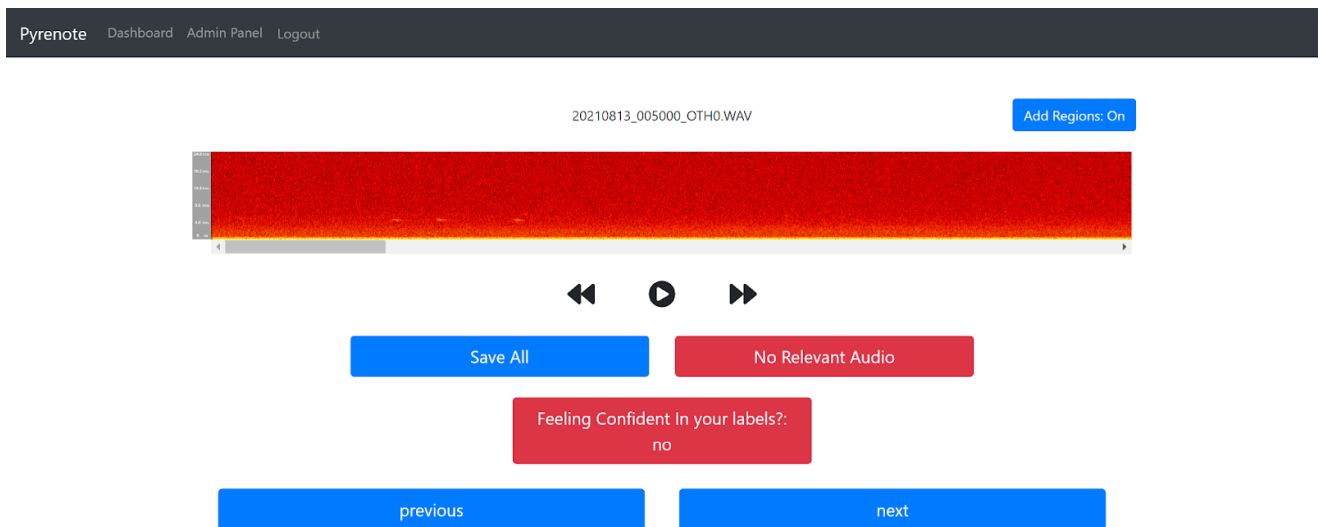


Wesley's Report

This report is a secondary output for my project. The primary outputs are the features I have built/worked on for <https://github.com/UCSD-E4E/Pyrenote>. You can visit https://wescodes.github.io/Wes_Project/ to get a better visual understanding of my work.

