Improving the SoundTouch Music Experience: A Data Driven Approach
2015-2016 SCOPE

BOSE | **Olin College of Engineering** | **SCOPE**

Project Goal
Improve user experience by leveraging data

Bose SoundTouch system is the **'last mile of audio delivery,'** wherein all the music listening activities, across all compatible streaming services, can be observed. The goal of this project is to leverage data collected by the SoundTouch speakers to improve the user experience of these devices.

System Loyalty
Understanding the users through data science

In order to find ways to improve the user experience, we need to first discern what makes experiences pleasant. Since we cannot directly measure the pleasantness of an experience, we decided to focus our efforts on finding those who tended to stick around to listen for a long time, and return regularly to using this device. **Our team calls these behaviors system loyalty,** and users who exhibited these behaviors we called system loyal users. The goal of our work is to **investigate and understand the behaviors/ characteristics that are present in these loyal users.**

Our users can be
Split into five groups

Using k-means clustering algorithm to segment users into 5 groups, we were interested in identifying the distinct user groups based on their preferred interaction mode with the SoundTouch system. Having these persona groups gave us context for comparing between system loyal users and non-system loyal user, between the different system loyalty groups.


Personae Distribution
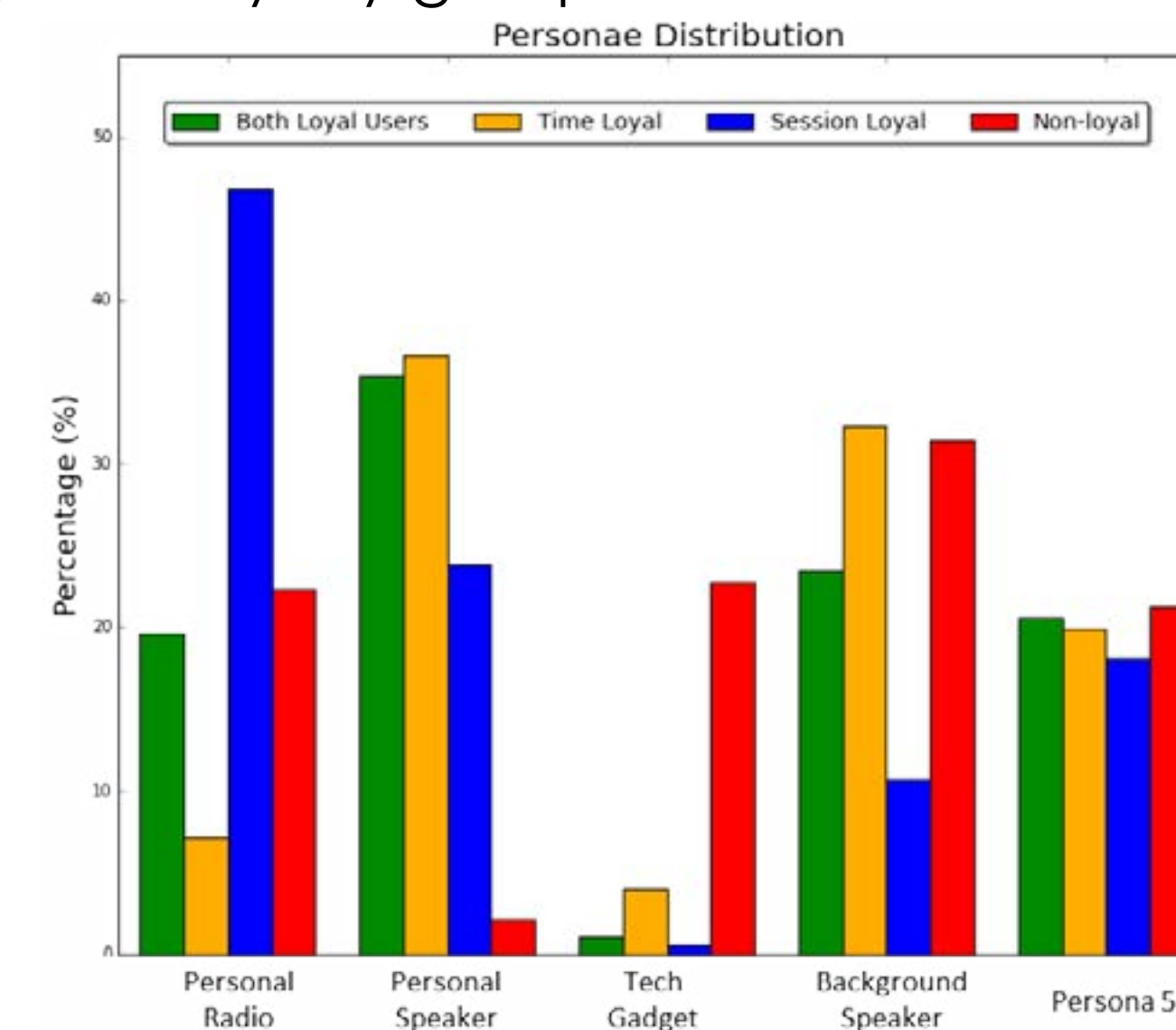
We found that session loyal users tended to interact with their devices as if a radio and heavily used the presets function. Time loyal users tended to be more passive listeners and executed minimal adjustments when using their devices.

