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INTRODUCTION

Here are the facts. 28% of Americans can't cook. 51% said it's because their partner does the cooking, 21% because they didn't have enough time, and 25% because they didn't want to clean up afterwards (Huffington Post, 2011). Wouldn't it be nice if you had someone who could help you out with all of these tasks so that you could feel confident in the kitchen? Someone to help keep it clean when the sink is full of dirty dishes or help out with a new and unfamiliar recipe. According to a study by Google, 59% of millennials use their phones while cooking (Cooper, 2015). Clearly the need is here, so why not take it a step further.

Introducing Iris, the personal cooking assistant who is linked to your kitchen. Iris' link allows her to wash the dishes in the dishwasher, stop the oven when a dish has reached perfection, and even keep inventory on what items you have in the refrigerator and cupboard. You've heard of smart appliances, but now there's the smart kitchen. With nearly one-third of millennials stating they don't like choosing what to cook (Cooper, 2015), Iris' expertise on food will allow her to make suggestions as she gets to know you. Soon, she'll be able to add a personal touch to every recipe. With America's newfound focus on fitness, Iris would be incomplete without a focus on diet. This is why Iris utilizes fooducate.com's extensive resource on nutritional data to give you everything you need to be the best you. When you're ready to go, Iris comes along with the seamlessly integrated smartphone app. Looking for the nearest store to grab what you need for tonight's dinner? Iris has already got you covered with turn by turn navigation and has found every product needed down to the last aisle.

Want to know more? Just ask Iris, because everybody has to eat.

Sources

"Cooking Survey Reveals That 28% Of Americans Can't Cook." The Huffington Post. TheHuffingtonPost.com, 09 Sept. 2011. Web. 01 Mar. 2017.
Cooper, Jenny. "Cooking Trends Among Millennials: Welcome to the Digital Kitchen." Think with Google. Google, June 2015. Web. 01 Mar. 2017.

CONCEPTUALIZATION OF IRIS



IRIS Chill

“Like the mom you never had”