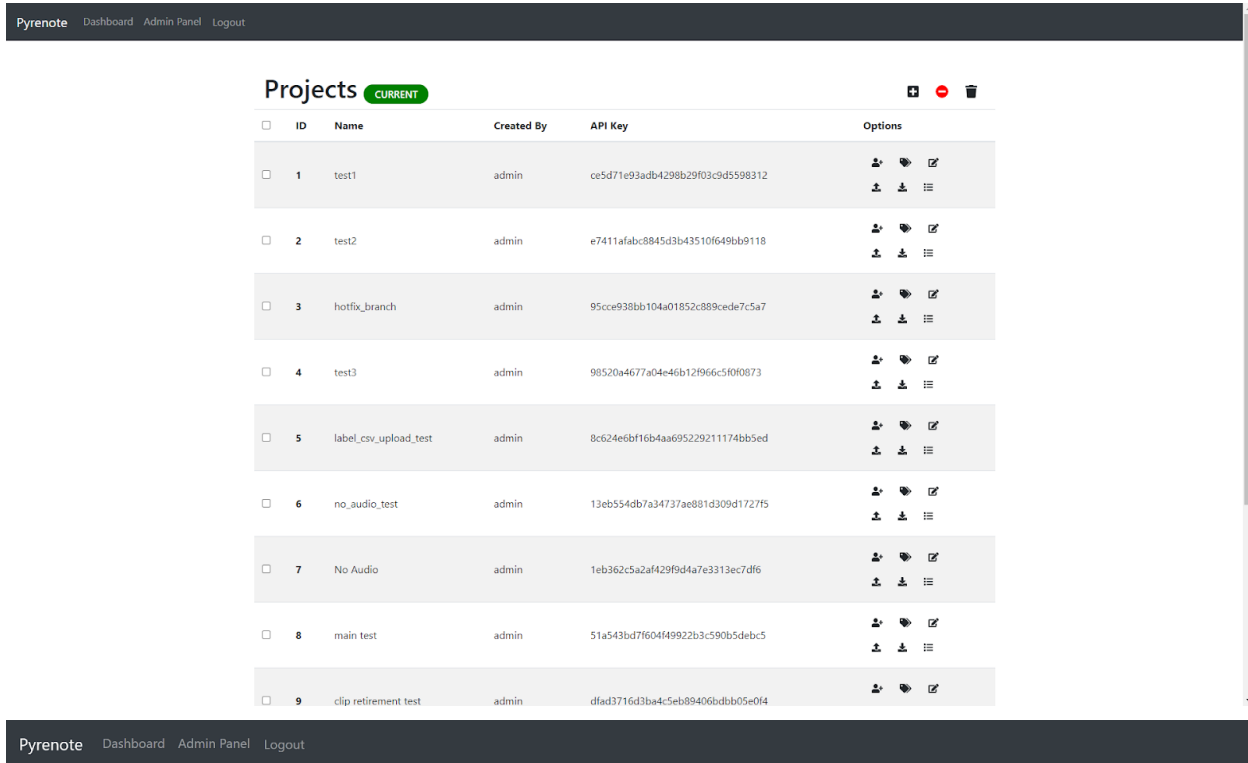
No Relevant Audio Button

The first feature I built is the “No Relevant Audio” button (<https://github.com/UCSD-E4E/Pyrenote/pull/264>). Until now, users would get stuck if an audio file was empty, and be unlikely to contribute further. By adding a “No Relevant Audio” button, the user experience for annotating audio recordings will be more streamlined. By clicking on the button, a “No Class of Classification” label will be created for the corresponding audio recording. This additional label will also allow easy filtering in the data preprocessing stage.



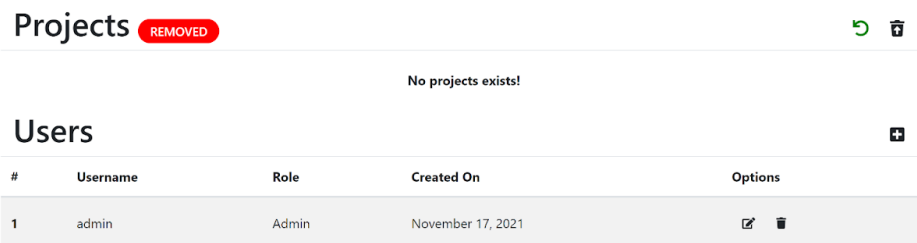
Admin Project Management

The second feature I built is a way for admin role users to manage the available projects (<https://github.com/UCSD-E4E/Pyrenote/pull/266>). If an admin wanted to declutter the created projects in the admin panel, there wasn't a feature that allowed for that need. Also, if an admin wanted to hide projects from non-admin users, there wasn't a feature for that need. I resolved those two needs by implementing a removal and a recovery feature. The specific changes I made can be viewed here. Admins can now remove any projects they want to declutter their admin panel and/or hide projects from users.



The screenshot shows the 'Pyrenote Admin Panel' with a navigation bar containing 'Pyrenote', 'Dashboard', 'Admin Panel', and 'Logout'. The main content area is titled 'Projects' with a green 'CURRENT' badge. Below the title is a table with columns: ID, Name, Created By, API Key, and Options. The table lists 9 projects, all created by 'admin'. The 'Options' column for each project contains icons for user management, visibility, and deletion.

ID	Name	Created By	API Key	Options
1	test1	admin	ce5d71e93adb4298b29f03c9d5598312	[User icons] [Visibility icon] [Deletion icon]
2	test2	admin	e7411afabc8845d3b43510649bb9118	[User icons] [Visibility icon] [Deletion icon]
3	hotfix_branch	admin	95cce938bb104a01852c889cede7c5a7	[User icons] [Visibility icon] [Deletion icon]
4	test3	admin	98520a4677a04e46b12f966c5f0f0873	[User icons] [Visibility icon] [Deletion icon]
5	label_csv_upload_test	admin	8c624e6b1f6b4aa695229211174bb5ed	[User icons] [Visibility icon] [Deletion icon]
6	no_audio_test	admin	13eb554db7a34737ae881d309d1727f5	[User icons] [Visibility icon] [Deletion icon]
7	No Audio	admin	1eb362c5a2af429f9d4a7e3313ec7df6	[User icons] [Visibility icon] [Deletion icon]
8	main test	admin	51a543bd7f604f49922b3c590b5debc5	[User icons] [Visibility icon] [Deletion icon]
9	clip retirement test	admin	dfad3716d3ba4c5eb89406bdbb05e0f4	[User icons] [Visibility icon] [Deletion icon]



