The Protecht Application

● ● ●

IS 272: HCI Final

Alara, Eliza, Marisa, and Quentin

What is Protecht

A mobile application that warns unconsenting users of virtual assistant devices in their proximity that may be collecting their data.

Why Protecht is Important

Individuals enter homes, classrooms, workspaces without consenting to the collection of their conversations, movements, and other personal data by "smart" devices, such as virtual assistants.

Protecht relieves these third-party privacy concerns.

How It Works

- When entering into a space, users of the Protecht App will be notified by a pop-up on their smartphone that a surveillance devices has been detected.

- User's phones and surveillance devices are connected through Bluetooth or WiFi.

- <u>(1) This pop-up will also prompt users to "accept" or "deny" the terms of service of the surveillance devices **OR** (2) this pop-up will prompt users to read the terms of service</u>

- Protecht users can open the application and find a device locator map, saved "smart" devices, and terms of service.

Problems Protecht Will Address

Issue 1

Alerts visitors of when/how/what data is being collected by AI devices.

Issue 2

Informs visitors of inconspicuous or hidden devices.

Issue 3

Gives tech companies the opportunity to protect against liability/privacy breaches.

Implementation

Companies will be inclined to use Protecht because it will:

1) Potentially protect companies from liability/privacy breaches

2) Users and their data will be more identifiable

Protecht Target Users

- Smart Device Owner. The Homeowner.

- Third-Parties: Individuals not living in the home. Guests.

- Tech companies.

The Rogers
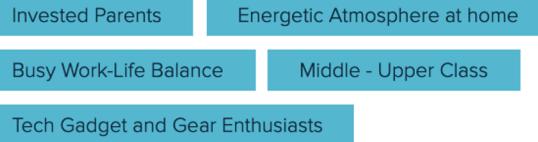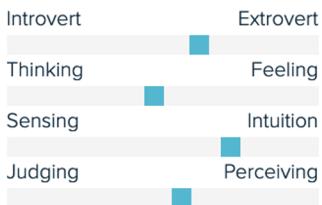
Age: Parents - late 30s
Work: Corporate management position, wife works in marketing
Family: Married with children (3) aged 5-11
Location: Santa Clara, CA
Combined Income: $ 120k

Personality

Introvert — Extrovert

Thinking — Feeling

Sensing — Intuition

Judging — Perceiving

Invested Parents

Energetic Atmosphere at home

Busy Work-Life Balance

Middle - Upper Class

Tech Gadget and Gear Enthusiasts

Goals

- Minimize work at home, and make it a comfortable living experience
- Allow the kids to spend time at home without getting bored
- Invite more friends and neighbors for dinners and drinks
- Use Nest Thermostat to help save energy and create a better future for our kids
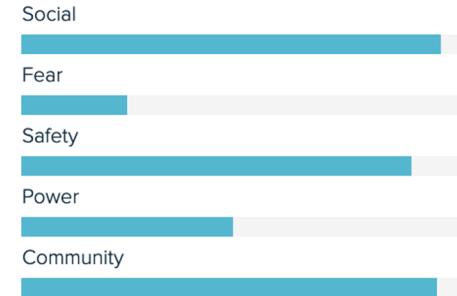
Frustrations

- Unsure about their kids privacy around their smart home devices as well as privacy of guests
- Only use Alexa for certain commands
- Kids play around with Alexa when they aren't around

A Day in The Life

- Wake up and ask Alexa about the weather and flash briefing
- Prepare breakfast and lunch boxes for the kids
- Drive the kids to school and play Alexa newsflash briefing
- Baby sitter comes at 4 pm to pick up the children and monitor them at home
- Cook and use recipes on Alexa
- Family members come around 7 pm for a casual dinner and conversation
- Use Alexa to play ambient music during dinner, adjust heating to cooling once people come in

---

Motivation

Social

Fear

Safety

Power

Community
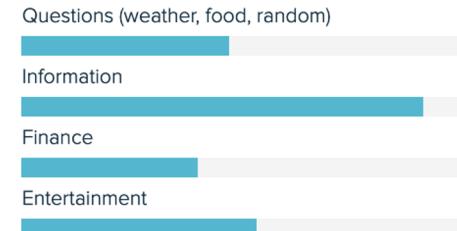
Smart Home Devices

Smart Home Use

Questions (weather, food, random)