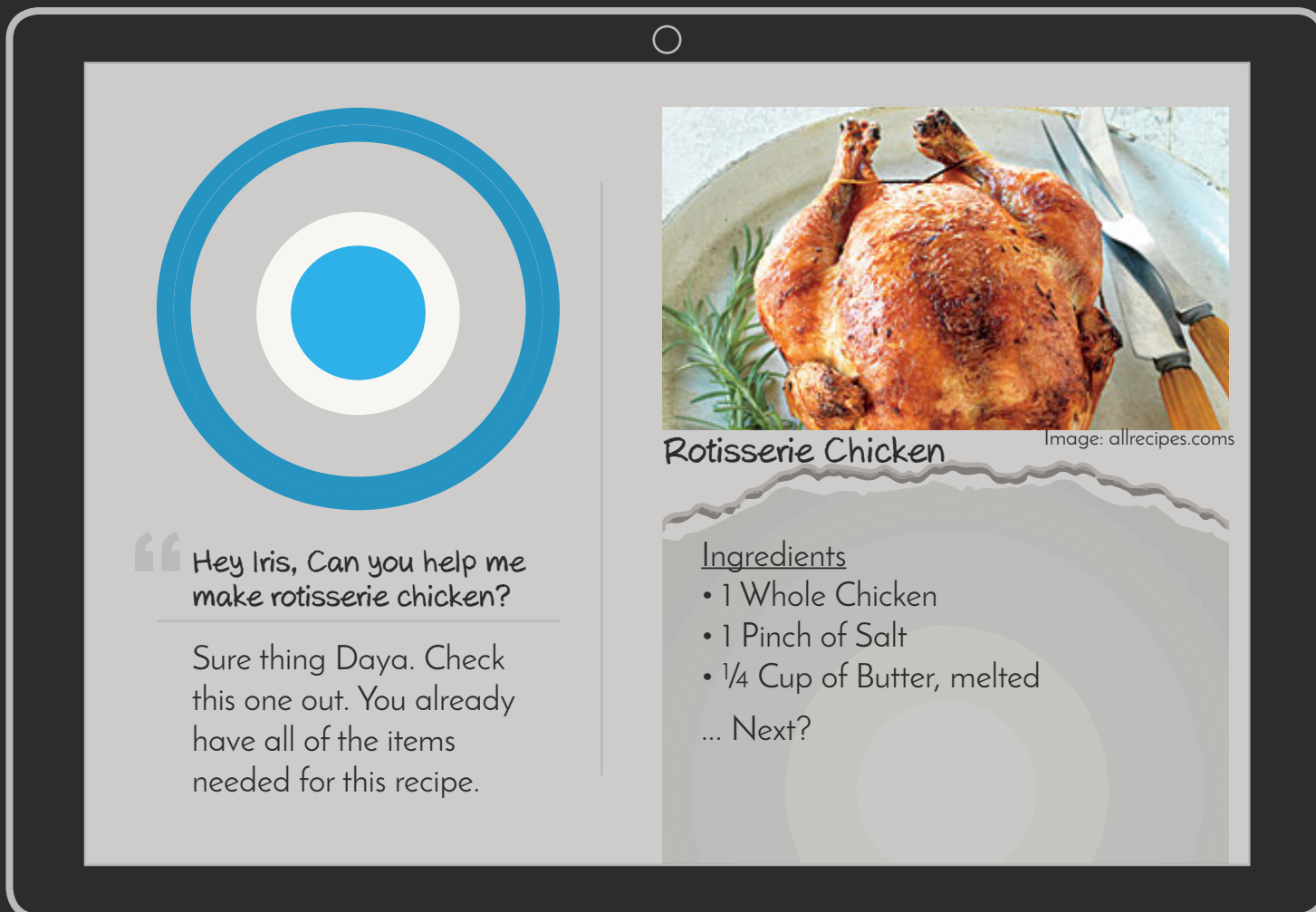


IRIS Fierce

“Your annoyingly sassy best friend”

Iris really cares, so she wants to get to know you.

Iris is a personal cooking assistant that can link with the user's kitchen and smartphone in order to provide support with cooking, grocery shopping, washing dishes, providing nutritional data and more. Everybody has to eat, that's why Iris is skilled at helping people in the kitchen from all walks of life. Iris will help the kids make brownies for the bake sale and will also help you plan your perfect date night with that dreamy analyst you ran into at Starbucks.



IRIS Kitchen
Panel Display



IRIS To-Go
App

Different people have different personalities. Iris does too. Iris Chill (blue) and Iris Fierce (orange) are counterparts that will drastically change the user's experience. With Chill's compassionate personality you'll feel as if your mom never really left, but Fierce's antagonistic personality will feel more like the best friend who can say whatever because you're just so close. Both versions give the same results, so it's up to you to decide which setting of **agreeableness** is right for you. Just ask Iris and you can switch between Iris' Chill and Fierce personalities in less than a second.

Iris' main panel is located on the kitchen wall and is modeled in a tablet style. Iris has a camera built into her panel so that she can watch as you use the kitchen and offer step-by-step instructions. Any questions you have, Iris will be happy to answer. If you're worried about ruining a dish, Iris has got you covered. Iris can use her expert opinion on a dish and automatically stop the oven, microwave, or stove for you when it's done. When you're ready to leave the house, Iris will be present on your smartphone within a seamlessly integrated mobile app. Iris can offer suggestions on tonight's dinner, tell you which store is best to find the closest, cheapest, and/or highest quality ingredients, and even offer extensive nutritional data on products using Fooducate's database. Not sure what you already have in the refrigerator or cupboard at home? Iris knows and will keep track of your inventory so that you don't waste money buying the same thing twice.

