AudioNote

Note-taking for the Modern Age

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The Problem

● Note-taking by hand can be tedious
  ○ Easy to miss vital information if speaking outpaces writing
  ○ Not as accessible to students with disabilities
  ○ Difficult when English is your second language

● Absent students miss lecture content
  ○ Inevitable illnesses force students to choose between getting well again and getting course knowledge

● Recording the whole lecture also isn’t practical
  ○ Time consuming
  ○ Hard to find key information via replay
Existing Solutions

- **Evernote**
  - Text based notes is Evernote's primary feature, not audio
  - No keyword detection

- **Voice Recorder**
  - Impractical to sift through
  - No keyword detection

- **Professor’s Lecture Notes**
  - Important information may primarily be spoken, not on slides
  - Professors may not post notes; requires extra effort from lecturers
Our Solution

- Use Android app to record audio during lecture
- Automate the note-taking process by transcribing audio
- View transcription in Android app
- Detect and highlight key terms

Best of both worlds!

Convenience of reading + analysis
Demo
Backend

● **REST API**
  ○ Upload audio in mp3 or wav formats
  ○ Returns JSON transcription + key terms

● **Technologies:**
  ○ AWS Transcribe
  ○ AWS s3
  ○ Heroku
  ○ Google GSON
  ○ Spring (Springboot)

● **Language: Java**
Backend (cont.)

```
startTranscribe
+startTranscribe(String file_name):void

GetTranscription
+getResult(String job_name):void

UploadFile
- awsBucketName:String
+upload(File this_file, Boolean deleteOnCompletion):void
```
Frontend

- **Overview:**
  - Android Application

- **Technologies:**
  - Android Studio
  - Android SDK
  - Android Media Recorder

- **Language:**
  - Java
Problems Solved

- Students can study more efficiently with keyword analysis
- Easier note taking for people with disabilities
- Absent students can be given recorded/transcribed content
- Allows students to focus on lecture content, rather than sprinting to keep up with notetaking.
Next Steps

- iOS, web app, and desktop applications
- Improved keyword detection through ML and more advanced algorithms
- Replace Amazon Transcribe with proprietary NLP system
- Beautify UI
- Add persistent user profiles to access transcripts across platforms
- Accessibility themes: Large text, dark theme, audio and transcript playback
- Integration with Quizlet to quickly create note cards
- Establish relations with partner universities to incorporate product in lectures
  - Lapel microphones = cleaner audio = better transcriptions & analysis
- Sell out to Evernote or Microsoft OneNote
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