The screenshot shows the 'Pyrenote Admin Panel' with a navigation bar containing 'Pyrenote', 'Dashboard', 'Admin Panel', and 'Logout'. The main content area is titled 'Projects' with a red 'REMOVED' badge. Below the title is a message: 'No projects exists!'. Below this is a section titled 'Users' with a '+' icon. Below the 'Users' title is a table with columns: #, Username, Role, Created On, and Options. The table lists one user: 'admin' with role 'Admin' and created on 'November 17, 2021'.

#	Username	Role	Created On	Options
1	admin	Admin	November 17, 2021	[Deletion icon] [Visibility icon]

Assisting with PR Requests

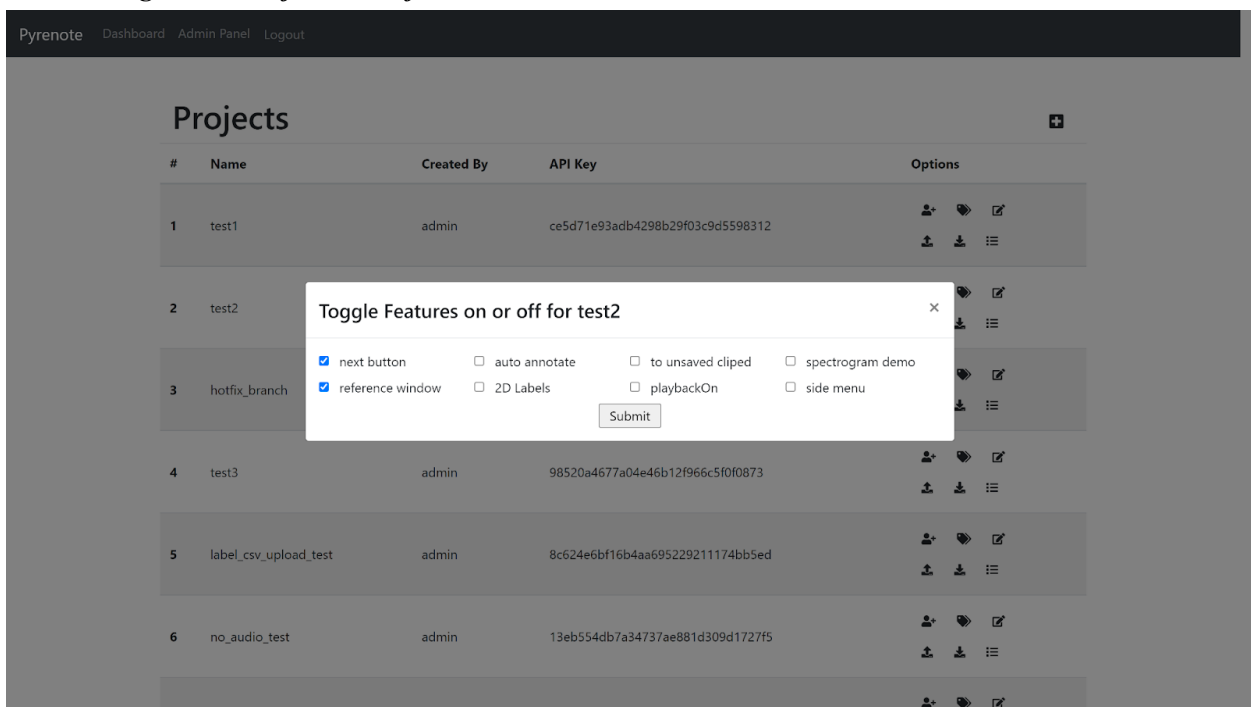
PR Requests that only needed to be reviewed and approved

Beside the two features I have built, I also helped Sean with approving his GitHub pull requests. I have reviewed and approved three of his pull requests. The first two pull requests, <https://github.com/UCSD-E4E/Pyrenote/pull/261> and <https://github.com/UCSD-E4E/Pyrenote/pull/256>, I reviewed and approved. They didn't require any revision required on my part during the reviewing process. PR 261 addressed an issue in which empty cells weren't ignored when uploading a csv file to create labels which resulted in an extra empty text annotation label. PR 256 addressed a conflict between main and production branches.

