

Arkansas Music Database Website Project Report

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Organization

This website, the Arkansas Music Database (AMDB) is being developed for the Arkansas Economic Development Commission (AEDC) via Mr. Thomas Wallace, the project sponsor. The AEDC is a state government agency that defines its mission as “creat[ing] economic opportunity by attracting higher paying jobs, expanding and diversifying our state and local economies, increasing incomes and investment, and generating positive growth throughout Arkansas.” The AEDC works to attract new businesses to Arkansas and to improve the environment for existing businesses. Mr. Wallace has approached the students at UALR to build a website that utilizes the database at TheAudioDB that supports the Arkansas music industry by providing a central repository for users to investigate musicians with ties to the state.

Analysis

Arkansas’ contributions to the world of music are largely unheralded. Many musicians were born in this state, and many others began their careers here or called the Natural State their home. Arkansas has produced noteworthy artists in both traditional and modern genres, but there is little awareness of this even within the state, much less from the world at large. A website highlighting Arkansas’ famous and current musicians will help to promote and grow the state’s music industry.

Current State

Currently, Google searches such as “Arkansas music” and “musicians of Arkansas” produce results that primarily consist of crowd-sourced sites of wildly varying

quality, and sites associated with individual towns, venues and organizations. The sites that are the most comparable to the AMDB are the music sections of Arkansas.com and the Encyclopedia of Arkansas, neither of which provide anything approaching the depth of functionality desired by the project sponsor.

It must be noted that the current state of the source data for this website, the database maintained at TheAudioDB.com, is a crowdsourced project driven by an international community with no particular interest in Arkansas. As such, the data for artists who have not achieved a high level of recent popularity tends to be incomplete, if it exists at all. Encouraging Arkansan contribution to TheAudioDB is therefore in the best interest of the AMDB, and a link to that project will be provided in the new artist submission section.

Future State

The initial release of the Arkansas Music Database website will provide a simple and attractive way for music lovers to learn about notable Arkansas musicians. Visitors will also be able to watch official music videos on Youtube embedded in the AMDB website. Users will be able to search for artists by name or browse an alphabetical list. Presenting users with the option to browse by genre or decade are stretch goals for this project. An option to explore a random artist will also be available. Once selected, the artist information will be displayed as detailed in the interface section. Users will be able to submit new artists for administrator approval. At the bottom of the landing page, an “about” button will lead to information about the AMDB. Administrators will be able to

approve or deny submitted artists, update the “about” section without using HTML, and review website analytics via Google.

