Speech Search

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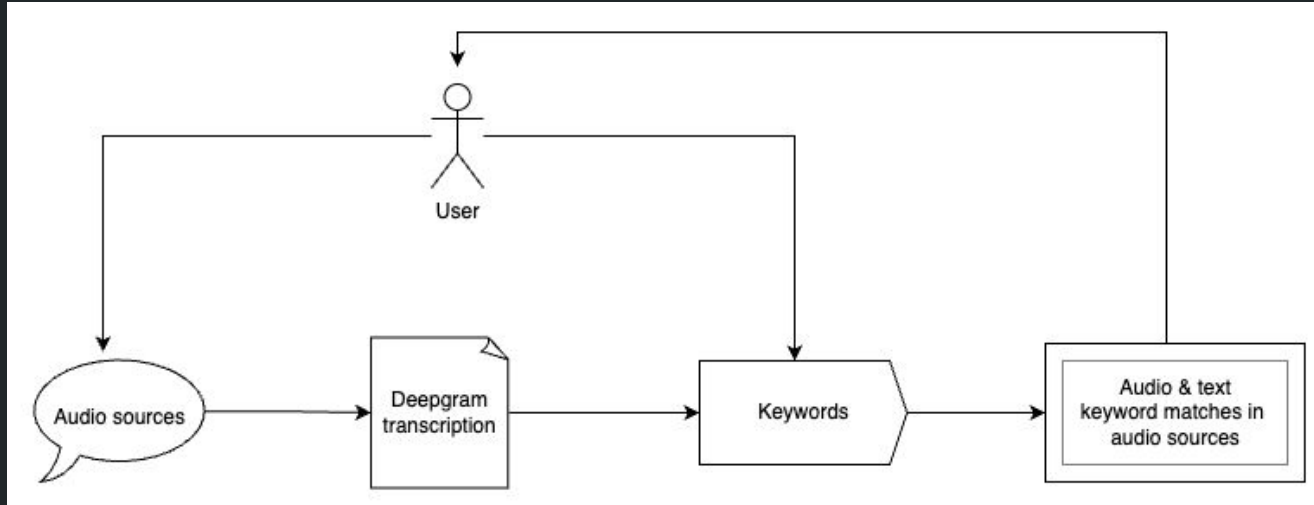May 3, 2023

Agenda

- My project
- Customer uses
- Demos
- What I learned
- Extensions
- Questions

My project

- Search within an audio corpus for text keywords
- User provides audio sources and keywords
- Program returns text sentences and audio snippets

Customer uses

- News alerts
- Students reviewing lectures
- Voice diary

Demo: Studying prior lectures

Demo: Audience choice

Showcasing Deepgram

- Fetching online audio sources
- Fast transcription of pre-recorded audio
- Transcripts at the sentence level
- Timestamps at the word level
- Smart formatting of transcripts
- Deepgram as a foundation for other NLP and audio libraries

What I learned

- Usefulness of timestamps in transcripts
- Different options for formatting transcripts (smart_format)
- Natural extension of transcript is text analysis

Extensions

Deepgram:

- Topic Detection: search for topics in addition to keywords
- Summarization: get summaries of matching sections
- Search: leverage acoustic patterns, rather than text patterns
- Language Detection: support 30+ languages & dialects

Other:

- Specify domains rather than individual audio sources (RSS)
- Automated schedule to process new audio in a domain
- Email alerts for new matches
- Option to download and store audio
- User interface

Questions?

Appendix

Code: https://github.com/j-kroll/dg-demo