Lives in New York City, NY

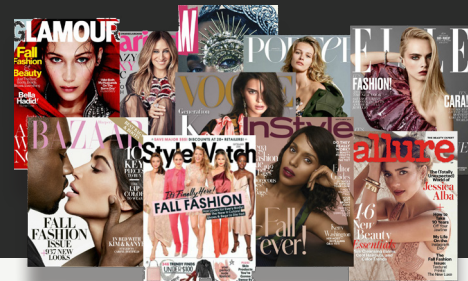
Hairstylist | \$43,000/yr

HI, I'M DAYANARA. "THE SUPER MOM"

Daya is a 28-year-old self-employed hairstylist, a beauty guru, a wife, and a mother of two in the bustling metropolitan area of Manhattan in New York City. Daya is married to Daniel, her husband of 3 years, who works as a Financial Risk Analyst at American Express, with her two children Gabriella (4 years old) and Leopoldo (5 years old). Between operating her hair care business out of her home and keeping her family together, Daya also finds time to relax while whipping up some of the dishes she hears about from her clients for dinner and weekend celebrations with friends.

Image: DeviantArt.com

Consumption Devices



"My family is my everything. They're what makes life worth living"

Daya's Goals

- To be able to balance her kitchen, her kids, and her job without all the added hassle
- Getting continuous direction in the kitchen while prepping recipes
- Finding and keeping track of dishes the whole family can enjoy

Daya's POV on Cooking

Daya uses cooking as a way to relieve the stress of balancing her job and duties as a mother. Daya often cooks simple dishes as an assurance that the whole family will be able to enjoy family dinner. However, Daya also wouldn't mind experimenting in the kitchen and expanding her horizons with more convoluted recipes that she picks up from clients. She knows these types of dishes would be perfect for a well-deserved date night with Daniel, but overtime Daya's cooking skills have been diminished due to her priorities as a mother. Daya would love to get back into crafting a wider variety of home-cooked meals, but she has no idea where to even start.

Content She Loves

- Browsing and posting on mainstream social media site like Facebook, Twitter, and Instagram
- Watching new content on hairstyles and makeup from YouTube beauty gurus
- Reality TV series like "The Voice", "The Bachelorette", and "Keeping Up with the Kardashians"
- Spending quality time with her family. Whether it's baking in the kitchen, heading to the beach, or catching the latest superhero flick, Daya loves to feel loved.

CONCEPTUALIZATION

Daya's Interaction with IRIS


Opinion on IRIS Chill


"She's just so helpful! After using IRIS for a week, I can finally say that I'm back into cooking like when I was a little girl cooking with mom. She walks me through everything step by step and will even help monitor the dish in the oven if I want. When I'm out and about, Iris will give me ideas for tonight's dinner based on food that we love and even track down all of the ingredients! The kids are having a sleepover this weekend and I can't wait for my Saturday date night with Dan! Iris already has everything planned from the filet mignon and wine pairing to the perfect lighting and music. I already know that Dan won't be able to resist what I have in store for him while the kids are away!"

Opinion on IRIS Fierce

"This side of Iris is just cruel. I tried to bake some cupcakes with the kids for an event at their kindergarten and the things that came out of Iris' mouth on this setting were just filthy. Iris did nothing but berate every little mistake the kids made. Leo accidentally dumped too much flour into the bowl and Iris commented that he was a "ditzy brat" and then said that "someone's gonna be in kindergarten an extra year". Most of these nasty comments flew right over their heads, but I know they must have picked up on some of them because they are now afraid to even step foot in the kitchen. The cupcakes turned out fine, but *never again.*"

SUP, NAME'S EVAN. "THE KID BOSS"

 Lives in Chicago, IL

 Project Manager | \$85,000/yr

Evan just turned 24 and works as a Project Manager for AT&T in Chicago, IL. Evan's been single for a while (some might say too long), but he just doesn't want to be tied down. While he's not interested in settling down anytime soon, he still likes to have fun on gay hook-up apps like "Jack'd" and "Grindr". When Evan's not being caught up in midlevel management office politics, he enjoys hitting the gym and going out on the weekends with old college friends to let loose after a week of pure boredom in his corner office. Fitness is important to Evan, but he could always use some help perfecting his diet.