Long Term

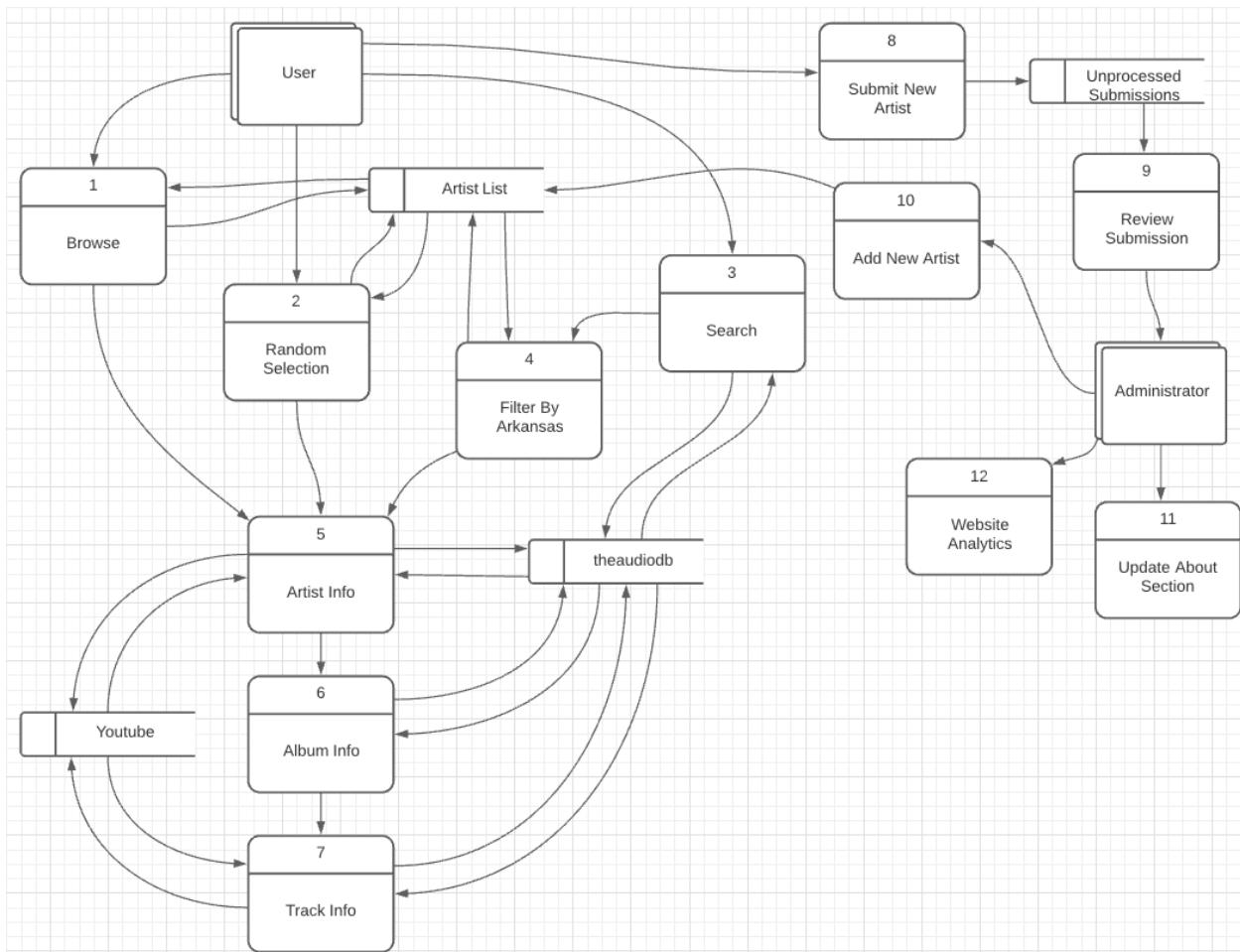
This project is intended to provide basic functionality at launch, while creating a base for future expansion. The following features are not currently present or planned, but could be seamlessly incorporated into the site at a future date. The search function will be designed with album and song searches in mind, in the hopes that TheAudioDB someday adds that functionality. An interactive map would be a useful addition to the browse option, but there is insufficient data in TheAudioDB to support it, especially if it is to include historic sites of interest. Another button can be added to the landing page linking to a live events section containing venues and calendars in order to promote up-and-coming artists. Social media rating and sharing could be implemented for track, album, artists, and perhaps venues and events. An ad-like promotion system for local artists and events is also a possibility.

Options for Delivery

The Arkansas Music Database website has been created from scratch using Notepad++ and Firefox. It is focused on mobile usage, but a traditional desktop site is also available. This site has been developed using HTML, CSS and javascript. Site mockups have been created on Mockplus, and the prototype site is hosted on Amazon EC2. Other languages or tools may be utilized if they produce desired results in an expedient manner. The background image has been sourced from the Little Rock

Convention and Visitors Bureau. Database information is provided by theaudiodb.com. API access for theaudiodb.com requires a monthly patreon subscription. The API's search function is currently only able to search for artists.

Data Flow Diagram



Risks

The greatest risk to this project is its reliance on external data. The AMDB site can and should encourage Arkansan participation in TheAudioDB, but beyond that it has no control over the accuracy or availability of the data. TheAudioDB's API offers limited functionality; for example, there is currently no way to use the API to search for individual tracks.

