2023 Privacy and IoT Research Exploration

Blueberry

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ProperData

INTRODUCTION

Goal Statement:

Using the Mycroft device there is a better protection and perks than its competitors in functionality, privacy, and security. You can personalize your Mycroft device with various skills that you can make or download. Although there are many existing IoT features that users can no longer live without, they are misled into thinking that the services are free.

Rather than paying with money, users pay with their data which is often unknown to them. Mycroft differentiates itself from these companies by offering complete privacy and can provide users with a sense of security when using this device.
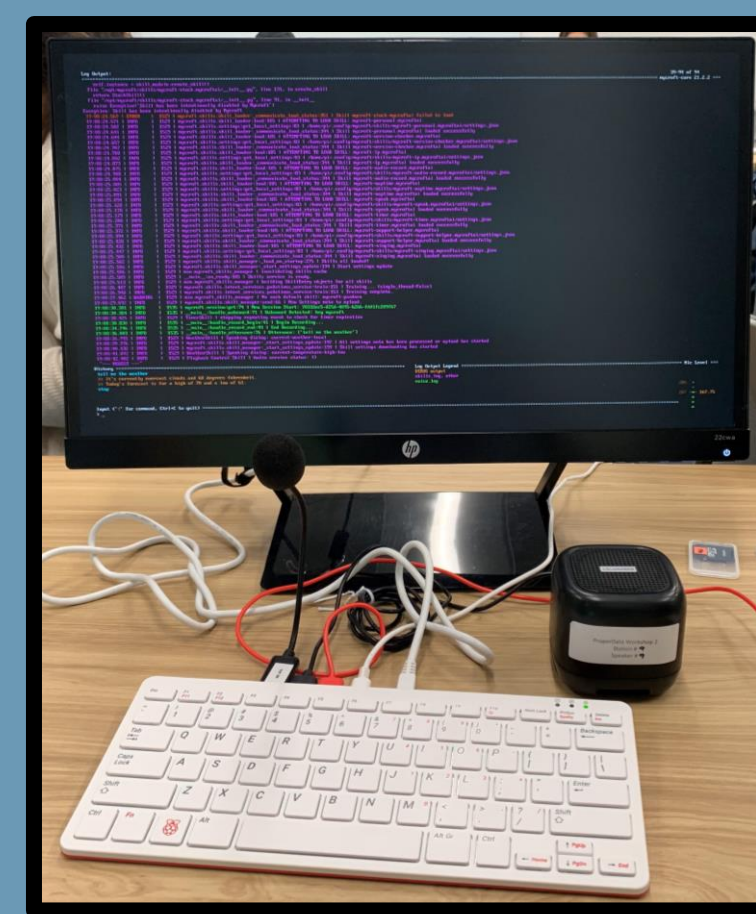
MYCROFT JOURNEY

Figure 1: Setting Up Mycroft

- Using the Mycroft was a fun but challenging experience
- On multiple occasions our files would get corrupted, and we would have restart the process
- With the help of backup SD Cards, we were able to finish setting up and developing our skill

ALEXA DATA

Figure 1: Data from our research on Alexa

- Alexa was not abundant in providing varying data
- There were only three information trackers found in our research
- However, unlike Alexa, Mycroft had no trackers at all