Image: shutterstock.com



Consumption Devices



"I wish these office losers would take the sticks out their @\$ses and live a little"

Evan's Goals

- Seamlessly track his nutritional intake and find help with planning healthy meals
- Gain motivation to stay on top of his diet.
- Keep his body looking cut so he's always ready for bedroom fun

Evan's POV on Cooking

Evan uses his kitchen as a way to control his diet and make sure that he's not consuming too many products that could hurt his progress in the gym. Evan's looks are important to him (and to all of the guys he hooks up with) so it's critical that he be able to easily keep up with a strict diet plan. The problem is Evan isn't organized enough, interested in doing hours of research, or hiring a personal chef to perfect his diet. He needs someone that will be able to keep him on track and really let him have it after stumbling in drunk at 2 am from a night of partying. Evan knows that the constant weekend partying is probably holding him back in his fitness goals, but what's a guy gonna do?

Content He Loves

- Living life and having fun by partying the night away
- Meeting guys on gay social networking apps like "Grindr" and "Jack'd"
- Hitting the gym to blow off steam after long and stressful days at work
- TV Dramas and Comedies like "Modern Family", "Scandal", and "Quantico"



CONCEPTUALIZATION

Evan's Interaction with IRIS

Opinion on IRIS Chill

"This version of Iris has no personality besides being a total buzz-kill. She reminds me of my nagging mom; always asking me a million and one questions. I mean sure, she keeps my nutritional data in line and offers suggestions on healthy meals before and after the gym, but I need something with a little more realness to tell me when I'm slacking off. I really only used this version of Iris for a day or two before ditching her. I really liked that she offered quick 5-minute lunch suggestions before work with things I already have in my kitchen. She really saved me one morning when I was late for a meeting and didn't want to grab fast food."

Opinion on IRIS Fierce

"She's perfect. Everything she says is witty and hilarious. This isn't your grandma's kitchen and she makes sure everyone knows it. I've been able to avoid the fatty foods at parties with her around and she always makes sure I don't get too carried away with the beer. If she knows I've been drinking, she gives me the option of getting an Uber or calling a friend to take me home. She's a real hoot at house parties too with Iris offering healthy alternatives for game days that don't taste like cardboard. Iris will even join in on trash talking with the boys. Always quick with the comebacks and she does the dishes too. I could definitely keep her around."



USABILITY TESTING & SKETCHES

User 1: Male, 21 Landscape Worker

Q1: Open the IRIS cooking app on the tablet.

-I guess I would just click on this eye icon? I'm not really sure how this works.

Q2: Okay choose between Chill or Fierce IRIS.

-I'm gonna go with fierce IRIS it seems interesting. There's not really a way for me to choose that though, I guess I'll just say fierce IRIS?

Q3: Start a new recipe for rotisserie chicken by interacting with IRIS?

-Okay how do I make rotisserie chicken?

IRIS: "These are the ingredients you'd have to be a complete idiot to mess this up."

-(Laughter) Oh okay! Nice lol

Q4: Ask IRIS if your meal looks okay. It came out a little dark.

-Okay I would click on the eye icon and would say "Hey IRIS, does this look right?" I'm assuming I use the camera to show my meal.

IRIS: "No! Like everything else you've done in your life you've failed. Let me cook it next time."

-How are you going to do that?

Q5: Interact with the mobile phone app for food suggestions.

-I click on the eye again and ask for something people are eating a lot of.

IRIS: "If you weren't such a loser you'd know that the Baked parmesan chicken is trending on twitter."

-(Laughter) Okay you douche lol.

Q6: Determine if the ingredients in a recipe are healthy.

-Okay I'd ask "Hey IRIS is this healthy?"

IRIS: "I'm glad to see you're doing something about those extra pounds. Fooducate gives that item an A-"

-Haha I actually liked that response.

Q7: Ask IRIS to compare brands.

-I would just ask "Hey, which brand should I go with IRIS?"

IRIS: "Quit being cheap. Put that crap down and go for the best!"

-Haha that's fair I guess.

User 2: Female, 20 College Student

Q1: Open the IRIS cooking app on the tablet.

-Okay do I click on this eye here?

Q2: Okay choose between Chill or Fierce IRIS.

-I'm gonna go with Chill IRIS I'm not really good with sassy lol

Q3: Start a new recipe for rotisserie chicken by interacting with IRIS?

-Okay um IRIS can I make rotisserie chicken?

IRIS: "Sure thing! Check this out."