PR Request that needed code revision in addition to being reviewed and approved

The third pull request <https://github.com/UCSD-E4E/Pyrenote/pull/241> required programming because the reworked to the functionality of the side menu wasn't working. PR 241 added the ability to turn side menu on or off without also turning off or on the reference tab. This was the function I had to do some revision and added new code to make it work. The side menu height was also reworked to make it look nicer.

Same setting used in before and after the rework to the side menu



The screenshot shows the Pyrenote dashboard with a 'Projects' table. A modal dialog titled 'Toggle Features on or off for test2' is open over the second row of the table. The dialog contains several checkboxes for feature toggling.

#	Name	Created By	API Key	Options
1	test1	admin	ce5d71e93adb4298b29f03c9d5598312	[Icons]
2	test2			[Icons]
3	hotfix_branch			[Icons]
4	test3	admin	98520a4677a04e46b12f966c5f0f0873	[Icons]
5	label_csv_upload_test	admin	8c624e6bf16b4aa695229211174bb5ed	[Icons]
6	no_audio_test	admin	13eb554db7a34737ae881d309d1727f5	[Icons]

Toggle Features on or off for test2

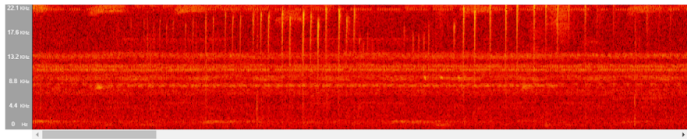
- next button
- auto annotate
- to unsaved clipped
- spectrogram demo
- reference window
- 2D Labels
- playbackOn
- side menu

Submit

Before

Pyrenote Dashboard Admin Panel Logout

20190701_073000.WAV Add Regions: On



◀ ▶ ⏪ ⏩

Save All

Feeling Confident In your labels?: no

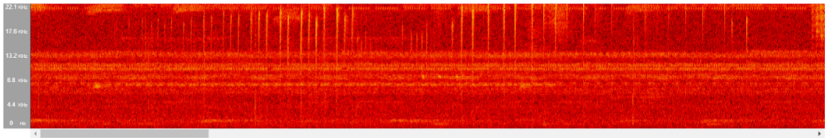
previous next

After

Pyrenote Dashboard Admin Panel Logout

references

20190701_073000.WAV Add Regions: On



◀ ▶ ⏪ ⏩

Save All

Feeling Confident In your labels?: no

previous next

Ending Note

Overall, I'm pretty satisfied with my work on the Pyrenote team. I didn't expect to build out another feature beside the "No Relevant Audio" button. Although <https://github.com/UCSD-E4E/Pyrenote/pull/266> isn't a fully fleshed out feature, I'm happy with how it turned out especially in the short amount of remaining time I had. It's a good base level on which other developers can take over and improve upon.

User Profile Page

Repo: <https://github.com/UCSD-E4E/Pyrenote/tree/profile-page>

Note: I am doing a report that's fully in depth on my site too, it's likely easier to read because of hyperlinks and specific formatting. I'll be continuously updating it as well since I plan to keep working on the project through finals week. The

Link: <https://dylan-nelson.com/Pyrenote>

Abstract

Pyrenote is a project in development by a growing group of student researchers here at UCSD. Its primary purpose is to allow anyone to contribute to research by labeling data in an intuitive and accessible way. Right now it is currently being used to develop a sort of voice recognition for birds. The goal is to make an algorithm that can strongly label data (say where in the clip a bird is calling and what bird is making the call). To do this, a very vast dataset is needed to be labeled. I worked mostly on the user experience side. Allowing them to interact with their labeling in new ways, such as keeping tabs on their progress and reaching goals. Developing a User Profile page was the primary source for receiving this data and was developed iteratively as a whole new page for the site