TIKTOK DATA

- Data collected while using the mobile device was significantly more than desktop website
- Tracks many data types that may not seem important but reveals personal information (e.g., screen size, device type, service provider)
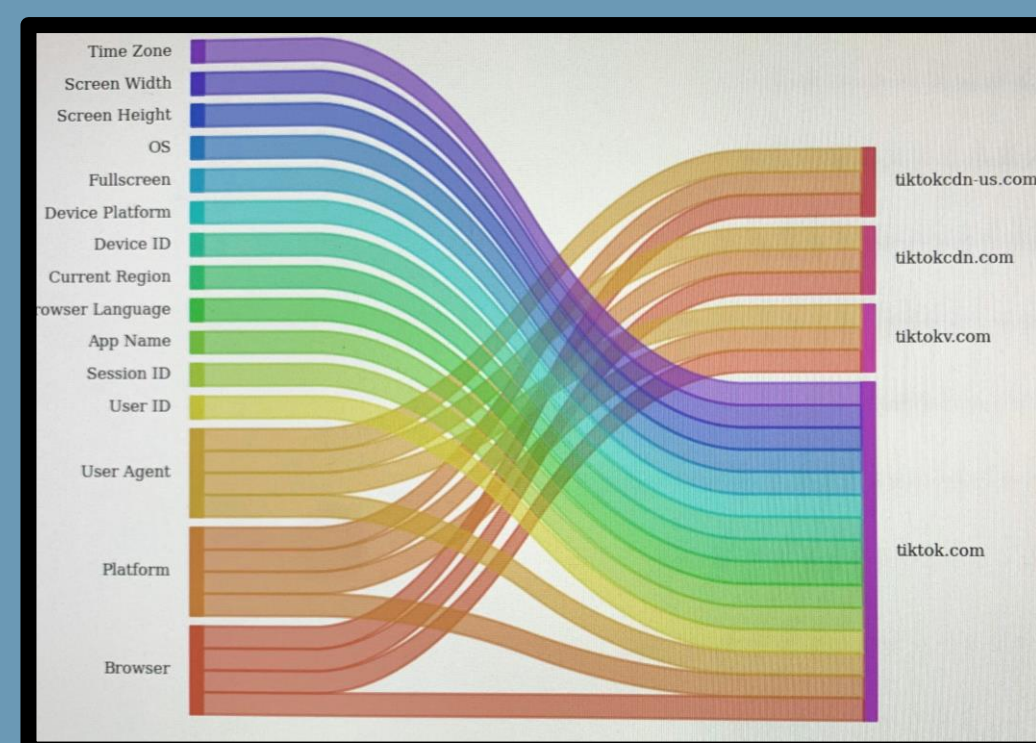

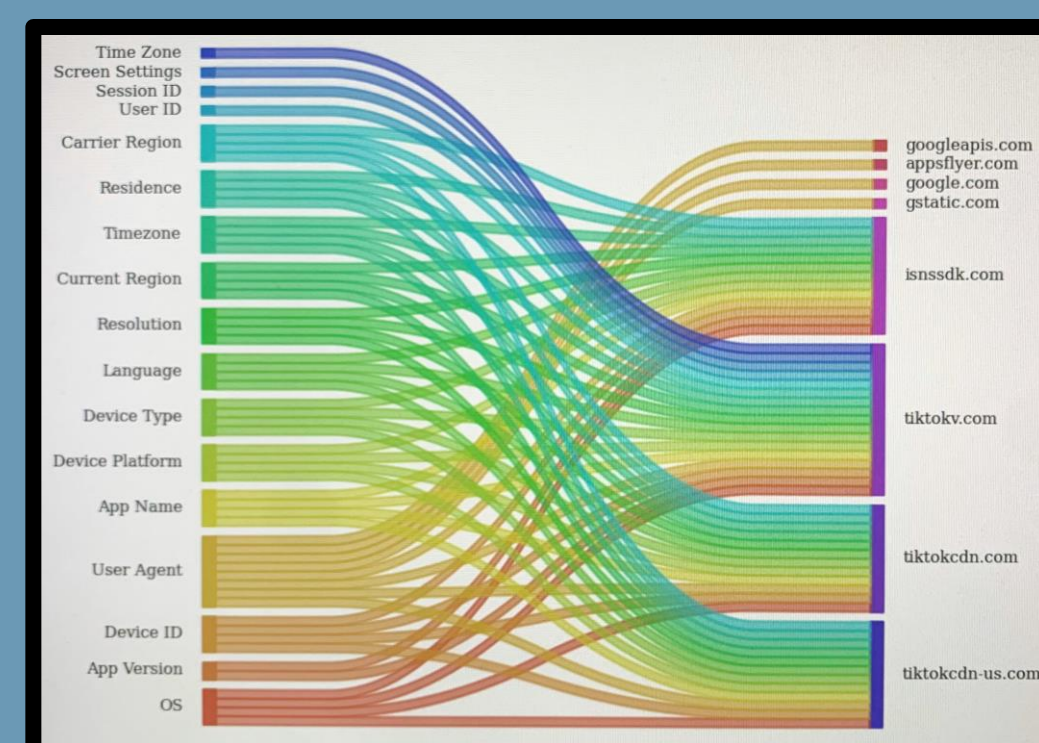Figure 1: Graph of TikTok (desktop) web data

Figure 2: Graph of TikTok (mobile) app data

MYCROFT DATA

Figure 1: Code for our fruit lister skill

Figure 2: Testing out fruit lister skill with Mycroft

- Our skill is designed use a virtual assistant to request types of fruits
- We would ask Mycroft to "Name a fruit" or "Guess my favorite fruit" and it would select a fruit from the list of fruit programmed into the skill
- This program provided us with valuable experience working in working raspberry pi and utilizing Mycroft to perform a skill, which we did based on fruits

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