Recomminders: Efficient (re)Discovery

Value Proposition
Enabling fluid, easy and efficient discovery of the things we want to see, do, and experience.

Team Member Names and Roles
Quentin Perrot - Documentation / User Testing
Edwin Park - Development
Ji Park - Design
Asad Khaliq - Team Manager

Problem and Solution Overview
Our hectic lives mean we can't always focus on discovering the experiences around us as efficiently and socially as we'd like. Our current methods of reminder are disconnected and inefficient. By recording and organizing our aspirations to discover in a centralized location, we can then efficiently utilize smart and location-based technology to help us revisit things we'd like to see and do at the right time and place. This technology will be able to sync with your calendar and track your movements, thus understanding when and where a recommendation would be appropriate and likely to be accepted.

Contextual Inquiry Customers
Since this project is a radical departure from how we "traditionally" explore and discover, we decided our target audience should be fairly young and open to additional roles for technology in their life, with hectic schedules and various friend groups they might want to explore their surroundings with. Therefore we targeted mainly 18-25 year olds with busy schedules: college students, researchers, recent graduates, etc. In line with the Master Apprentice model, we asked our interviewees to walk us through their "discovery process" (e.g. how they find things they want to do, how they organize and store them, and how they involve their friends in the process) whilst talking about the rationale behind each step.

Below, you will find 4 interviews. Each one is broken down into interviewee background followed by information gathered from the interview process.

Asad's Interview Notes

H.F - Student, 20, who spends half his time off campus and half on (stays with his brother in Palo Alto a few times a week) and regularly visits San Francisco and the surrounding area. This means he has varied friend groups, and the fact that he is one of the few people he knows with a car means he is often pushing others to join him as he explores the places and experiences the Bay Area offers. Uses the calendar
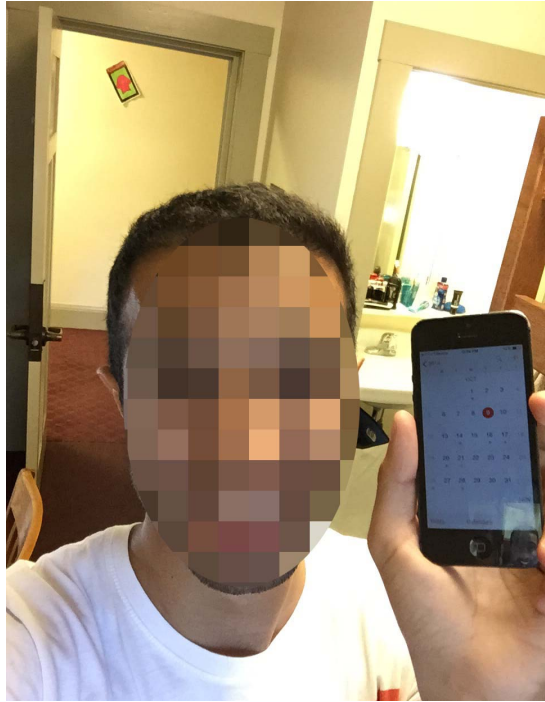
Interviewee showing us his recommendation-taking process

application for classes and meeting and only sets reminders for stuff that is extremely important or time sensitive. Writes all other information that he wants to remember (or one day go back to - non time-sensitive) in the Sticky Notes app on his Mac. Checks these notes periodically, but admits that he often forgets to check. He says the system of going between calendars/reminders/notes is a bit cumbersome to manage. We applied the Master-Apprentice model successfully: since he usually does this "exploration organization" in his dorm room, thats where I watched as he went over his process for finding new things to do (using websites such as Time Out SF), deciding who he wants to go with (dropping them a quick text with the relevant information) and adding it to his list of things to do (on the "Stickies" app on his mac). Would be very happy with something that reminded him at the right time/place, such as when he goes back to his room and has some down time or if he is close to an item of interest. But would also be interested in recommendations for new items/places/things/etc. to explore; not just be reminded of things he already knows about.

Definitely thinks there is room for a social aspect, but only with close friends, who often share activities and interests.