Another source of unowned content is the linked music videos. Youtube allows video owners to restrict embedding, which will disable playback within the AMDB site. Video owners could also remove content, or restrict it based on location.

The use of Google Analytics requires a privacy/cookie policy that must be created by the sponsor. A link to this policy must be offered to the user as a standard pop-up on the user's first visit.

TheAudioDB Database API

Below are examples of the data that can be returned when searching with theaudiobd.com's API. The user inputs a term in the search box, such as "Johnny Cash". The first step is to generate an API URL that includes the API key and the search term, which results in this format:

https://www.theaudiobd.com/api/v1/json/{APIKEY}/search.php?s=johnny_cash

This query will return "null" if there are no matches. Otherwise it returns a json document containing the artist's numeric ID, the fields used to populate the artist's Information Tab, and links to images hosted by TheAudioDB that are used to populate the artist's Media tab. The program will then compare the artist's name to the list of

Arkansas musicians maintained by the AMDB administrator. If the name is not present, the site will inform the user that the artist has the misfortune of not being from Arkansas. Otherwise, the website generates and displays artist-level information.

Other API URLs used for this site include

Artist's music videos:

<https://www.theaudiadb.com/api/v1/json/{APIKEY}/mvid.php?i=111372>

All albums:

https://www.theaudiadb.com/api/v1/json/{APIKEY}/searchalbum.php?s=johnny_cash

Individual albums:

<https://www.theaudiadb.com/api/v1/json/{APIKEY}/album.php?m=2135238>

Album track list:

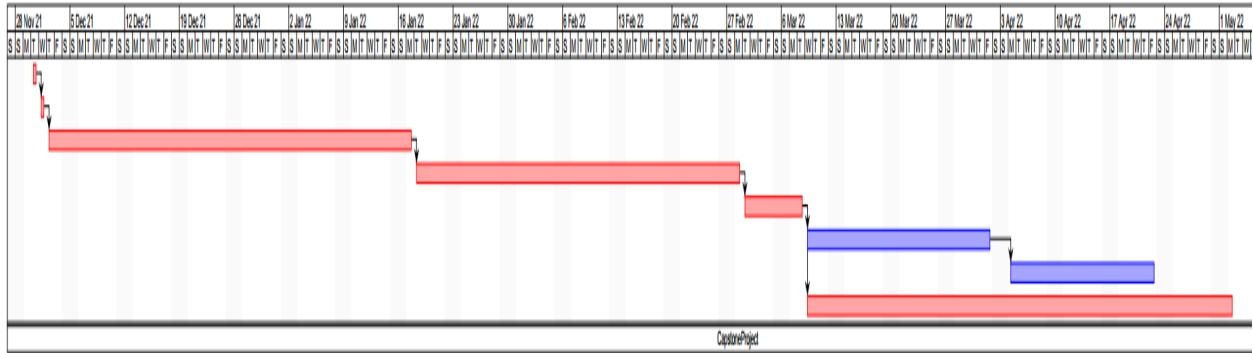
<https://www.theaudiadb.com/api/v1/json/{APIKEY}/track.php?m=2116684>

Individual track info:

<https://www.theaudiadb.com/api/v1/json/{APIKEY}/track.php?h=32802755>

Project Timeline

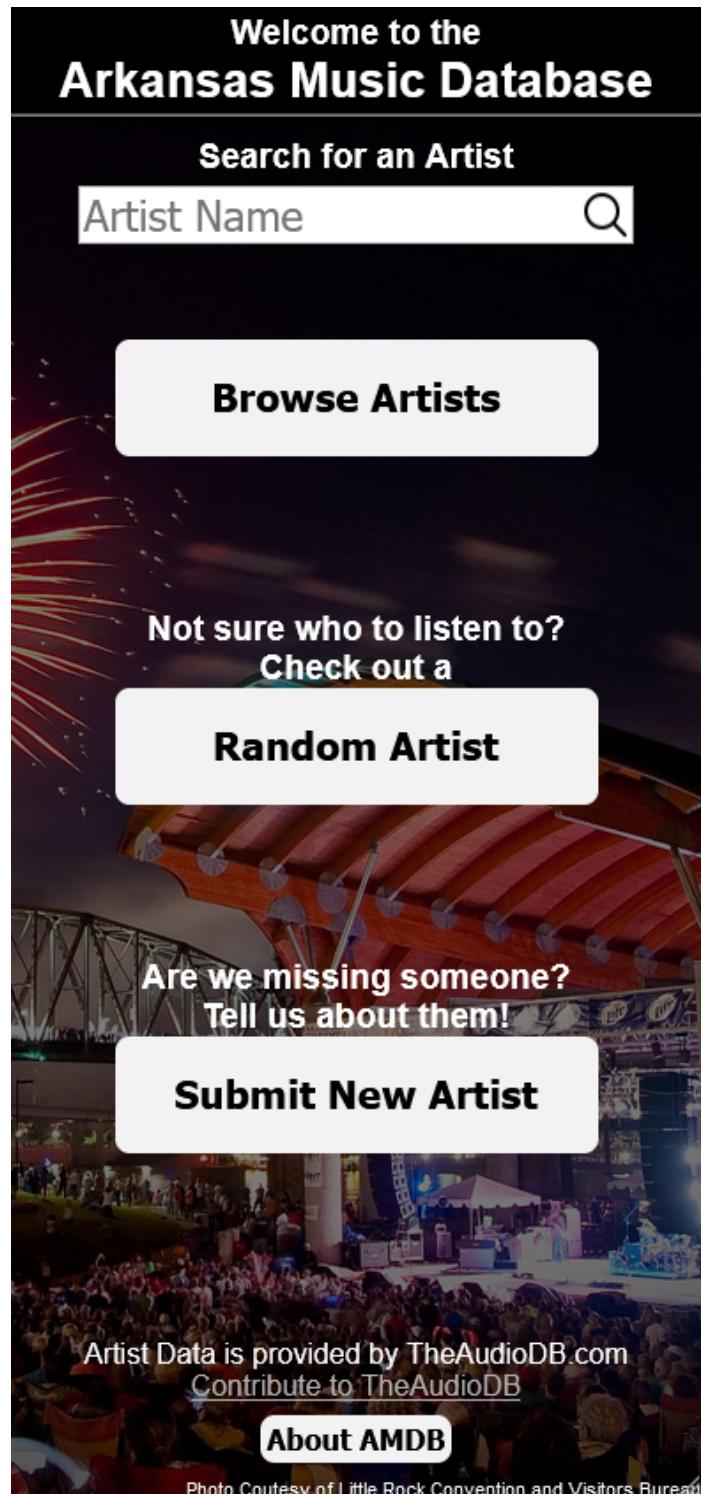
| |  | Name | Duration | Start | Finish |
|---|-----------------------------------------------------------------------------------|-------------------------|----------|------------------|------------------|
| 1 | | Complete initial design | 1 day | 11/30/21 8:00 AM | 11/30/21 5:00 PM |
| 2 | | Capstone 1 presentation | 1 day | 12/1/21 8:00 AM | 12/1/21 5:00 PM |
| 3 | | Complete UI prototype | 33 days | 12/2/21 8:00 AM | 1/17/22 5:00 PM |
| 4 | | Implement functionality | 30 days | 1/18/22 8:00 AM | 2/28/22 5:00 PM |
| 5 | | Implement analytics | 6 days | 3/1/22 8:00 AM | 3/8/22 5:00 PM |
| 6 | | Testing | 18 days | 3/9/22 8:00 AM | 4/1/22 5:00 PM |
| 7 | | Additional coding | 15 days | 4/4/22 8:00 AM | 4/22/22 5:00 PM |
| 8 | | Capstone 2 report | 39 days | 3/9/22 8:00 AM | 5/2/22 5:00 PM |



Mobile Landing Page

The landing page for the website contains six interactable areas. At the top, the welcome header clearly states the name of the site. This header is present on all pages of the site. On any page, the user may tap this header to return to the landing page.