## Where do our loyal users place?
Average session counts comparison

We are categorizing our loyal users who have more listening sessions with the SoundTouch speaker.

Average Number of Sessions By Type
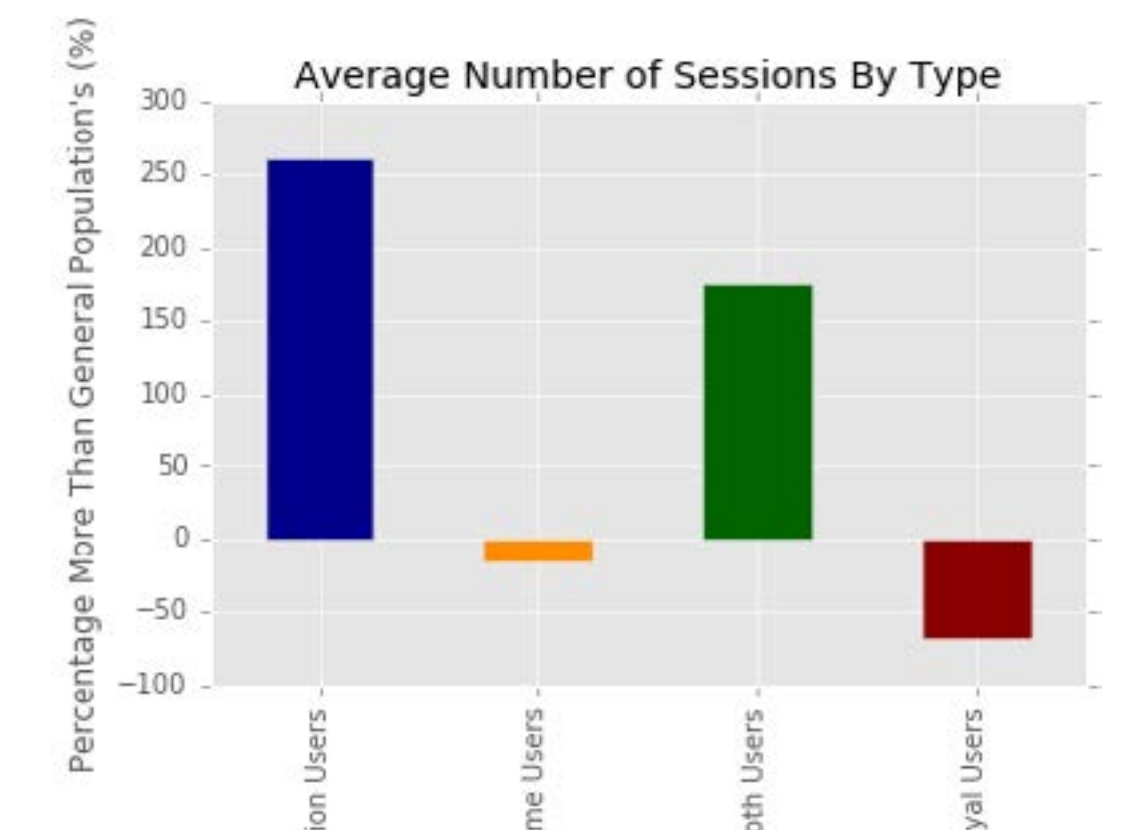
Our loyal users
listens through presets longer

The following is a graph of the median listening time of each preset per session for each user type.

