

Piggy Data

A browser extension to manage sharing of personal data in Ecommerce Websites & earn rewards



Capstone Team



Combined mentorship from Salesforce & Professor. Mark Larew

August 2020 – May 2021 (9 Months)



Goal

To improve the online shoppers experience

- Alleviate the negative experiences with targeted Ads.
 - Enhance privacy controls to receive personalized Ads.
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My Role

01

UX Researcher
3/9 user interviews
Affinity mapping
Service Blueprints
User Journey Map

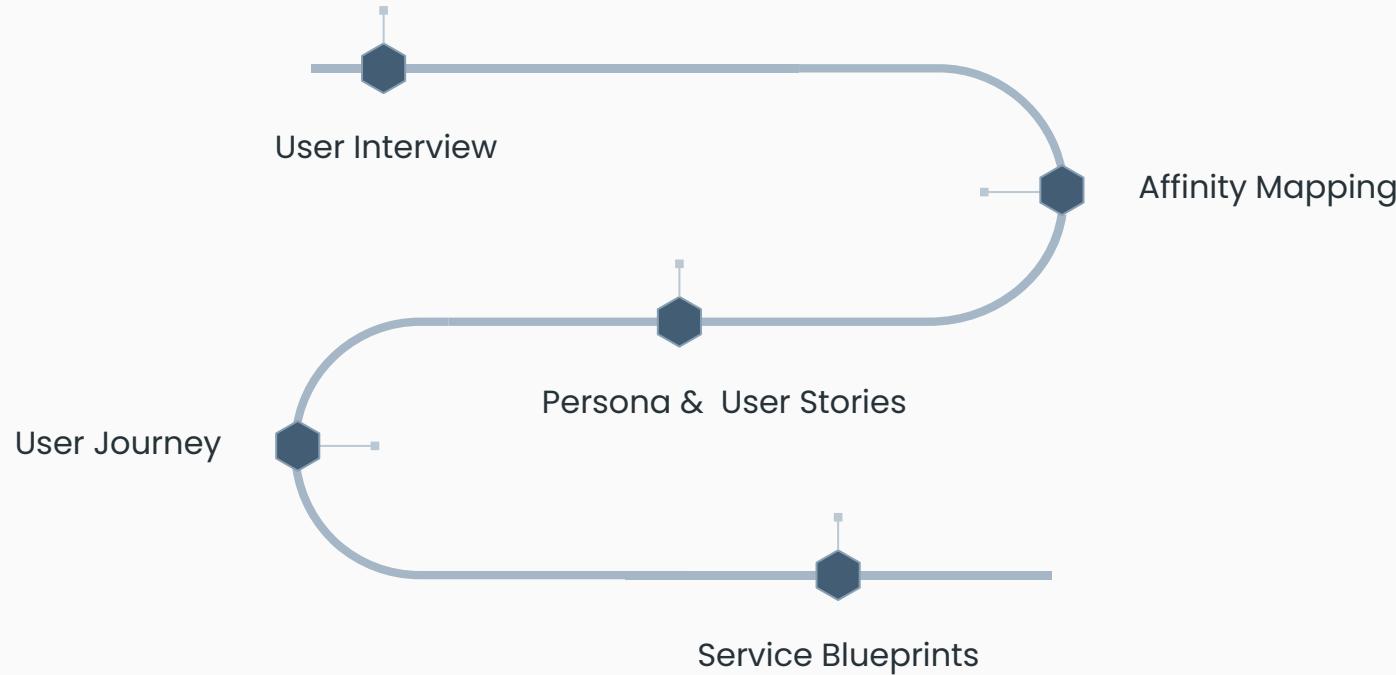
02

UX Designer
Lo-fi, Hi-fi mockups
Iterations
Usability Testing

03

Product Manager
Competitive Audits
Market Research
Design deliverables

Understanding the User



User Research: Highlights

Social media and streaming websites are the biggest source of targeted advertisements

Usually are hesitant of buying products from targeted ads but would occasionally buy few products based on deals

More negative opinions about targeted Ads and how business revolves around tricking customers

User Research: Highlights

Control their personal information by tweaking with privacy settings and installed ad blockers

Uncomfortable sharing financial information but willing to share general info to some extent

Would like compensation but unable to quantify it due to uncertainty in type of data collected

Why is this a big problem?