Information

Finance

Entertainment

Linda

Self-Employed Spa Specialists   Empathetic

Cautious   Accommodating

*"I enjoy easy-to-use technology and will do anything I can to accommodate to my clients' needs and comfort."*
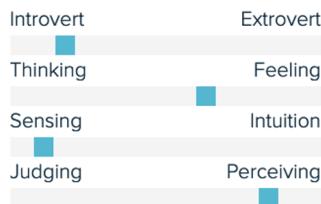
Age: 33
Work: Small business owner
Family: Married with 2 kids
Location: Pacific Palisades, CA

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

Goals

- Stay organized and updated with client appointments
- Create an enjoyable atmosphere at her home office for clients
- Convey use of latest technology and tools to her clients
- Ensure safety despite her home address being public as her work address

Frustrations

- Privacy - she must disclose her home address for her work
- Smart-home malfunctions: Amazon Alexa goes off in front of clients, disturbing a peaceful environment with her voice
- Changing settings on Amazon Alexa for client privacy

A Day In The Life

Wake-up and play daily flash briefing
Alexa recites client appointments
Get ready and prepare breakfast for the kids
Alexa alerts to wake Children up
Babysitter arrives to help kids before school
First client arrives, Nest temperature adjusts to their needs
Amazon Alexa plays relaxing music playlist
3 - 4 clients taken daily, through her front door, Linda adjusts the Alexa playlist according to their procedures/preferences
Alexa reminder to pick up kids from school

Motivation

Growth

Fear

Efficiency

Power

Business

Brands & Influencers

Smart Home Use

Schedule/Calendar

Music

Third-Party Users

Passive Pam

"I hope the smart home device in the Johnson's home is not tracking me. I love posting on social media and I am worried that I am being constantly being tracked."

`College Student` `Babysitter`
`Social Media Savvy` `Personable`
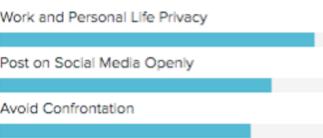
Goals

Understand how the smart home device in the family's home she works for is being used.

Frustrations

Worried about her privacy in the family's home but is reluctant about asking them to turn off the device in fear of losing her job. She does not have access to turn the device off or view the terms and conditions.

Motivation

Work and Personal Life Privacy

Post on Social Media Openly

Avoid Confrontation

Cautious Carl

"I read a news article recently about smart home devices invading our privacy. My peers have these devices and I hope my data is not being collected when I visit their homes."

`Accounting Manager` `Reserved`
`Pensive` `Hard-working`

Goals

Would like to know how his friend's smart home device collects his data when he visits them.

Frustrations

Conscious about data tracking due to confidential work information that he does not want to be shared. Visits his work friends and does not want private conversations shared. Does not want to confront his peers about their devices.

Motivation

Sensitive Personal Data

Avoid Upsetting Friends

Control Personal Data Tracking

Active Alice

"I am having trouble understanding all of the new tech that is out there. I wish there was an easier way to find out how these smart home devices in my grandchildren's home are being used."