Using Pyrenote

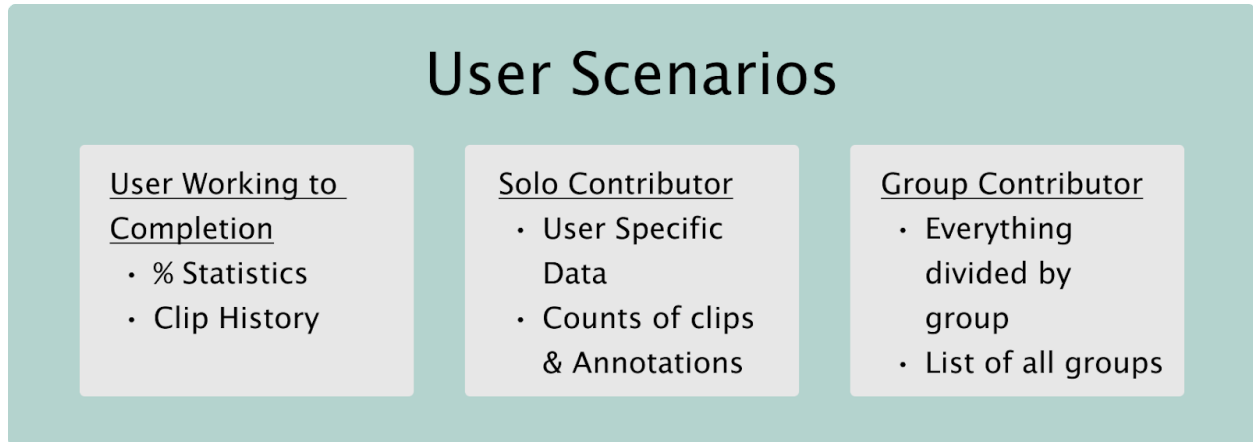
As a user of Pyrenote I came up with a few ideas and improvements I wanted to implement. One of the main issues we faced was needing to ask our team leader, who was the only one who could access the data of our project, for updates. Each time we did this he had to manually go through the data, parse it, and deliver it to us (manually). This is something that can clearly be automated and delivered directly to the user. In the end, my team and I decided to make a User Profile page. Engaging users is key to the Pyrenote workflow, and we need users to be content, because without good users, we don't have data.. We set out to incorporate a user page with a few goals in mind:

- To allow users to track their progress on their own, in real time

- To allow users to access previously annotated clips, in case there was an error, incomplete labeling, or anything else.
- To allow managers to organize and access all this data better as well, without manual intervention

Through this process we assessed each of these, and strived for even greater

Developing Ideas



Different sets of functionality needed

This was the first set of users we identified and decided we needed to work for. There is different data for each and different ways to access the data so it will allow the development of each part to work fairly iteratively



Personal Profile

User Name: John Baker
Team: DSC 180a
Expected Completion: 12/1/2021

Annotations	Files Annotated	Annotations Expected	% Completed	
	47	150	12.5%	Start

Annotation History	File Name	Date Completed	# of Annotations	Confident?
	Conopias-trivirgatus-556233.wav	12/3/2021	7	No
	Buteo-swainsoni-468973.wav	11/7/2021	3	Yes
	Chloroceryle-americana-108678.wav	11/6/2021	2	Yes

[Collapse List](#)

Prototype 1

The first prototype I made and presented to the team. Developed in **Figma** and shared in our weekly meetings. I eventually got a lot of feedback that paved my direction for the following quarter. A lot more data was desired and organized in a different way

Backend Learning

I met with one of our lead programmers and designers for the site. Sean helped me throughout this entire quarter and taught me during each step of my journey. First we went over the old prototype and discussed the limitations of it with respect to the currently developed code. Some things were going to be a lot harder to develop than others. We knew we *could* develop

everything we had pictured, but only with enough time. So we set priorities and I made a new prototype

Prototype 2

Pyrenote



Personal Profile

User Name: John Baker

Team: DSC 180a

Expected Completion: 12/1/2021

Global Stats

Annotations	Files Annotated	Total Annotations	Sum of File Lengths	
	47	150	12.5%	Start

Group Stats

Group	Files Annotated	Total Annotations	Sum of File Lengths	Expected Files Completed	% Completed
UCSD E4E	47	122	12.5%	150	31.5%