Edwin's Interview Notes

R.P. - Bio Researcher, 24, in the Bay Area. Decided to interview her at a cafe in Los Altos after a group cycling ride together. She tends to forget little tasks, such as brushing teeth and calling her parents when she is swamped with work; therefore, she might forget to discover and explore her surroundings efficiently as well.

For events with a time-frame, she uses iCal (Apple Calendar) as a reminder tool for lab meetings and work schedule. She showed how she uses "Create Quick Event" to quickly write what/where/when of the event, and often organizes by modifying alert settings on her free time. But she admits that she sometimes forgets to change alert settings and gets unnecessary notifications later on.
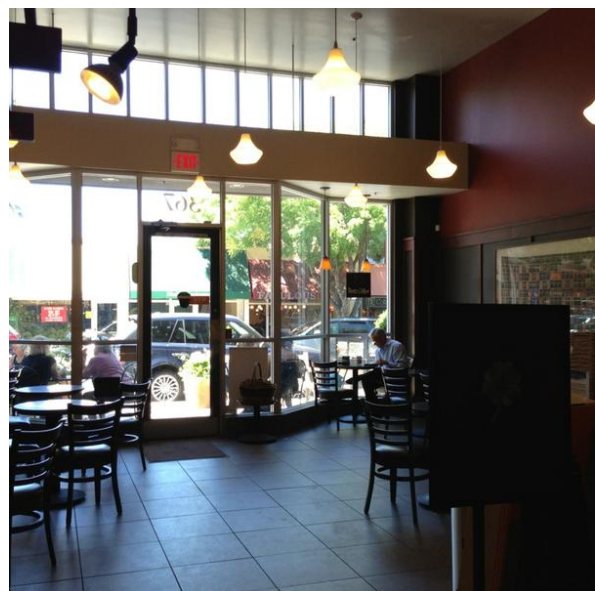
Interview at Café in Los Altos.

For tasks without a time-frame, she uses a to-do list on the Stickies app on iOS or physical sticky notes. She showed how she creates sticky notes by topic, rather than all in one list, because it is easier to organize. She believes that there could be a social aspect because it can help her become a better social person as she will easily remember other people's interests, especially the little ones, like hot chocolate, tv shows, etc.
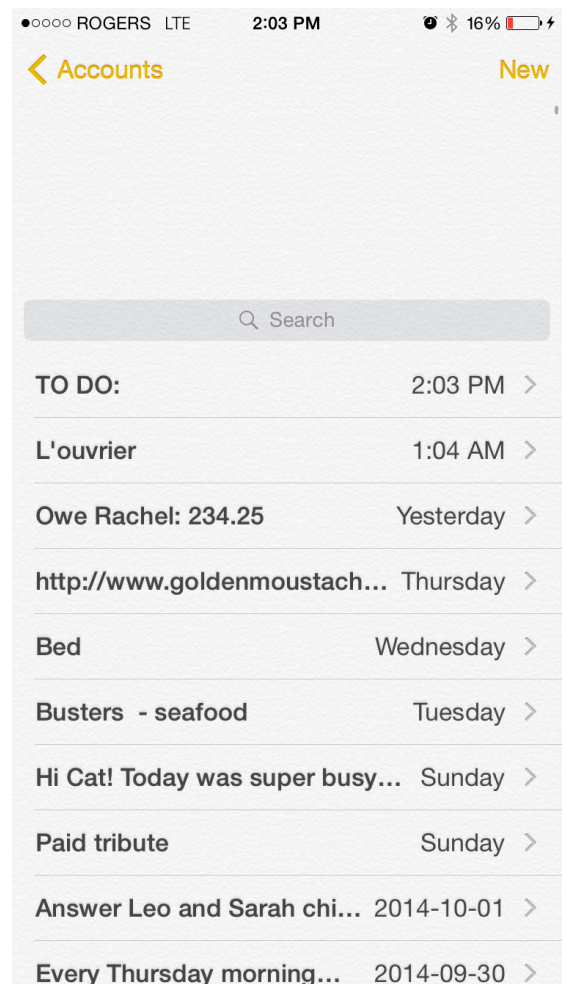
Ji's Interview Notes

