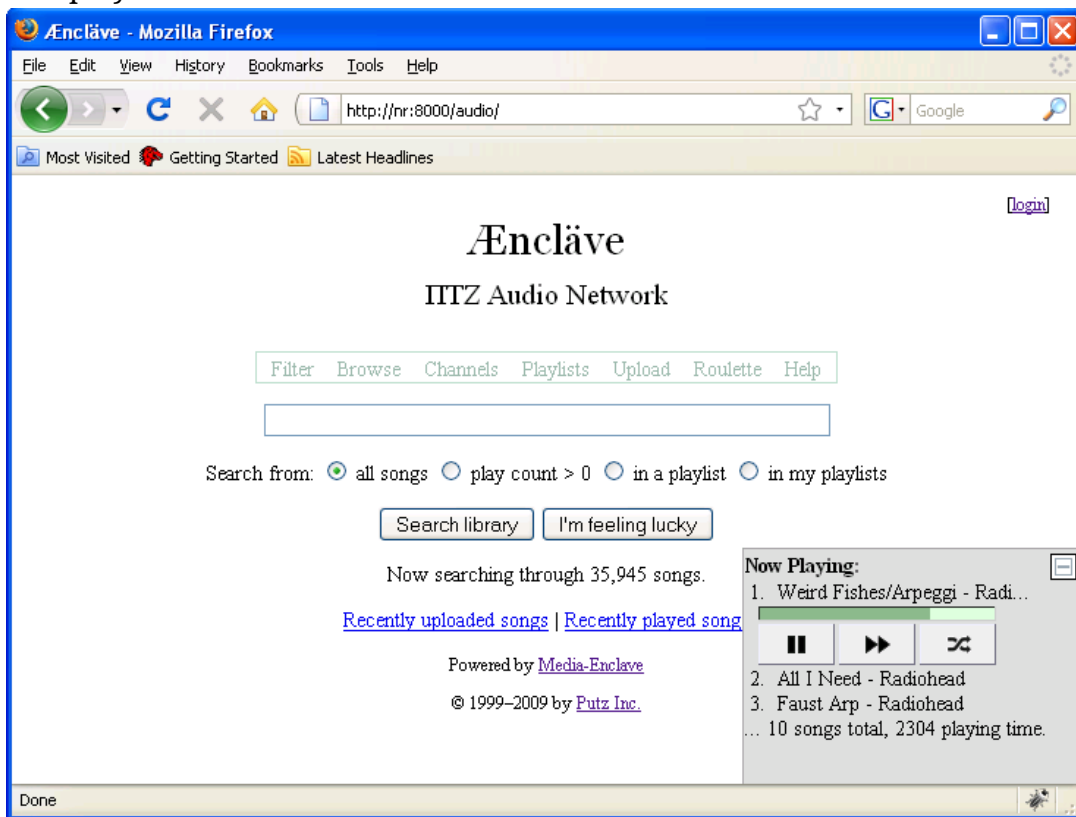


Project Proposal: A Spoken Dialogue System for Audio Enclave

Domain

Audio Enclave is a web-based communal “jukebox” that allows users to queue and de-queue songs to be played in shared spaces, with support for playlists and song recommendations. Through a web interface, users can search for or browse through songs, mark songs as favorites, create playlists, and pick songs to play. Songs that are queued to play can be removed or reordered.



