Understanding music listeners: NLP approach to customer segmentation

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Our challenge

Find customer personas for whom we can build new products and product features

**Why** do Alexa customers listen to music?

**What** music moments play pivotal roles in their music journey? **When** and **where** do they take place?

**How** do music moments differ in how music is consumed?
Initial segmentation based on demographics proved unhelpful

Music crosses demographic “barriers” easily

Surveys that focused on demographics, listening devices and music genres provided limited predictive power

Our goal: Getting deeper into the mind of our customers while quantifying findings for the product team
Solution: Get deep with Qual while evaluating what matters with Quant

Step 1
Ask the “why” questions

Step 2
Cluster natural language answers into main themes

Step 3
Convert themes into scales

Step 4
Build & quantify segments
Step 1: Ask the “why” questions

- Focused on open-ended questions
- Used machine learning to consolidate answers in real time
- Gibberish and zero-value statements were automatically removed

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What comes to mind when someone says the word “Music” to you?

Happiness

Please complete the following sentence: To me, music is …

Something that relaxes me

The role music plays in our lives can vary from one individual to another.

Besides listening to music for enjoyment, what other role(s) does music play in your life?

Answer in short sentence(s)
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Step 2: Cluster natural language answers into main themes

Longer branch – themes are less related
Shorter branch – themes are more related
Cluster of answers – emerging theme
Step 2: Cluster natural language answers into main themes

- Relieves depression
- Release from reality
- Joy, blessing
- Music helps me think
- Peace, healing
- Heartbeat, life, inspiration
Step 3: Convert themes into scales

“Music helps me think”

“A background to encourage cerebral thinking” (75% support; N = 235)

“Makes me think” (82% support; N = 137)

“To help me think of new ideas” (67% support; N = 267)

What is your level of agreement with the following?

“Music helps me think”

- Completely agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Completely disagree

SUBMIT
Step 4: Build segments

- Identify orthogonal answers
- Cut data along orthogonal lines
- Resulting segments represent groups of customers most similar to one another
**Sample Segment profile**

xxxxxxxxxxxx, 8% of sample

**Demographic**

- xx% female
- xx% White
- xx years old
- Average household income: $xxk

**Device usage**

- xx% own a voice-based device
- xx% own Alexa
- xx% of Alexa users use paid music services

**Description**

More likely to listen to music while...

**Behavior**

Selected attributes, % difference from mean

- I listen to music to ...
- Music helps me ...
- I listen to music to feel ...
- I often sing along to music
- I consider music ...
- Music ...
- I enjoy music
THANK YOU

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