E.G. - Student, 22 years old, CS major at Rice University. Decided to interview her at a conference because of her extraordinary interest in the most up-to-date products in Silicon Valley. She has always attempted to take a yoga class at a studio near her university, but she has never committed herself to it. She only uses Google calendar as a reminder tool, but often turns off the reminder because it gives her excessive notifications on her phone. If the new reminder app makes it simple and easy to turn on and off the notifications and to categorize events well, she is willing to use the app. She would not feel comfortable to share these information with others on the social aspect - she said she would like it to be able to easily set the privacy settings.

Quentin's Interview Notes

R.P. - Recent female graduate from McGill University and now in the workforce in Toronto, 25 years old. Has a very multicultural background, as she moved from country to country as a child (Asia and Europe) - bringing a great perspective to our inquiry. She has an educational background in Marketing and Sociology and now works in Sales.

This interview was conducted over Skype. We wanted to approach a similar demographic in a different environment, which proved difficult. This made the master-apprentice model more difficult to apply, but it remained successful. When asked about forgetting things she brought up going to the supermarket for one specific item and coming out with 10 things except for the one thing she needed; she also reads emails and tells herself she will answer later but then those emails get lost in her email and she forgets to answer. More on our topic of desired recommendations, she told me about furnishing stores friends recommend, but she forgets the names and forgets to go. After a moment of silence, she considers how many times she sees cool things on Facebook that she wished she had documented to check out later - from a new piece of clothing to a restaurant a friend is at. She reckons this happens because she's distracted, sometimes not in the mood, and simply forgetful. To remember, she says she uses her "notes" application on her phone or sets alarms with appropriate names. However, she realizes she may write something in but

●○○○○ ROGERS LTE   2:03 PM   ⏾ ✳ 16% ▮▭ ⚡

‹ Accounts   New

Q Search

TO DO:	2:03 PM >
L'ouvrier	1:04 AM >
Owe Rachel: 234.25	Yesterday >
http://www.goldenmoustach…	Thursday >
Bed	Wednesday >
Busters - seafood	Tuesday >
Hi Cat! Today was super busy…	Sunday >
Paid tribute	Sunday >
Answer Leo and Sarah chi…	2014-10-01 >
Every Thursday morning…	2014-09-30 >

Interviewee's current way of storing recommendations. This information is visibly lost in a list of other things, including must-dos and email templates.

then forget to look back or even forget that she had written a note in the first place. Finishing up the inquiry, she suggests a new implementation based on expiry: you input a note with a suggested expiry, and before that expiry ends you are reminded.

Contextual Inquiry Results

Broadly, we realized it was extremely easy to forget the things we'd like to see and do, particularly under the pressure of hectic schedules. All our interviewees utilize tools like Google Calendar or the Notes application on their phone/computer to keep track of the important things they *need* to do. However, information about things they *want* to do is either lost amongst higher priority tasks or relegated to less regularly visited storage, such as virtual or physical sticky notes.

In addition, there is simply no centralized way of keeping track of things we'd like to discover - we have to "learn" what works best for us through trial and error; such as using the Sticky Notes app or setting reminders for the future. A recurring theme in our interviews was the fact that our busy schedules often mean that the things we do are often a product of circumstance - for instance, going to restaurants that are close by to something we need to do or are fast and convenient.

Interestingly, almost all our interviewees seemed excited by the social potential of shared discovery and exploration as long as there was some mechanism in place to control the privacy setting.

Task Analysis Questions & Answers

Who is going to use the system?
The system is to be used by anyone with a mobile device who desires a method of both managing recommendations and being reminded about a recorded recommendation at an opportune time and place. In our interviews and our own experiences, we found that it is difficult to bridge the divide between recorded recommendations (on a phone, sticky note etc.) and actually acting on the recommendation. People with different backgrounds have this problem, and so we envisage a very large and diverse customer base.