Global Clip History

Annotation History	File Name	Date Completed	# of Annotations	Confident?	Group Name
	Conopias-trivirgatus-556233.wav	12/3/2021	7	No	UCSD '22
	Buteo-swainsoni-468973.wav	11/7/2021	3	Yes	E4E ASID
	Chloroceryle-americana-108678.wav	11/6/2021	2	Yes	DSC 190A

[Collapse List](#)

Prototype 2

New Insights

- A whole new section to distinguish between groups
- Group Specific data for each clip
- A limit to how many clips are shown (not all/infinite)
- Rephrasing for some words and tables

After this I drew up the changes and made that second demo above. Next was to get that working in the frontend code, which went smoothly given I already had a working demo from before

New Frontend

The screenshot shows the 'My Profile' page in the Pyrenote application. At the top, there is a navigation bar with links for 'Pyrenote', 'Dashboard', 'Admin Panel', 'My Profile', and 'Logout'. The main content area is titled 'My Profile' and displays user information: 'User Name: Dylan Nelson', 'Team: DSC 180a', and 'Expected Completion: 12/1/2021'. Below this is a 'Global Stats' section with a table showing 47 files annotated, 150 annotations expected, and a total file length of 7 min 30 sec. A 'Start' button is present next to the sum of file lengths. The 'Group Stats' section shows a table for the 'UCSD E4E' group, with 47 files annotated, 122 total annotations, 7 min 30 sec of file lengths, 150 expected files completed, and 31.5% completion. The 'Global Clip History' section features a table with columns for 'Annotation History', 'File Name', 'Date Completed', '# of Annotations', and 'Confident'. It lists three clips: 'Conopias-trivirgatus-556233.wav' (7 annotations, No confidence), 'Buteo-swainsoni-468973.wav' (3 annotations, Yes confidence), and 'Chloroceryle-americana-108678.wav' (2 annotations, Yes confidence). A 'Collapse List' link is at the bottom right.

Pyrenote Dashboard Admin Panel My Profile Logout

My Profile

User Name: Dylan Nelson
Team: DSC 180a
Expected Completion: 12/1/2021

Global Stats

Annotations	Files Annotated	Annotations Expected	Sum of File Lengths
	47	150	7 min 30 sec

Start

Group Stats

Group	Files Annotated	Total Annotations	Sum of File Lengths	Expected Files Completed	% Completed
UCSD E4E	47	122	7 min 30 sec	150	31.5%

Global Clip History

Annotation History	File Name	Date Completed	# of Annotations	Confident
	Conopias-trivirgatus-556233.wav	12/3/2021	7	No
	Buteo-swainsoni-468973.wav	11/7/2021	3	Yes
	Chloroceryle-americana-108678.wav	11/6/2021	2	Yes

[Collapse List](#)

Frontend Complete

Works pretty similar to the previous demo and looks similar to the new prototype some adjustments need to be made but that can be done easily. Now we just need to hook it up to the backend

New Backend

The backend was able to be incorporated partially with ease. After a few meetings and much more learning. We were able to get some variables in that worked and delivered exactly what we wanted. Most of the other functionality is still a work in progress because it requires writing all new backend code, which I was not previously familiar or experienced with. The tables are a whole level of complexity harder than everything we've done so far, and certainly take time.

Sean taught me a lot and I got access to everything on the backend that I need. We successfully got the page setup to accept data and API calls and tested a few and they work. Everything else is diving into the massive data structures and coding them to search and display correctly (which has been easier said than done). In simpler terms, there's a few steps to each problem

- 1) Find how and where the data is represented
- 2) Write python code to access it
- 3) Write some connections in a few JS files allowing communication
- 4) Find the best way to display the output using HTML/React

Most of this has worked in a straightforward manner. The clip history (an ever changing table with lots of different data points) has been the exception.

What Now?

Trying to wrap up some data displays (mostly the annotation history). I'm learning a lot while trying to develop the backend code, but with that comes a lot of issues. I was slightly overzealous with how much I thought I could learn and do in these last few weeks of the quarter, but I'm proud of how far I've come and will continue working and see this project through. All the features currently finished are all ready to be deployed, but I'm trying to get the clip history complete before pushing anything.

(I'm working on a section with more detailed code info that doesn't work well in a report. If you're interested, check the [link](#) I mentioned. "Technical Work Dump" is at the end, full of code and file specific info)