five.

Q: Wow. What made you apply for so many credit cards?

A: I was advertised. Only one card has an annual fee.

Q: What about it that appealed to you?

A: The reward points bonus at sign up. I can use the reward points for flight tickets and hotels, and I don't need to spend money when I travel.

Q: Cool! That's awesome!

A: Yeah, I have a lot of points right now. If I fly to anywhere, I can just use my points.

Q: How did you know about these rewards?

A: I keep an eye on these things. I followed blogs and websites.

Q: I see. In your daily life, do you mainly use only one credit card or you use all of them?

A: I mainly use two of them, depending on the cashback categories.

Q: Can you tell me more about it, on the cashback categories? Do you just leave the other three cards unused then?

A: Yeah, I don't use the other three cards at all. The cashback categories change by season. I have two Chase cards that I use mainly, one is Freedom, and the other one is Sapphire Preferred. My Freedom card changes cashback categories by season, for example, last season was restaurants, so I use Freedom at restaurants, and this season is supermarkets, so I use it at supermarkets. For other stores, Freedom has no cashback on it. But my Sapphire Preferred has double cashback. The two cards share the rewards points. But if you only have Freedom, when you buy flight tickets, Freedom's points worth one cent each, but Sapphire Preferred's points worth one point five cents each. Hmm... Sapphire Preferred has an annual fee, but the first year is free.

Q: I see. Is it one category for one season, or different stores for one season? Some credit cards have discounts at different stores in different seasons.

A: I did a lot research on credit cards. Yeah, AmEx send a lot promotions on store discounts.

Q: Would you take a notice of the promotions, and use AmEx at these stores then?

A: No. I don't go to those stores. They don't have things that I want to buy. I am not that easy to be advertised!

Q: Haha! A research has found that, because credit cards have different discounts, but people don't spend time knowing the discounts and use whichever card handy at the moment. On average a person could have saved \$200 a year, just by taking a little bit of care when paying.

A: Yeah. There's a lot 5% cashback that you can earn. In fact, the credit card issuers would email you about it.

Q: Yep. Now there is an app. You put in which bank cards you have, it will locate the store you are in via GPS and tell you which card you should use to get the most rewards. Would you be interested in such app?

A: Wow. Yeah, sure! I really need it!

Q: What do you think this app should be?

A: First it should include all types of card. When you put in your card name, it should pop up the corresponding card. Then you put in all your cards. But determining the store location would be pretty hard. Because many restaurant locations are not easy to determine. You can let user text-type in the category of the store, like gas, restaurant, etc. Then the app compares different cards, or just show the best card to use. The thing is that I would want to know why this card is the best and what would I get by using this card, like 5% cashback, extra points, etc.

Q: Gotcha. If this app exists, would you check this app every time you pay for something?

A: Yeah, I will.

Q: Cool! That's all my questions! Thank you A!

A: Haha, you are welcome!

Interviewer: Lan Liu

Interview 1:

Time: September 21 19:30-20:00

Purpose: by talking to potential users, we can verify whether there is a real need, how the need different from our assumption, and how to define our current persona further according to the interview.

Interviewee: female, 25, working in Vmware, developer. Graduated for 1 year, international background.

Interview Transcript:

What is the percentage of online/offline shopping?

- around 1:4

What kinds of things do you buy for online/offline shopping respectively?

-I bought large stuff online, but I prefer buy things offline because online shipping is too slow.

Which payment method do you prefer to use?

-Credit cards

Do you use paypal or Applepay ever?

-No, I don't use them because I think credit cards are good.

How many credit cards do you have?

-2

(If more than one card,) What made you apply for these cards?

- I applied one card because it has 1.5% cashback for everything; and I applied for another one because I was a student, and this is the only card I can apply.

How do you decide which card to use for different transactions?

- I would more likely to use the one which cash back.

Do you know that maybe the other card has some rewards that higher than the cash back one?

- I know different credit cards might have discounts for certain stores, but it changes seasonally. I didn't have time to check for that every time. It would take a lot of time. For me, using a card with cash back for everything is my best choice.

How often do you check for coupon/deals/rewards?

-Seldomly looking for rewards, because I am super busy. And if I need to do this, I have to compare as well, it takes even more time.

(How do you keep track of the rewards?) Never ask If there is an app that can save you \$100/y, would you use it?

-Yes, if it can help me find the best solution, I will use it.

Interview 2:

Time: October 3 17:00-17:15

Location: Stanford Campus

Purpose: by talking to potential users, we can verify whether there is a real need, how the need different from our assumption, and how to define our current persona further according to the interview.

Interviewee: male, 25-30, second year EE student in Stanford, international background. Looking for a full time job.

Interview Transcript:

What is the percentage of online/offline shopping?

- around 1:1

What kinds of things do you buy for online/offline shopping respectively?