How Long Do Users Listen to their presets?
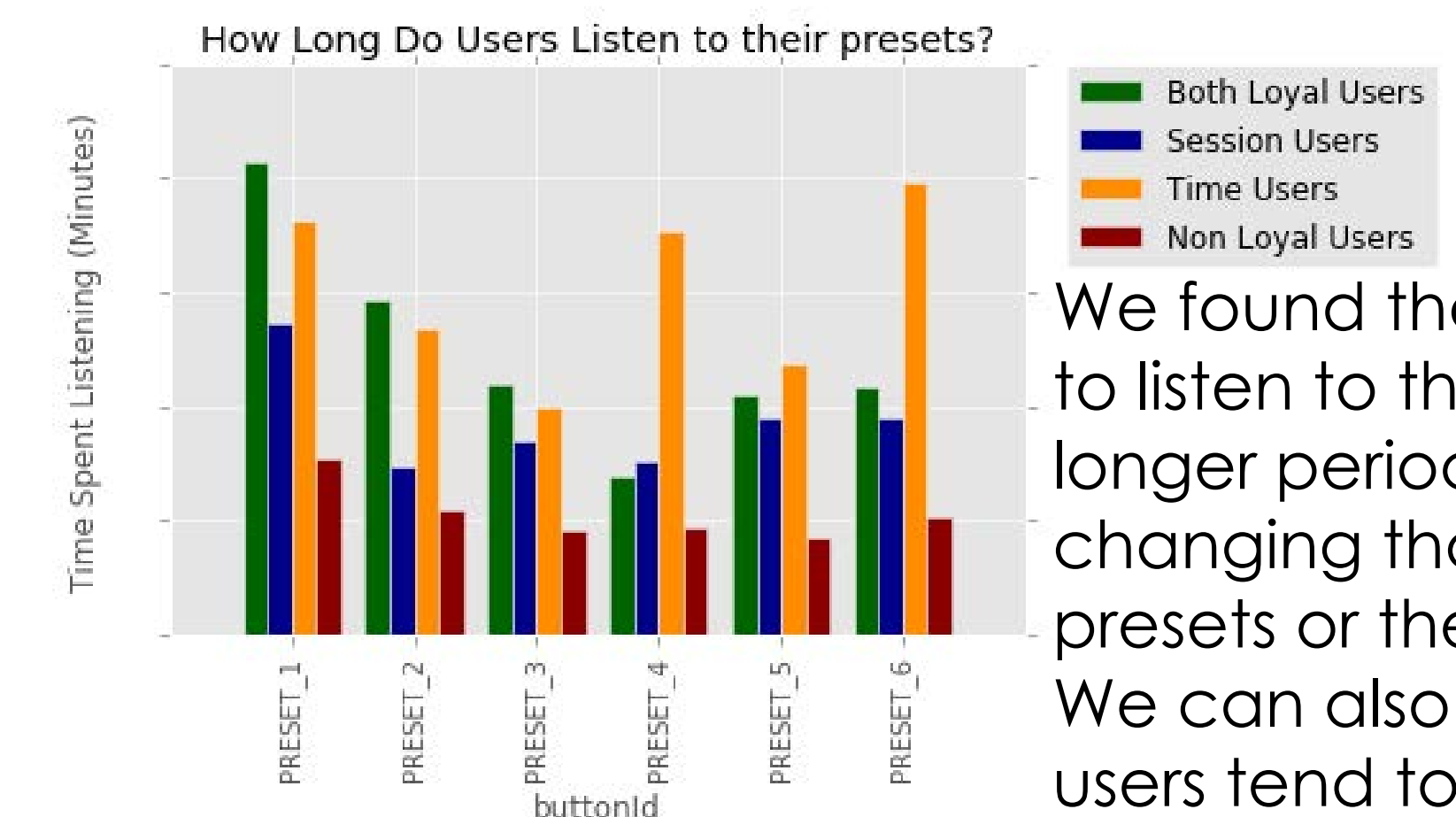
We found that most users tend to listen to their Preset 1 for a longer period of time before changing than the other presets or they stop listening. We can also observe that loyal users tend to listen to each preset 2 to 4 times longer than non-loyal users.

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