`Non-Profit Manager` `Activist`
`Feminist` `Compassionate`
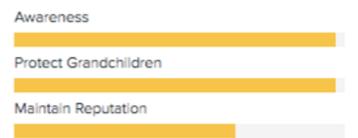
Goals
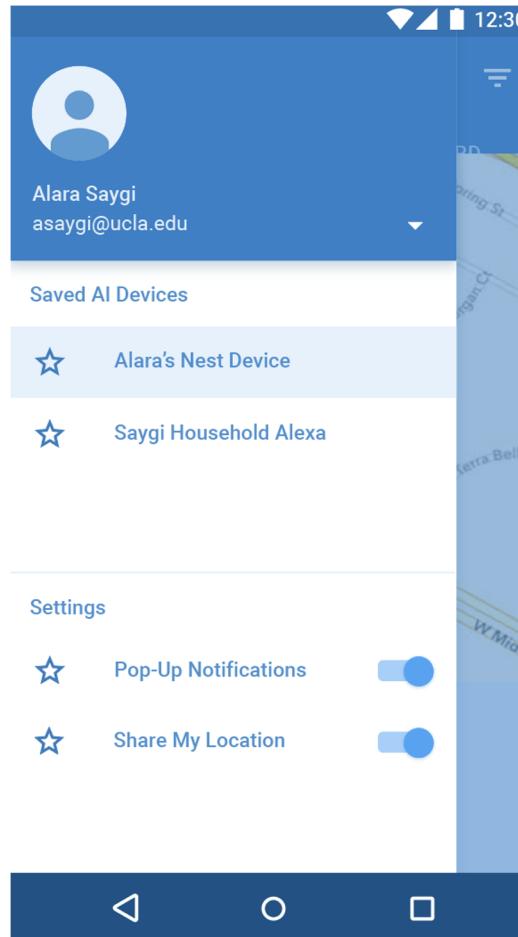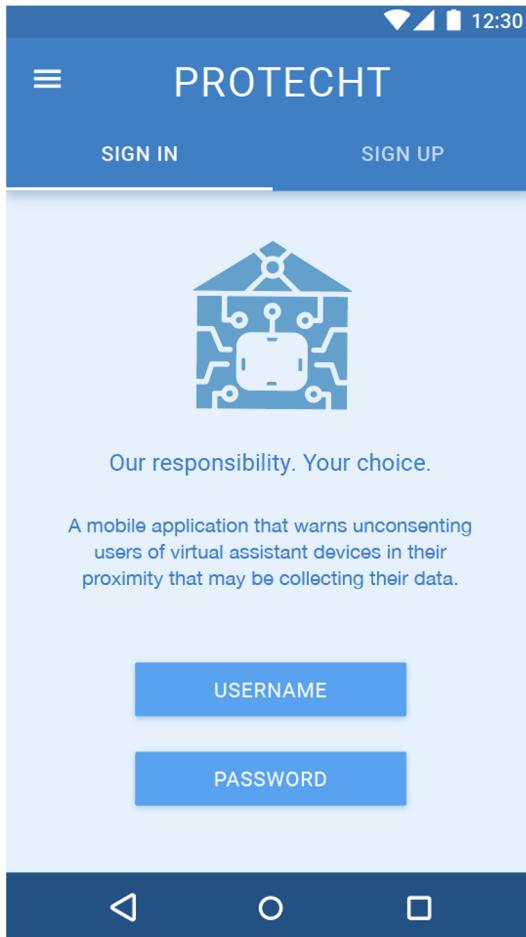
Wants her grandchildren and her own privacy protected when she visits their house.