-I like to buy electronic products and everything that can be bought at Amazon. For offline shopping, I shop in groceries and sometimes buy clothes.

Which payment method do you prefer to use?

-Credit cards

Do you use paypal or Applepay ever?

-No, I don't use them, not convenient than credit cards.

How many credit cards do you have?

-5

(If more than one card,) What made you apply for these cards?

- A couple of reasons, cash back, bonus, United airline, discover card for several stores...

How do you decide which card to use for different transactions?

- I would subscribe and follow some websites or people who can regularly send me email with information of big discounts for several cards.

Do you track all those information for your cards regularly or do you have some ways to track?

- Not really, I am busy everyday, and I don't use too much efforts to do this. I use different cards for different reasons, usually they can save me a large amount, like ticket flight points, I can use them to exchange a ticket in a period of time.

In what situation do you check for coupon / deals / rewards?

- Sometimes if I really want to buy something big, I would go to the website and see if there is a discount for it. But I don't have time to track them often.

If there is an app that can save you \$100/y, would you use it?

-Yes, it's not that I don't want to know the rewards information, it's just too complicated and time-consuming. If you can have an App that would pin me when I have to pay, I will be happy.

Interview 3:

Time: October 3 17:00-17:15

Location: Stanford Campus

Purpose: by talking to potential users, we can verify whether there is a real need, how the need different from our assumption, and how to define our current persona further according to the interview.

Interviewee: male, 25-30, second year EE student in Stanford, international background. Looking for a full time job.

Interview Transcript:

What is the percentage of online/offline shopping?

- around 1:4

What kinds of things do you buy for online/offline shopping respectively?

-Actually, I don't spend much money. Almost offline, because I have to buy living stuff, like grocery and water. Sometimes I have to refuel my car. Online only for electronic stuff.

Which payment method do you prefer to use?

-Credit cards

Do you use paypal or Applepay ever?

-No

How many credit cards do you have?

-2

(If more than one card,) What made you apply for these cards?

- One for cash back for everything, one is a starter card.

How do you decide which card to use for different transactions?

- mostly the one with cash back.

Do you know that your credit cards might offer you different rewards in different stores?

- Yes, I know, but I never truly check them. I know one of them is 5% cashback for everything, so I use that often.

How often do you check for coupon/deals/rewards?

- Never, I'm just too lazy to do it. I'm busy enough, and if I have time, I will do other things (How do you keep track of the rewards?) Never ask If there is an app that can save you \$100/y, would you use it?

-Yes, if it can tell me when to use what, that saves my efforts, and I will probably use it.

Interview 4:

Time: October 3 17:00-17:15

Location: Stanford Campus

Purpose: by talking to potential users, we can verify whether there is a real need, how the need different from our assumption, and how to define our current persona further according to the interview.

Interviewee: male, 35-40, start-up CEO, have accent of Europe.

Interview Transcript:

What is the percentage of online/offline shopping?

- 70% online, and 30% offline

What kinds of things do you buy for online/offline shopping respectively?

-online: cloth/tech/music; offline: grocery mostly

Which payment method do you prefer to use?

-Applepay50%; credit cards 50%

Why do you want to use Applepay?

-I have an i-watch, it's pretty convenient and cool.

How many credit cards do you have?

-5

(If more than one card,) What made you apply for these cards?

- Mostly for business reasons. I need more balance to keep.

Did you apply credit cards for rewards?

- No, I don't really care about rewards

How do you decide which card to use for different transactions?

- I use ApplePay when it is available. For the rest of time, I use a regular credit card.

How often do you check for coupon/deals/rewards?

-Rarely. I run a company, and I'm very busy travelling and meeting people. But if you give me a coupon that can use instantly, I would use.

(How do you keep track of the rewards?) Never ask If there is an app that can save you \$100/y, would you use it?

-Yes, if it can help me find the best solution, I will use it.

Interview 5:

Time: October 10 9:00-9:10

Location: Scoop car

Purpose: by talking to potential users, we can verify whether there is a real need, how the need different from our assumption, and how to define our current persona further according to the interview.

Interviewee: male, 28-25, BMW Researcher, American.

Transcript:

What is the percentage of online/offline shopping?

- 50% online, and 50% offline

What kinds of things do you buy for online/offline shopping respectively?

-online: cloth/tech mostly; offline: grocery for water. I don't cook, but I eat outside.

Which payment method do you prefer to use?

-Applepay50%; credit cards 50%

Why do you want to use Applepay?

-I have an i-watch, it's pretty cool. And other time I use credit cards for different rewards in different situation.

How many credit cards do you have?

-8-9

(If more than one card,) What made you apply for these cards?