What tasks do they now perform?
An example task: HF likes to explore the Bay Area and all the entertainment it has to offer. He tries to keep track of places and things he'd like to explore, but hasn't found a way to efficiently integrate them into his busy schedule and instead relies on large chunks of free time. Even so, he often doesn't get around to doing the things he wants to do - either because he forgets, or because of circumstance.

On a broader scale, our users currently use static/non-interactive means as a rudimentary way of keeping track of things, events, and places they would like to explore and (re)discover, but this means that they often forget to "explore" at the right time and place.

What tasks are desired?
Task 1: Efficiently record and organize past recommendations, to be easily leveraged in the future.
Task 2: Efficiently remember and follow up on things, events, and places that they would like to explore and (re)discover. Using your inputted information, predict what new places and experiences you would also like.
Task 3: Discover these new things with your friends. Share your experiences with them or even invite them to your next outing.

How are the tasks learned?
The tasks our interviewees complete today are learned primarily through trial and error. We currently use a diverse and inefficient set of reminder tools, from sticky notes to mental notes, to group up recommendations and activities we wish to do. Because our tools are so scattered, there is great opportunity to optimize our use of them, which our interviewees have done. For example, R.P realized that sticky notes work best for immediate tasks and her notes-application is better for long-term desires.

In our service, we envision the tasks being learned predominantly through a "give and take" dynamic. If users are able to consolidate these in one place, then our service will allow them to remember and follow up on some of these. If you record activities you will do some of the activities - through this give and take dynamic. If the experience of being reminded of something you've wanted to do for a while is good, then you will continue to record using our service - thus learning through positive reinforcement!

Where are the tasks performed?
We learn about things we want to do everywhere. We can record this information on the fly anywhere - but our interviews indicate that recommendations are often consolidated at home when one has time.

Interviewees used a mixture of both offline and online means to set reminders about things they wish to do in the future. Offline, they used sticky notes, usually in a work area or in a location at home you spend significant time in (eg. kitchen area). On their devices, interviewees used their notes application to write things down that they wish to do. These notes are not necessarily shared between devices. A shared commonality between these mediums: these "notes" or "reminders" are located in places of high interaction, so the chance that you'll be reminded is high (eg. kitchen, desktop of your laptop).

What's the relationship between customer & data?
Data is all the information on sticky notes, iOS reminders and in your mind. Data is also the emotional association you personally have to the physical information recorded. Data is also what your daily life looks like, your routine, your schedule etc.

Up until now, the relationship between customer and data has been poor. Interviewees use a wide range of recording tools, and each tool is not necessarily associated to a specific type of activity. The recording process is not streamlined, and so the relationship between customer and data becomes confused as a result. For example, because your data is spread out across different mediums, you cannot use it on-demand: I am out in Palo Alto looking for that restaurant I wanted to go to, and its name is on a sticky note at home.

What other tools does the customer have?

Right now, we've described how customers use physical notes, note-taking applications and calendar reminders. Let us call these *physical reminders* and *virtual reminders*, respectively. You can also be reminded to do things by friends, colleagues and family. For example, you can be going back home for a weekend, and your brother will remind you to try that restaurant you've always wanted to go to. When friends have information about your daily-life, they are able to remind you (let's call these *social reminders*).

How do users communicate with each other?

Users can communicate with each other at 3 key moments.

1. A friend can recommend you an activity, through email, a conversation or even through this app.
2. If the service recommends you do an activity, you can communicate with friends to organize the activity together.
3. During or after completing an activity, you can share the moment with your network.

How often are the tasks performed?

The service is broken down into two main tasks:

1) The first task involves recording information, which should be an ongoing task. I am recommended things many times a day, and so the task of recording is done often.

2) The second task involves accepting the app's recommendations at opportune times. The rate at which this happens depends largely on the person. Some people have very busy weeks, and so would expect recommendations only on weekends or while on holiday. Others have less to do during the week, but have most mornings blocked off because they're at the gym. Hence, depending on someone's calendar, recommendations can come more or less often; the act of actually accepting the recommendation also varies widely on the person.

What are the time constraints on the tasks?

Recording information should be a very easy thing. Ideally, it is as easy as picking up your phone and telling Siri, "you know Siri, one day I want to go to that restaurant called Da Mario's on University Avenue with Bob and Jane." Recording information should be quick, intuitive and painless.