79%

Of Americans worry about companies infringing
their online privacy



80%

Of Americans think the risks outweigh the benefits
When it comes to sharing their personal data

User Research: Summary



01

User Group 1

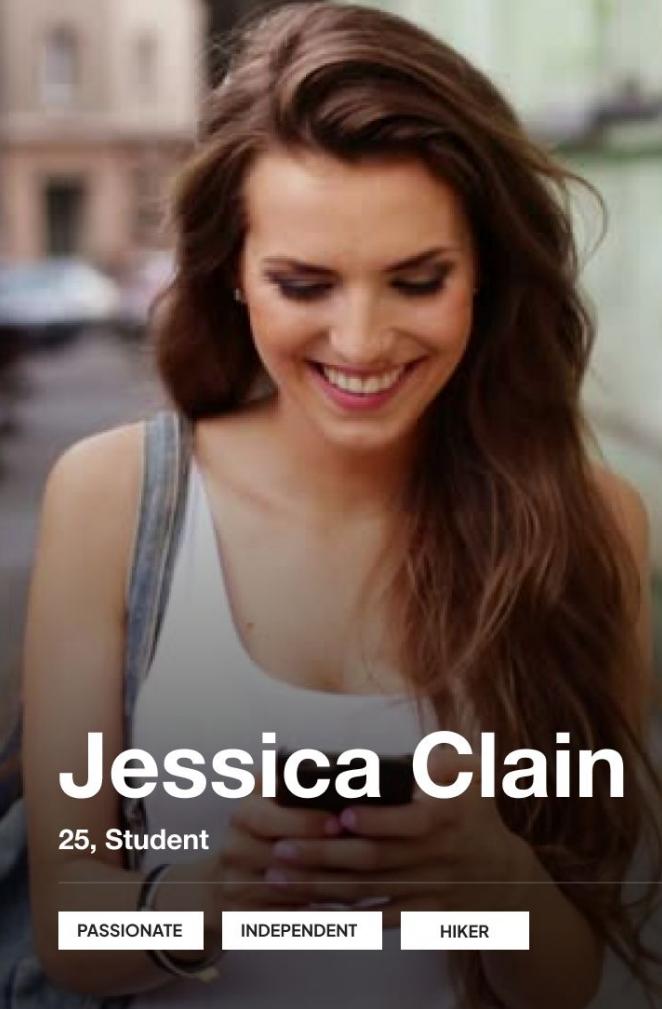
People who wanted better shopping recommendations



02

User Group 2

People who did not want to share their data

A photograph of a young woman with long brown hair, smiling and looking down at her smartphone. She is wearing a light-colored tank top and a backpack strap is visible over her shoulder. The background is a blurred city street.

Jessica Clain

25, Student

PASSIONATE INDEPENDENT HIKER

“

I like discovering new products and small businesses online, mostly on TikTok and Instagram.

I wish I could unsubscribe from ads that I see from the same companies all the time that I'm really not interested in.

ABOUT

Jessica shops online every other week. She's single and lives with her dog and roommate. She usually shops on Amazon and has used sites such as Target, Walmart, and other large online retailers.

Jessica's primary pain points are the volume of targeted ads she receives and the inability to control the type of ads. She is not concerned specifically about controlling her personal information that is shared but would like to be able to tailor the ads she receives by having the option to "turn off" ads from specific brands or for specific items.

GOALS

- Prefers to shop small online boutiques and support local online businesses.

FRUSTRATIONS

- High volume of targeted ads
- The inability to control the type of ads



Jim Doe
52, Manager

ANXIOUS INDEPENDENT OPTIMISTIC

“

I don't trust social media and I really don't like the fact that they are making money off of my data. I didn't give them permission to track my every move.

Getting targeted advertisements is creepy and an invasion of my privacy. Even if I was considering buying something, if I see it in a targeted ad for it then I am not purchasing it.

ABOUT

Jim works at Mens Warehouse. Jim doesn't like to shop online other than for things he can't get in his local shops and mall. When he does shop online, he mostly uses Amazon and specific clothing brands if he can find good sales. Jim finds targeted ads to be unnecessary and annoying. Additionally, he is concerned about the amount of personal information companies seem to store about him and search activity that is monitored. He also gets a lot of scam calls and he thinks the internet is the reason for that, because companies like Facebook sell his data.

GOALS

- Find good ongoing sales to get discounted clothings and goods

FRUSTRATIONS

- Targeted ads are unnecessary and annoying
- Lot of scam calls

User Stories

As a customer, I would like to know ‘what personal information is used for what type of recommendations that I receive’, so that the website is transparent enough to trust & use.

As a customer, I would need the ability to block Ads if I had bought an item already, so that I don’t get annoyed by seeing multiple Ads.

As a customer, I need to feel that it is a fair exchange, rather than feeling that my data is being stolen or that I am being taken advantage of.

Service Blueprint

Evidence from Research	I use online shopping because of it being convenient to compare, receive at door step	I accept cookies & policies without reading. I am aware of privacy settings, Ad blockers but they are inefficient	I received most targeted advertisements through social media, streaming websites like YouTube, emails and texts	It is annoying to receive Ads even after buying the product but sometimes I find it helpful as it reminds me to buy the item/product	Though I find targeted Ads annoying, I occasionally find it useful and in-fact buy when there is a good deal
Customer actions	Searches for an item in online / e-commerce website	Responds to the prompt to accept/decline cookies	Scrolls the social media / Watches a video in youtube / Uses other apps	Notices an Ad similar to searched item with deals & discounts across other e-Commerce websites	Evaluates if it would be good option to buy or not
Comments	Excited to see new deals, products	Skeptical about accepting cookies and policies but accepts in order to proceed	Surprised to see how much they know about individual preferences	Seems like a good option to buy / I already bought it	Thankful for showing good deals / Feels annoyed of irrelevant Ads
Emotions					
Front-stage actions	Match results based on the search item	Take consent to track customer interactions on website / app	Track interaction with targeted Ads	Make enticing deals to result in positive buying option	
Backstage actions	Run through products and list them based on customer search	Send consent to track personal info and preferences	Collect the interaction metrics for a particular product / search	Understand the reaction / modify the target Ad algorithm to customize for similar population - user profiling	Offer enticing deals based on the customer interaction
Support processes	Collecting cookies, location	Cookie analyzer	Sending Ads across different platform (Social media, video, email, or other websites)	Sending target Ads and keeping track for +ve & -ve responses from Ads	