The second area is the search bar; the search function is detailed in the API section above. The Browse Arkansas Musicians button will display the list of Arkansas artists in tappable format, arranged in alphabetical order, and the “Random Artist” button will randomly select an artist from this list. Once the artist is chosen, the artist page will open the same way as the search function. “Submit New Artist” will open a form that can be filled out to submit new artists to the AMDB administrator, and “About AMDB” leads to information about the Arkansas Music Database project itself.



Mobile Artist Page

When the artist page is open it will default to the Information tab. This tab displays the general information for the artist, headed by an image of the artist. This includes origin, genre, style, mood, years active, an official website (if any), and the artist biography. For solo artists, birth and death years are included, and bands will list the number of members.

Welcome to the
Arkansas Music Database

Johnny Cash

| | | |
|-------------|---------------|--------------|
| Info | Albums | Media |
|-------------|---------------|--------------|



CASH

Origin: Kingsland, Arkansas, USA
Genre: Country
Style: Country
Mood: Provocative
Born: 1932
Died: 2003
Official Site: www.johnnycash.com

Biography:

Johnny Cash was one of the most imposing and influential figures in post-World War II country music. With his deep, resonant baritone and spare percussive guitar, he had a basic, distinctive sound. Cash didn't sound like Nashville, nor did he sound like honky tonk or rock & roll. He created his own subgenre, falling halfway between the blunt emotional honesty of folk, the rebelliousness of rock & roll, and the world-weariness of country. Cash's career coincided with the birth of rock & roll, and his rebellious attitude and simple, direct musical attack shared a lot of similarities with rock. However, there was a deep sense of history – as he would later illustrate with his series of historical albums – that kept him forever tied with country. And he was one of country music's biggest stars of the '50s and '60s, scoring well over 100 hit singles. Cash, whose birth name was J.R. Cash, was born and raised in Arkansas, moving to Dyess when

Photo Courtesy of Little Rock Convention and Visitors Bureau

Tapping on the albums tab will open a sorted list of the artist's albums. Full length studio albums will be listed first, from newest to oldest, followed by EPs, singles, compilations and other works. Each album will display a thumbnail created from its cover art, along with the album's title, release year and record label. Tapping on an album will drill down to album level information.

The media tab displays all art and video returned by the initial artist search query. This does not include album art, which is found by drilling down in the albums tab. Tapping on a video will navigate to that video's associated track, where the user can watch the video without leaving the AMDB website.

Welcome to the Arkansas Music Database

Evanescence

| Info | Albums | Media |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| | Format: Album Label: Concord Music Group, Inc. Title: Fallen Year: 2003 Format: Album Label: Concord Music Group, Inc. Title: Mystery EP Year: 2003 Format: EP Label: Concord Music Group, Inc. Title: My Immortal Year: 2003 Format: Single Title: Bring Me to Life Year: 2003 Format: Single Title: Anywhere but Home Year: 2004 Format: Live Label: Concord Music Group, Inc. Title: The Open Door Year: 2006 Format: Album Label: Concord Music Group, Inc. Title: Evanescence Year: 2011 Format: Album Label: Concord Music Group, Inc. Title: Greatest Hits Year: 2012 Format: Album | |

Photo Courtesy of Little Rock Convention and Visitors Bureau

Welcome to the Arkansas Music Database

Ne-Yo

| Info | Albums | Media |
|------|--------|-------------------------|
| | | Music Videos |
| | | Champagne Life |
| | | |
| | | One In a Million |
| | | |

Photo Courtesy of Little Rock Convention and Visitors Bureau

Mobile Album Page

Drilling down to the album level requires another API call using the numeric album ID, which is contained in the data used to create the album list. The cover art for the selected album is displayed directly under the tab bar, flanked by buttons allowing easy navigation to previous or subsequent albums. Tapping the album image, album tab or band name returns the user to the album list. The album name is displayed above a new album-level tab bar with Track, Info and Art tabs. The default tab at the album level is “Tracks”, which displays the list of track names and durations. Tapping on a track drills down to track level information.