Recommending an activity should also be quick and unobtrusive. For example, a small notification could come up on your phone reminding you about something. If you're interested, an event maker could quickly guide you in organizing and scheduling an activity. If you're not interested, you can just ignore the recommendation. Organizing a task should be very quick.

What happens when things go wrong?

What could go wrong?

- We recommend something the user has already done
- We recommend something the user is no longer excited about
- We recommend something at the wrong time (not in the mood, not enough time etc.)
- We recommend something in the wrong place

There is high potential for things to go wrong when recommending things. We are complicated organisms with moods and routines, and sometimes recommendations come at the wrong time and place. There should be a quick feedback system so that it is always 100% clear to the application what the user wants. For example, if the app recommends a restaurant, you should be able to accept and plan, decline now but recommend later (with reasons for decline), and decline and do not recommend again (with reasons).

Application Ideas

1) Analyze existing recommendations in the data a user provides, and recommend at a good time and location.
2) Collect existing recommendations in all users' data and categorize all by topic and area so that people can easily discover what things have been popularly recommended in different areas, depending on their interests.
3) A platform to organize all your recommendations (with the ability to filter through them using different criteria) and provide a comprehensive, quick and intuitive event planner that helps you plan your activity.

Ideas	Significance	Feasibility	Interest
#1 - Recommendation engine based on your data, time and location	Yes	Maybe	Yes
#2 - Social Application: Crowdsourcing popular recommendations	Yes	No	Yes
#3 - Recommendation Organizer	No	Yes	No

We choose Application 1. This application is two-sided. It is (1) a tool to record recommendations (things you want to do), and (2) a tool to discover those things. A user uses the app to record their "to-dos", and interacts with this information in two ways: by (1) directly looking at the data and choosing something to do, and (2) passively being recommended something to do by the app's engine.
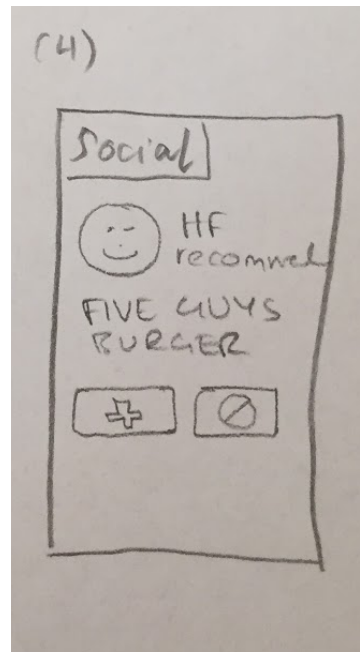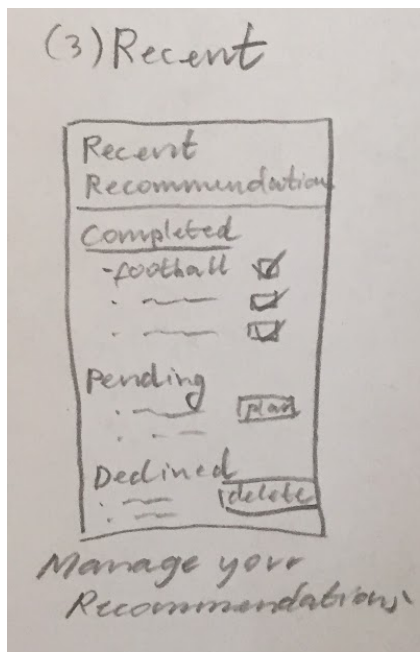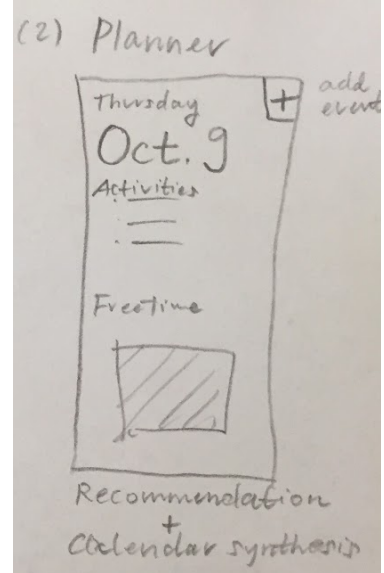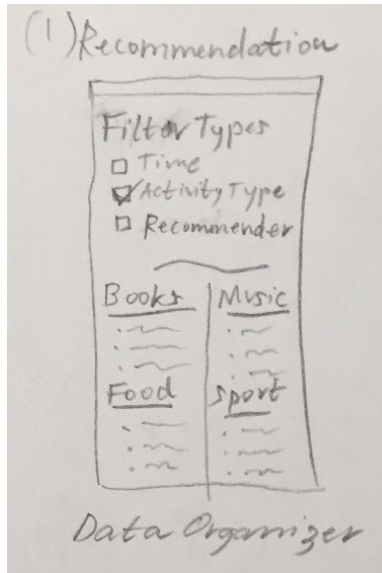
Significant because we want recommendations to be easily accessible for input and discovery; making the process of exploration much more fluid and ensuring that we do the things we want to do at the right time and place. Ideally, this means that we can do the things we want to much more easily and often.