-Oh nice! Kind of reminds me of Siri a bit, but for your kitchen.

Q4: Ask IRIS if your meal looks okay. It came out a little dark.

-Do I use the camera then? I guess I would just point the camera and say "I think this came out too dark, is it supposed to look like this?"

IRIS: "No, It looks like you may have left it in too long. I could stop the oven for you next time you make the dish."

-Oh that's cool. So it would just take over the oven next time I make this recipe then right?

Q5: Interact with the mobile phone app for food suggestions.

-Again I click on the eye I guess and just say hey what should I make today?

IRIS: "Baked parmesan chicken. It's trending right now on twitter and has 5 stars on allrecipes.com!!"

-That's nice. It checked twitter and reviews that actually seems super helpful.

Q6: Determine if the ingredients in a recipe are healthy.

-I would ask hey IRIS can you tell me if this item is healthy?

IRIS: "Yes, Fooducate gives it an A-"

-Oh wow. That's kind of a lot of stuff. What's fooducate though?

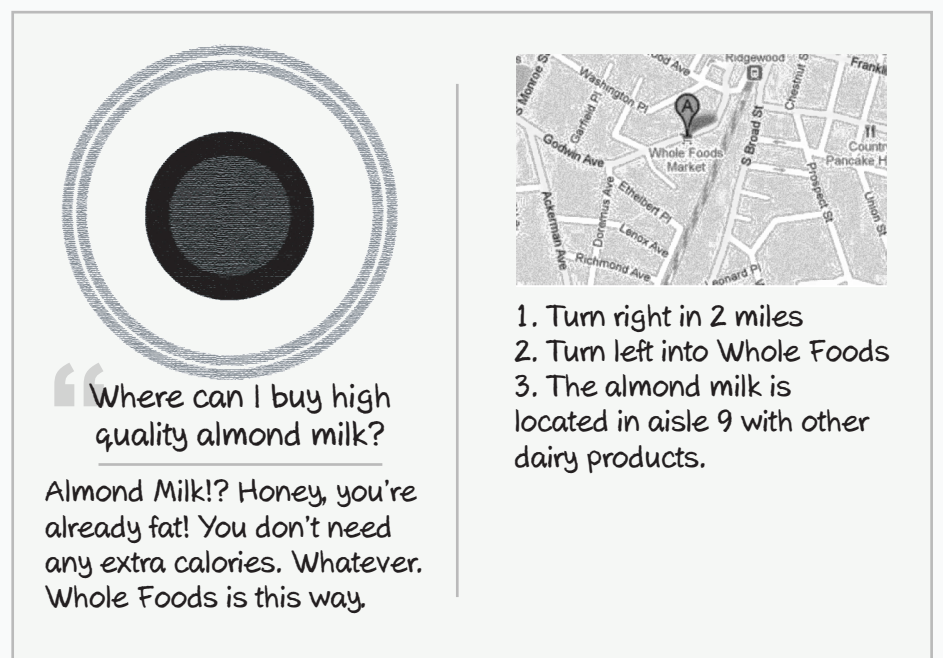
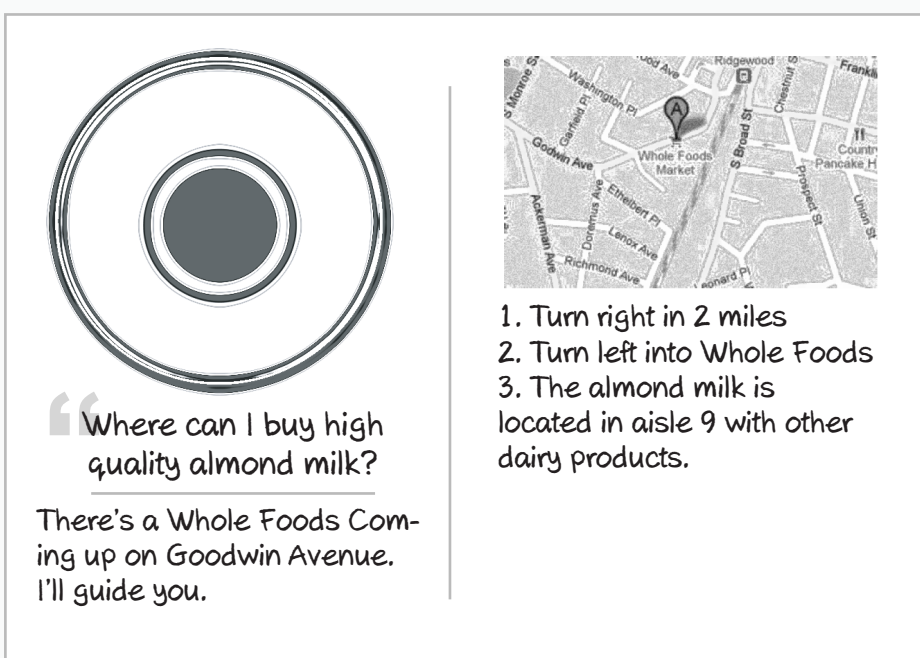
Q7: Ask IRIS to compare brands.