Photo Courtesy of Little Rock Convention and Visitors Bureau

The album Info and Art tabs are very similar to the artist Information and Media tabs.

The Info tab displays the release date, genre, mood, style, tempo, format, and record labels. Worldwide sales and an album description are displayed if available. The Art tab displays all images retrieved from the album's API call.

Welcome to the
Arkansas Music Database

Evanescence

| Info | Albums | Media |
|---------------|--------|-------|
| | | |
| << | | >> |
| Fallen | | |
| Tracks | Info | Art |

Release: 2003
Genre: Rock
Style: Rock/Pop
Mood: Troubled
Tempo: Medium
Format: Album

Record Label: Concord Music Group, Inc.
World Sales: 8967000
Album Description:

Fallen is the debut studio album by American rock band Evanescence. It was released on March 4, 2003, through Wind-up Records. The album was recorded in multiple recording studios, including Conway Recording Studios in Hollywood, California. It is commercially the band's most successful album to date, selling more than 7 million copies in the United States alone, and more than 17 million worldwide. It debuted at number 7 on the Billboard 200, selling more than 141,000 copies within its first week, eventually peaking at number 3 in June 2003. Internationally, it has topped the charts in more than ten countries worldwide. It was certified Platinum seven times by the Recording Industry Association of America (RIAA), and acquired multiple certifications worldwide. Upon its release, Fallen received mixed to positive reviews from music critics. It spawned four singles: "Bring Me to Life", "My Immortal", "Going Under", and "Everybody's Fool". "Bring Me to Life" and "My Immortal" peaked

Photo Courtesy of Little Rock Convention and Visitors Bureau

Welcome to the
Arkansas Music Database

Evanescence

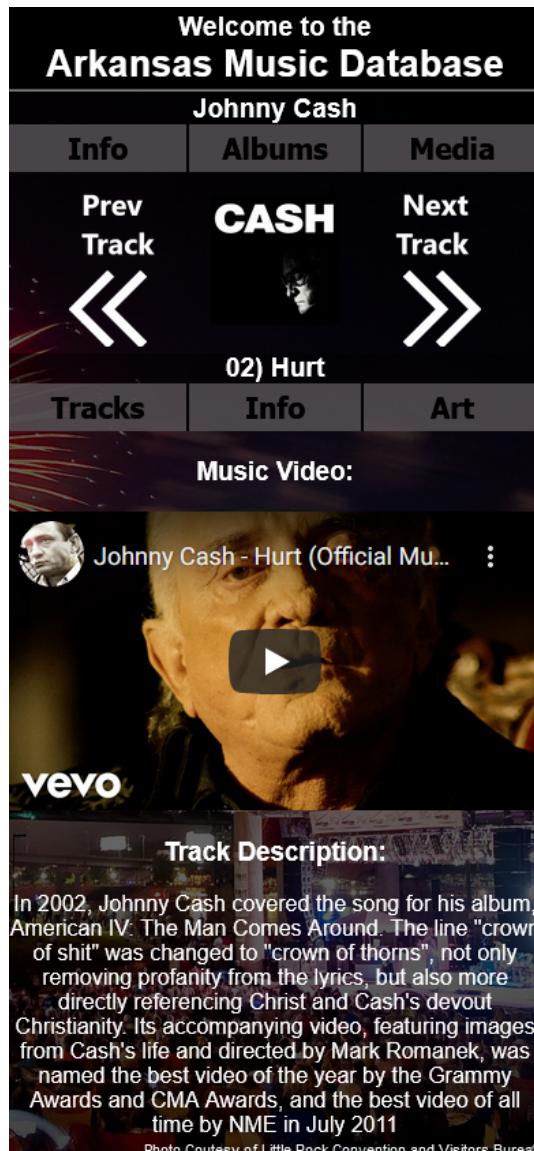
| Info | Albums | Media |
|---------------|--------|-------|
| | | |
| << | | >> |
| Fallen | | |
| Tracks | Info | Art |