Frustrations
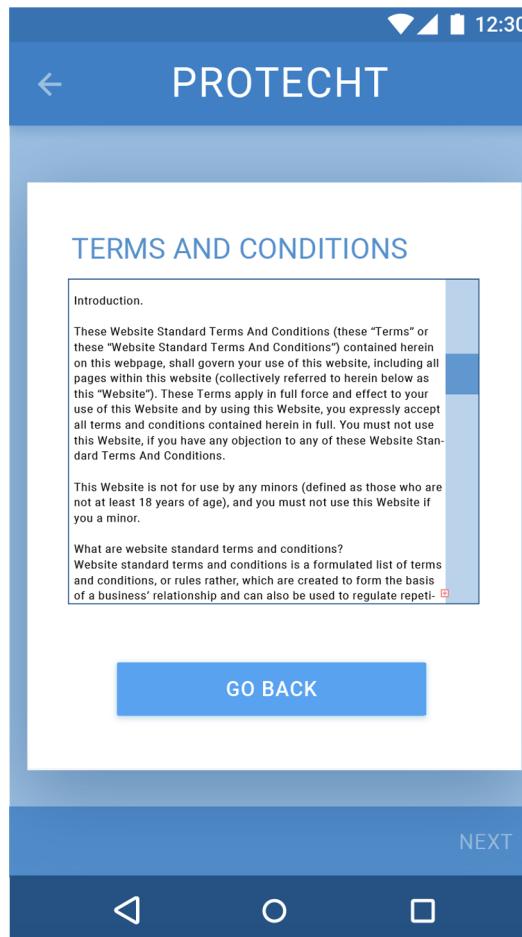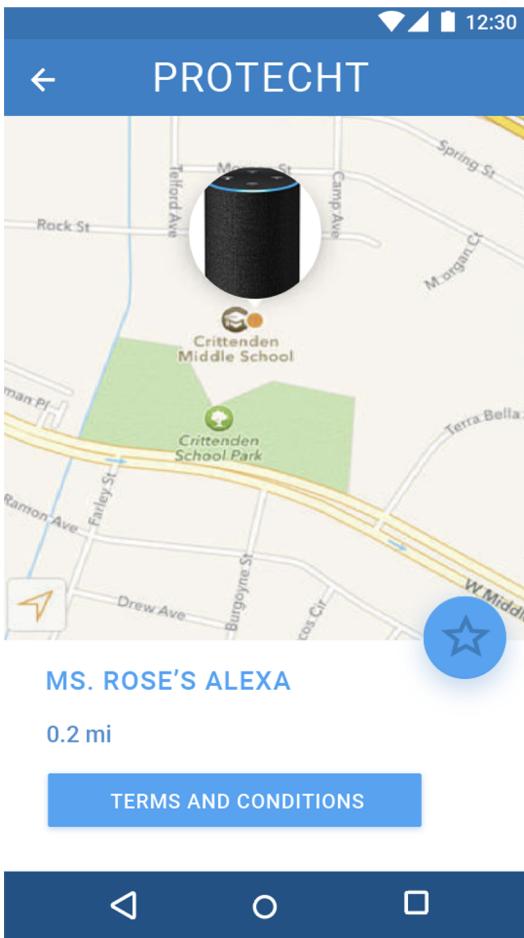
Is not very tech-savvy and does not know whether or not she is being tracked by smart home devices present in her grandchildren's home. Helps out her community and does not want private information about her shared or collected.

Motivation

Awareness

Protect Grandchildren

Maintain Reputation
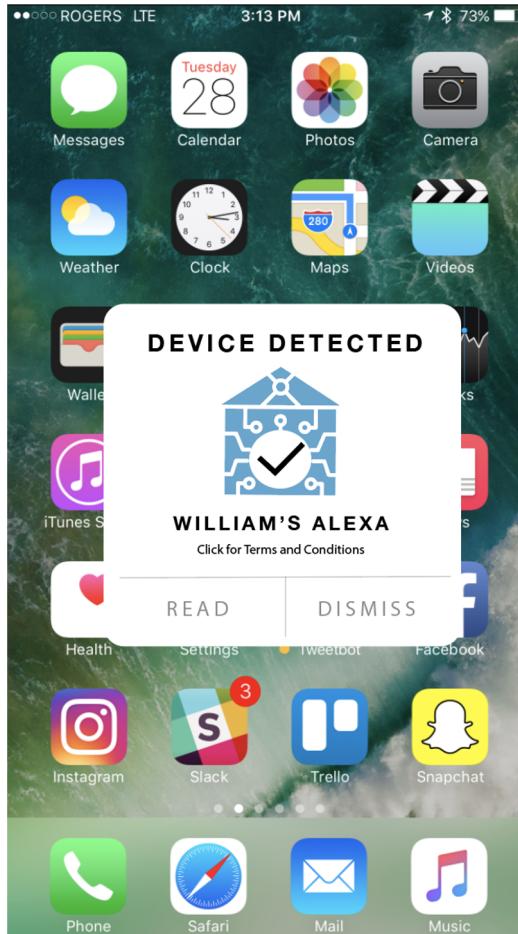
Main Menu (Mobile)

Device Map (Mobile)

Terms and Conditions Popup (Mobile)

Roadblocks

- Would this application really give third-parties more privacy? Would it allow tech companies to target consumers even more?

- What are the legal and social implications if we allow third-parties to "deny" the terms of service?

- Would tech companies be on board to integrate this application with their devices?

- Would this lead to more security breaches/targeted hacking of devices?

- Is it ethical to collect and/or store data on the Protecht App?

- Is the Protecht App user friendly for those who are not tech-savvy or disabled?

QUESTIONS?