- I know which card can bring me what kind of benefits, so I applied cards to tailor my needs. I have a credit card particularly for airline, and one for car refuel, and one for *** (a clothing brand) and a bunch of others for different reasons

Do you know all of these rewards? Like, sometimes they change reward offers seasonally.

- I don't know all of them, I just know some of them can save me an amount of money and I use them. I definitely don't have time to compare and remember.

How often do you check for coupon/deals/rewards?

-Rarely. I know what credit cards can offer, but I rarely consciously check coupons.

If there is an app that can save you \$100/y, would you use it?

-Sure, it sounds like helpful

Interviewer: Sijia Chen

1. How many credit cards do you have?

Jane: Two cards.

2. If you have more than one card, in what situation did you apply for the cards?

Jane: One card is applied with the debt card and the other card is applied for discount shopping.

3. How do you decide which card to use for different transactions?

Jane: Mainly use the discount card. Though I don't the exact coupon details, I know this card has more coupons in general compared with the other one.

4. What are the types of stores where you shop most often?

Jane: Supermarkets, Restaurants and Cafes.

5. How often do you look for coupons, deals or discounts before you visit the stores above or shopping in general?

Jane: I don't check the coupons deliberately but I have checked the information indeed. The avg. frequency is about one time per month. And I learn this information mainly from my friends or WeChat moment (a social media from China).

6. If an app can tell you which of your credit cards would give you the best rewards for the store you are in, based on your location, would you download it?

Jane: Yes, I think this app is usefully. If your team can complete this, I'm willing to be the first group users.

7. If you could save more than \$100 a year through maximizing rewards from this app, would you consider paying a yearly fee for it? If so, how much would you be willing to pay for it?

Jane: No, I don't want to pay money to download this app.

8. Do you use Yelp?

Jane: Yes, though I don't use this app every day, I think this app plays a necessary role in daily shopping.

9. If that service were designed similar to Yelp, would you consider it?

Jane: Yes, if that service has its own characteristics.

10. Would you be fine with a service that pushes notifications about offers and discounts in the neighborhood?

Jane: I turn off most notifications. But if these coupon notifications are actually useful, I think I will turn on them.

11. How often would you use a third-party payment (apple pay, google wallet, etc) while paying at the counter?

Jane: In China, the percent is 100%. But in the USA, I use credit card and debit card mostly.

12. In general, what percentage of your overall shopping is done online?

Jane: Half to half.

13. What categories of things/services do you like to purchase online?

Jane: All kinds of things. Clothes, foods, living goods and so on.

14. Does the type of coupons have a great influence on whether you would use this app or not?

Jane: I like directly discounts and this may decide whether I use this app or not.

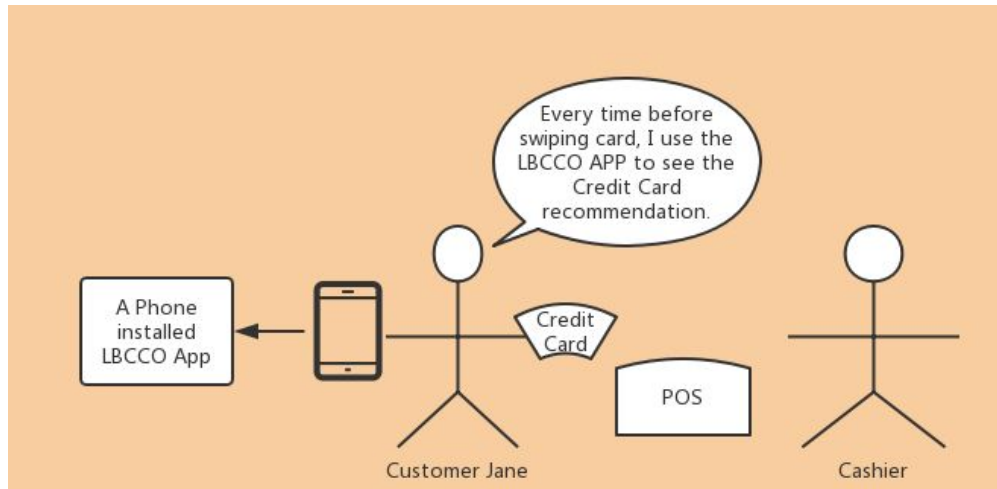
15. Do you have a smartphone?

Jane: Yes, an Android Phone.

Appendix C: Scenarios

1. Payment Scenario

Jane is a constant user of LBCCO (Location-Based Credit Cards Offers) App. Every time before she swipes her credit card in the Mall, she will open LBCCO App to see the credit cards recommendation.



2. Notification Scenario

Tom was walking in the Outlets Mall. And he got a notification from LBCCO App suddenly which told him that using BoA credit to pay the bill can get a 50% discount in Starbucks. He was pretty happy and went to the nearest Starbucks shop to buy a coffee.