Photo Courtesy of Little Rock Convention and Visitors Bureau

Mobile Track Page

The furthest level of drill-down is track level information. The data needed for this page has already been retrieved by the album track API call. On the desktop site this will be displayed next to the track list, but for mobile screens the previous level's album navigation will be replaced by track navigation. The album art will still be displayed at a slightly reduced size; tapping it will return users to the album level track list. Most tracks have no further information. If an official music video is available on Youtube an embedded link will be displayed at the top of the information pane. If the track has a description, it will be displayed below the video.



Mobile New Artist Form

The “Submit New Artist” button will open a form that can be filled out to submit new artists to the AMDB administrator. Adding an artist is only possible if that artist exists in TheAudioDB database, so the top of the form contains a link that will open a new page to contribute to that project. The artist’s name, connection with Arkansas and at least one link to the artist are required field as this information is necessary to determine whether the artist qualifies for inclusion. There are also fields for additional information and the submitter’s email address, which is used to notify the submitter of approval/rejection or possibly to request additional information. Once submitted the form will generate an email that will be sent to an address specified by the administrator.

Welcome to the
Arkansas Music Database

We source our artist data from
[TheAudioDB.com](#)

If you know of an artist that is missing from
that database, please help out and
[Contribute to TheAudioDB](#)

**Is there an Arkansas Artist present
in TheAudioDB but not listed
here? Let us know so we can fix it!**

Email *

Your email

Artist's Name: *

Your answer

Artist's connection to Arkansas: *

Your answer

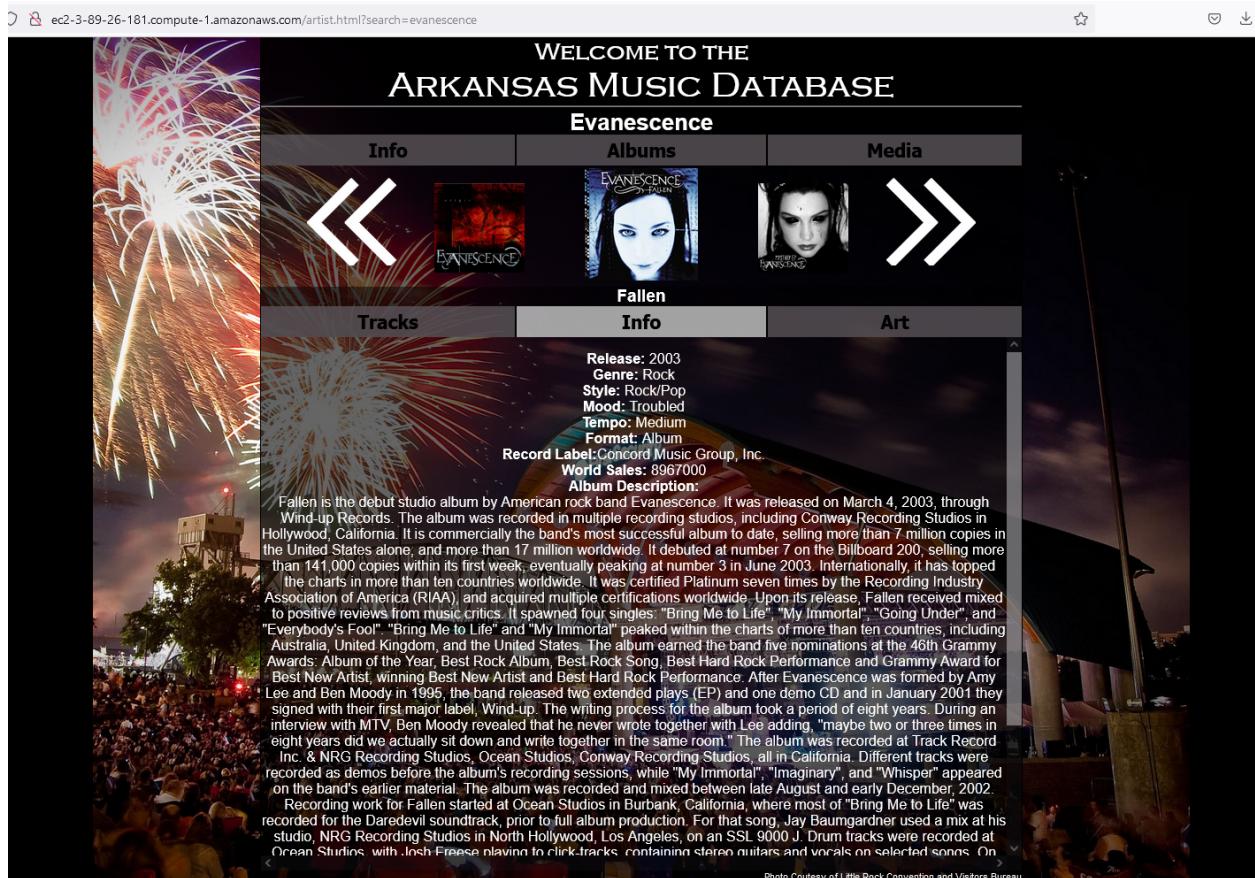
Artist link(s) *

Your answer

Photo Courtesy of Little Rock Convention and Visitors Bureau

Desktop Version

A horizontal screen such as a desktop or tablet will display a widened version of the website. This may be enhanced in a future version by using the larger screen size to display multiple tab panes simultaneously.