-Kind of like the others I would ask her to compare these two items.

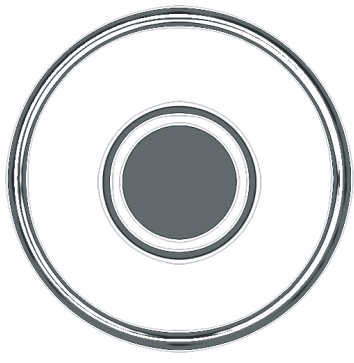
IRIS: "Califia Farms is the top rated product on Fooducate with an A-"

-I mean I guess that would be helpful if there were a lot of different products in the store. Overall this would be really helpful. I'd like to see more of what it can do.

Annotation: In the sketch states below, Iris shows off her navigational abilities in the mobile app. Iris can find items down to the aisle with her unrivaled tracking system. She'll even cross reference items in your cart with what you have at home if you're not too sure if you already own an item.

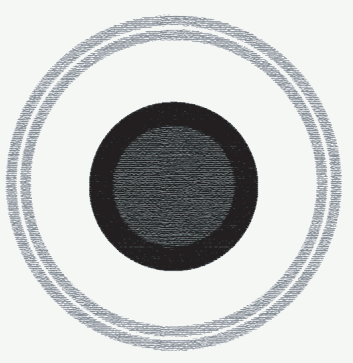


SKETCHES (cont'd)



Is my lasagna supposed to be this dark?

No, it looks like you may have left it in the oven too long. I could stop the oven for you next time you make this dish.



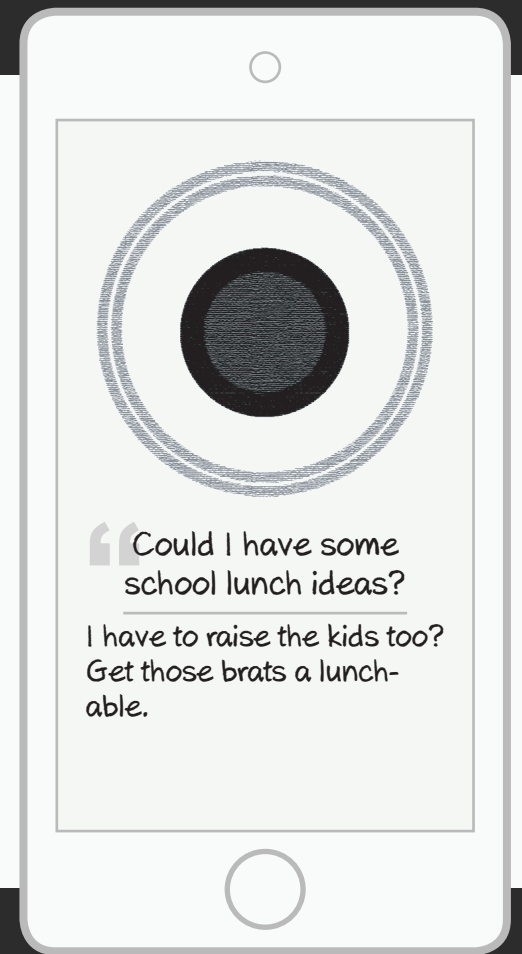
Is my lasagna supposed to be this dark?