Feasible because we can use time and location data to determine when the user would like to be reminded as well as integrating recommendations to explore with their schedule and availability.

Interesting because people have yet to find a tool that successfully keeps track of things you want to do. Our information is spread out across different mediums, we are disconnected from the data and as a result never act upon our recommendations. There is ample room to fix this problem.

Sketches

Design #1

Welcome
Page

Recommendation

Planner
Recent
Preferences
Social

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(1) Recommendation

Filter Types
☐ Time
☑ Activity Type
☐ Recommender

Books	Music
·————	·——
·————	·——
Food	Sport
·——	·————
·——	·————
·——	·——

Data Organizer

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(2) Planner

Thursday   [+] add
Oct. 9   event

Activities
——
——

Free Time

Recommendation
+
Calendar synthesis

---

(3) Recent

Recent
Recommendation
Completed
-football ☑
·——— ☑
·——— ☑
Pending
·——— [plan]
·——
Declined
·——— [delete]

Manage your
Recommendations

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(4)

Social

☺ HF
    recommed

FIVE GUYS
BURGER

[＋] [⊘]

Design #2

Sketch   Edwin Park

Left phone:

🔍 (Add Recommendation) ⋮

People: popular
Topic: All
Location: Current Location

AT&T Park

edwinp recommends
MVP seat at AT&T Park — MAP

ppoint recommends
nerving the dish

HCI for Dummies

spark recommends — MAP
HCI for Dummies

asadk recommends — Map
Palo Alto Noodles

⭐

Right phone:

🔍 (Add Recommendation) ⋮

People: mine
Topic: Sports
Location: Stanford

edwinp recommends — MAP
trying the New Yorker
burger at Treehouse

STANFORD

edwinp recommends — MAP
going to Stanford Football
game on Saturday

edwinp recommends — MAP
Visiting Hoover Tower

⭐

Design #3

recommended is nearby.

to directions

"Siri, I've always wanted to go to MOMA in San Francisco!"