Testing

I enlisted the help of various friends and family to test the website. Unexpected behavior in the search and navigation functions was corrected fairly quickly. The most persistent problem found was inconsistencies in the info returned by the crowd sourced API. 'Years Active' turned out to be particularly difficult to consistently calculate. I

added some conditional processing for the API results and made a few adjustments to the fields in the Info panels to get the results to display in a consistent manner.

Professional Responsibilities

This project presents a few ethical issues in its current form. The background image copyright is owned by the Little Rock Convention and Visitors Bureau, which allows the image to be used for the purpose of promoting Little Rock as long as it displays the line, "Photo Courtesy of the Little Rock Convention & Visitor Bureau". All other media is hosted by TheAudioDB or Youtube, neither of which requires any sort of special labeling or logos to be displayed.

Google Analytics tracks users with cookies, so the AMDB must add a privacy/cookie policy. This policy must make it clear that Google Analytics is used to track users. This policy should meet the more stringent standards of the GDPR because it is possible that EU residents will use this site, which means that users must be able to opt out of tracking. The AMDB privacy policy also needs to link to the Google Analytics privacy policy.

Support and Integration

If selected, ownership of this website will be transferred to the sponsor. The sponsor will be responsible for hosting, maintenance and further development of this site, and for purchasing their own API key. The sponsor will be provided with hands-on training and documentation for updating and maintaining the site. This designer will retain a functioning copy of this work on Github for portfolio purposes.

References

TheAudioDB, <https://www.theaudiadb.com/>

Notepad ++, <https://notepad-plus-plus.org/>

Mockplus, <https://www.mockplus.com/>

Google Analytics, <https://analytics.google.com/analytics/web/provision/>

Google Analytics Terms of Service,

<https://marketingplatform.google.com/about/analytics/terms/us/>

Youtube, <https://www.youtube.com/>

Github, <https://github.com/>