Audio Enclave - Main Page

Æncläve Search Results

Filter Browse Channels Playlists Upload Roulette Help

Search: abbey road

Search from: all songs play count > 0 in a playlist in my playlists

Found 34 results for "abbey road"

	<input type="checkbox"/>	#	Title	Album	Artist	Time	P#	S#	Last played	Date added	
▶	<input type="checkbox"/>		Come Together	Abbey Road	The Beatles	4:22	2	0	22 Sep 2009 11:21:13	30 Jun 2005 19:44:52	-
	<input type="checkbox"/>		Something	Abbey Road	The Beatles	3:04	0	0		30 Jun 2005 19:44:52	-
	<input type="checkbox"/>		Maxwell's Silver Hammer	Abbey Road	The Beatles	3:28	4	0	14 May 2007 12:07:14	30 Jun 2005 19:44:52	-
	<input type="checkbox"/>		Oh! Darling	Abbey Road	The Beatles	3:28	2	0	04 Feb 2006 18:28:44	30 Jun 2005 19:44:52	-

Queue selected songs choose 5 random songs: Go

Search

Æncläve Channels

Filter Browse Channels Playlists Upload Roulette Help

Search:

Search from: all songs play count > 0 in a playlist in my playlists

There are eight songs in the queue. See [recently played](#) songs.

	<input type="checkbox"/>	#	Title	Album	Artist	Time	P#	S#	Last played	Date added	
▶	<input checked="" type="checkbox"/>	5	All I Need	In Rainbows	Radiohead	3:50	15	0	17 Sep 2008 01:10:03	12 Oct 2007 11:20:49	-
	<input type="checkbox"/>	6	Faust Arp	In Rainbows	Radiohead	2:10	14	0	17 Sep 2008 01:10:03	12 Oct 2007 11:20:49	◆
	<input type="checkbox"/>	6	Up On The Ladder	In Rainbows	Radiohead	4:17	5	0	17 Sep 2008 01:10:03	11 Dec 2007 12:53:07	◆
	<input type="checkbox"/>	7	Reckoner	In Rainbows	Radiohead	4:51	17	0	17 Sep 2008 01:10:03	12 Oct 2007 11:20:49	◆

Dequeue selected songs choose 5 random songs: Go Email link to song... Recently played

Queue of songs playing

This project will provide a spoken-language interface for Audio Enclave. The domain concepts that our system will support are *song titles*, *artists*, *albums*, *playlists*, and *actions*, e.g. queueing, removing, or recommending a list of songs. Listed below are some example concepts:

Song titles: *Semi-charmed Life*, *Getting Better*
Artists: *The Beatles*, *Cake*, *Third Eye Blind*
Albums: *Sgt. Pepper's Lonely Hearts Club Band*, *Comfort Eagle*
Playlists: *ecooper's favorites*, *Party Music*
Actions: *queue*, *dequeue*, *list*

Input and Output

At the start, the user can choose one of three actions: *dequeue*, *queue*, and *list*. After the system completes the action, it returns to the start, and the user can choose another action, or to end the conversation.

Dequeue

This action skips the song that is currently playing. Users can specify this action by saying, e.g.

- "Dequeue this song, please."
- "Skip this song."
- "I hate this song!"

Users can also remove a song that's later on the queue:

- "Dequeue [song]."

Queue

The user can specify a song to play by name, and the system will add it to the queue. For example:

- "Play [song]."
- "Queue [song] from [album]."
- "I want to hear [song] by [artist] from [playlist]."

Since there are many different songs, specifying them just by song title might lead to ambiguity. If a user specifies a song by its title only, and there is ambiguity in the recognition, the system can enter the *list* action and name the possible songs the user might have meant.

The user can also request to play three random songs that fit some criteria. For example:

- “Play me some [artist].”
- “Queue something from [playlist].”
- “Can you play me some songs from [album]?”

List

The user can request to hear a list of songs, from which he or she can choose ones to play. For example:

- “Which songs do you have by [artist]?”
- “Read me some songs from [playlist].”
- “Can you tell me which songs are on [album]?”

The user can also request to hear a list of songs that the system recommends, based on which songs are already in the queue:

- “Can you give me some recommendations?”

As the system responds by reading names of songs in the list, the user can request to queue any of those songs and hear the rest of the list, or to exit the reading of the list and return to the beginning.

Team

Audio Enclave is developed and maintained by current and former residents of my undergraduate living group at MIT. I have previously worked on adding features to Audio Enclave, including the recommendation system.