INPUT

- speech based
- passive interface

Data

Palo Alto

OUTPUT

Maps

4:46

Thursday, Oct5

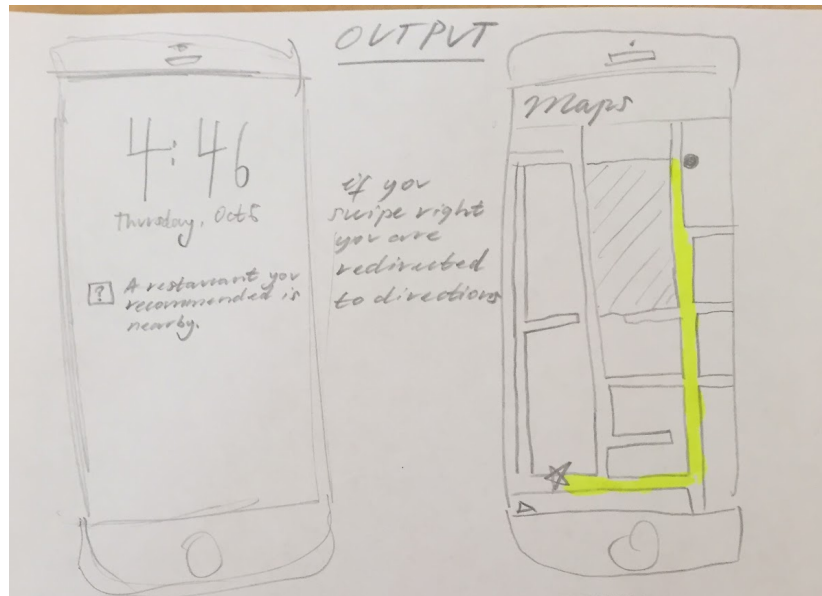A restaurant you recommended is nearby.

If you swipe right you are redirected to directions
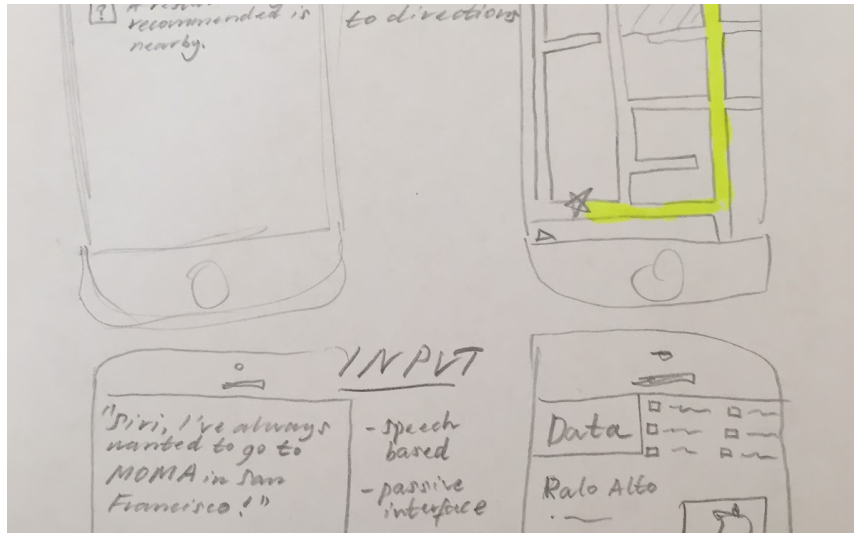
Other Info (Not in Essay)

New Tasks
Describe 3-5 new tasks that users will perform using our product. There should be simple, moderate and complex tasks. Compare/contrast with existing tasks your users are already doing. Focus on user behavior, not features. Label each task along two dimensions: frequency (high, medium, low) of use by the customer and importance (high, medium, low) to the customer or application.

Task 1: Recording the Information (simple, high frequency, high importance)
This is the first interactive step the user goes through: inputing recommendations.

Task 2: Organizing and Viewing Data (moderate, moderate frequency, medium importance)

Task 3: Interacting with Automatic App Recommendations (complex, moderate frequency, high importance)

Task 4: Sharing recommendations with Friends

Interview Notes
Questions
What is your name? What is your background? What is your current occupation? What skills do you use in your job? (Also note how the interviewee was recruited, chosen, and interviewed).

Are there things you wanted to do, but ended up forgetting to do?

Why do you think you forget?

What reminder tool do you use today, and what do you think of it? Or if you don't use a reminder tool, why not? (Is it cumbersome to set a reminder each time? Improvised from this point.)

What kind of things do you use this to remind you of?

In this reminder tool (we assume) you have to set a time to be reminded, right? This means the nature of the "thing" has to be one that you can be reminded of in a specific time-frame. What tool do you use to remind you of things without a known time-frame? Give them examples.

What kind of tool do you use for this purpose? A notes tool?

Does this work for you?

How great would it be if the tool reminded you at the right moment or even place for you?

Do you imagine a social aspect to reminders?