# Making Sound Accessible

Visualizing Sound & Conversation Tracker for the deaf and hard of hearing

Amy Brumet / Meleigha Holt Kyle Hipke / Kevin Anderson / Dylan Price

## Visualizing Sound

#### Detecting sound in a static environment & visualizing it



# Visualizing Sound

Detecting sound in a static environment & visualizing it

Major technologies

- machine learning
- audio peak detection
- feature extraction
- client/server architecture



### Conversation Tracker

Tracking audio conversations in an isolated group to track discussion flow



### **Conversation Tracker**

Tracking audio conversations in an isolated group to track discussion flow

#### Major technologies

- machine learning
- audio peak detection
- feature extraction
- client/server architecture
- speech  $\rightarrow$  text



#### Community Input and Participation

What is meaningful to this community?

- value of in home/static detectors: alleviates work arounds
- conversations in groups: improves engagment

#### Community Input and Participation

What is meaningful to this community?

- value of in home/static detectors: alleviates work arounds
- conversations in groups: improves engagment

Plan

- contextual inquiry: members in the deaf community (mostly on campus)
- user testing: prototype and test on participants

#### Team Members

Kyle Hipke / Dylan Price *machine learning* 

Amy Brumet / Meleigha Holt *community research and visualization* 

Kevin Anderson *android implementation* 

### Major Milestones

- community feedback on project direction & concept (01/17)
- technical limitations to success
- paper prototype and user testing
- working prototype on android
- demonstration & feedback
- revisions  $\rightarrow$  final product

### Risks and Obstacles

- technical limitations
- is this useful?

#### Comments Please.