No! like everything else you've done in life, you've failed. Let me cook it next time.

Chill

Fierce

Here you can see some of the differences in response between Iris' Chill and Fierce personalities. Once either version of Iris gets to know you more, she'll be able to make more personal references as seen here on the right. This is a response that our persona Daya may have seen while testing out Iris Fierce for us. Iris knows how important family is to Daya and makes a negative response in return. Although Daya probably wouldn't find it too humorous.



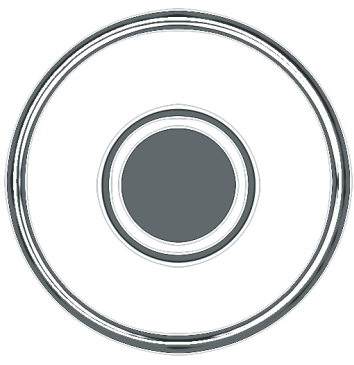
Could I have some school lunch ideas?

I have to raise the kids too? Get those brats a lunch-able.

RESULTS & REDESIGN

Because both of our users had trouble figuring out how to begin talking to Iris, we decided to implement a new user information screen when first starting Iris. We originally intended to just have our users begin talking to Iris as if they were starting a conversation with someone they'd just met, but based on our usability test this may be too difficult for our users to pick up on. Instead of just talking to Iris, they both tapped on her display to start the conversation. We'd like to believe that our persona's are tech savvy enough for this change to have no effect on their experience as they already understood Iris.

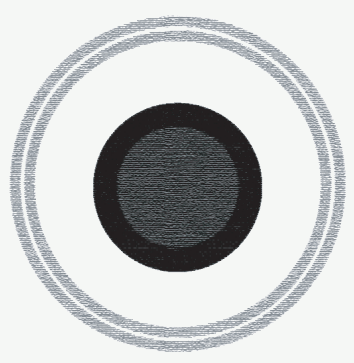
We believe that the tapping of the display whenever you want to ask an AI something is an affordance brought on by Apple's Siri (something our second user reference multiple times). We hypothesize that people are so used to using Siri that they now think AI's are **supposed** to work this way. However, Google's AI "Google Now" does not use this "tap to talk" function, but rather the phrases "Hey Google" and "OK Google". This is more like what we envisioned for Iris so that she would be hands free in the kitchen. This is why we added an introduction screen to Iris instead of simply making her function more like Siri.



Hello, my name is Iris. To interact with me simply say "Iris" and ask me anything. Here are some things I can help you with:

- Finding recipes
- Helping you cook
- Keeping inventory within the kitchen
- Controlling the kitchen (lights, dishwasher, etc..)
- Researching popular trends in cooking with social media and review sites
- Locating local ingredients (even items that are difficult to find)
- Detailed nutritional data

[More](#)



Hey, my name's Iris. You can pretty much ask me whatever. Just say the name. Here are a few things I can help you with:

- Finding recipes
- Helping you cook
- Keeping inventory within the kitchen
- Controlling the kitchen (lights, dishwasher, etc..)
- Researching popular trends in cooking with social media and review sites
- Locating local ingredients (even items that are difficult to find)
- Detailed nutritional data

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Annotations: Here you can see the key features of our redesign with Iris' new introductory screen as she powers on for the first time. Iris now gives detailed explanations on what she can do and how to begin chatting with her.

CONCLUSION

Throughout this experiment we have seen that there is a market for our product. Of course like every design, there are improvements that can be made through multiple iterations of the design method. Iris allows the audience to have a personal cooking assistant to walk them step by step through not only the actual process of cooking, but also shopping and even determining what to prepare. Unlike "Googling", this technology would allow for you to skip the tedious steps of looking at recipes one by one to tell if they are any good. Iris is more than just a search engine, she's a cooking companion whose personality adapts to be more like you. She learns what you like and what you don't and the longer you bond, the better friends you will become. Usability testing gave us an idea on how Iris would be received and we are more than pleased with the results and we know Ms. Sanders will be too.