Ideation

Ideas

01

Pay per data collected

02

Cookie Control

03

Shopping / Security Advisor



1

Is it embedded in a great business model?



2

Does it focus on the most important jobs, most extreme pains, and most essential gains?



3

Does it focus on unsatisfactory jobs, unresolved pains, and unrealized gains?



4

Does it concentrate on only a few pain relievers and gain creators but does those extremely well?



5

Does it address functional, emotional, and social jobs all together?



6

Does it align with how customers measure success?



7

Does it focus on jobs, pains, or gains that a large number of customers have or for which a small number are willing to pay a lot of money?



8

Does it differentiate from competition in a meaningful way?



9

Does it outperform competition substantially on at least one dimension?



10

Is it difficult to copy?



Ideas

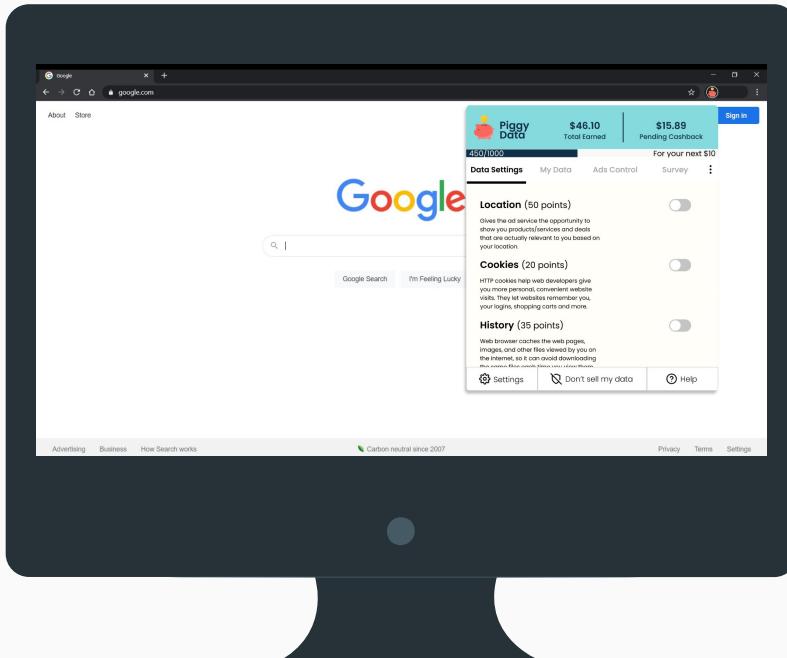


IDEA	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total
Idea 1	10	10	5	10	5	10	5	10	10	10	85
Idea 2	10	5	10	10	5	5	10	10	10	10	85
Idea 3	5	1	1	10	1	10	10	5	10	5	58

Final Concept (1 + 3)

- Incorporates multiple requirements that came out of research & analyses.
 - Provide a holistic approach to controlling personal information while getting paid for the data that is being shared.
 - Users will have a fair exchange for their data, rather than feeling that they are being taken advantage of.
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Hi-Fi Prototype



Usability Session: Tasks

- **Task 1:** Review the initial screen to assess the functions of the extension
 - **Task 2:** Update settings to earn points
 - **Task 3:** Activate rewards while shopping on an e-commerce website
 - **Task 4:** Update settings to block ads for a specific product
 - **Task 5:** Identify a way to earn points without visiting e-commerce sites
 - **Task 6:** Disable and enable tracking of your data for a specific website
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Usability Session: Feedback

The categories we found in our user testing are:

- Feels good
 - a. Using browser extensions to earn money.
- Confusion
 - a. Options to sell data.
 - b. Cashback
 - c. Points to earn and frequency
 - d. Enabling and disabling data for particular website Vs. globally updating preferences
- Improvements
 - a. Logo
 - b. Color
 - c. Wording related to 'Selling Data'

The SUS scores indicate that participants generally found our prototype easy to use.

Future Work

- Adding a tour guide for first-time users to provide them with an easy onboarding experience. This could enhance the user's knowledge of what they could do with the browser extension.
 - The terminology used should be refined, especially to clarify the purpose of the Survey tab and to distinguish sharing data for a specific site from sharing data for all sites.
 - Adding a user interface element that allows a user to know which website the browser extension is currently accessing. This would help users understand that they can change privacy settings for each website.
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Thank you