Shades coding project: Backend/LLM role

Background
We're eager to continue exploring the possibility of a Shades role with you. Coding ability and initiative are crucial to success in any engineering role, especially at a very-early-stage startup like ours. To give us an even better sense of your skills beyond the interviews you've done so far, we'd like you to complete this project in advance of the next interview.

Basic details
- You'll complete this project on your own time.
- You should build the project in React, Node, and JavaScript/TypeScript (TypeScript preferred).
- The project will give you direct experience with our content management system, which you'll be working closely with if we end up working together.
- We'll set up a 60-minute interview to take place a few days out. That will give you a few days to complete this project.
- In that interview, we'll ask you to do three things:
    1. Demo the functionality that you created for this project.
    2. Walk us through the code that you wrote.
    3. Describe your approach to extrapolating this project to a new application that would improve the Shades user experience (described in a section below).

What you'll receive
- An API key to our dev instance of [Sanity Studio](), which is the source of truth for all Shades content (it's what our content team uses to create and edit content). See the bottom of this doc for a code snippet you can use.
- An overview of Shades content terminology (in this doc).

Final deliverables
- A publicly accessible URL (more below on the functionality this webpage will need to have).
- Be prepared to discuss your plan for building upon the user "likes" data to build a personalization model (no concrete deliverable needed, just think about it and be prepared to discuss in the interview). More details on this toward the bottom of the doc.
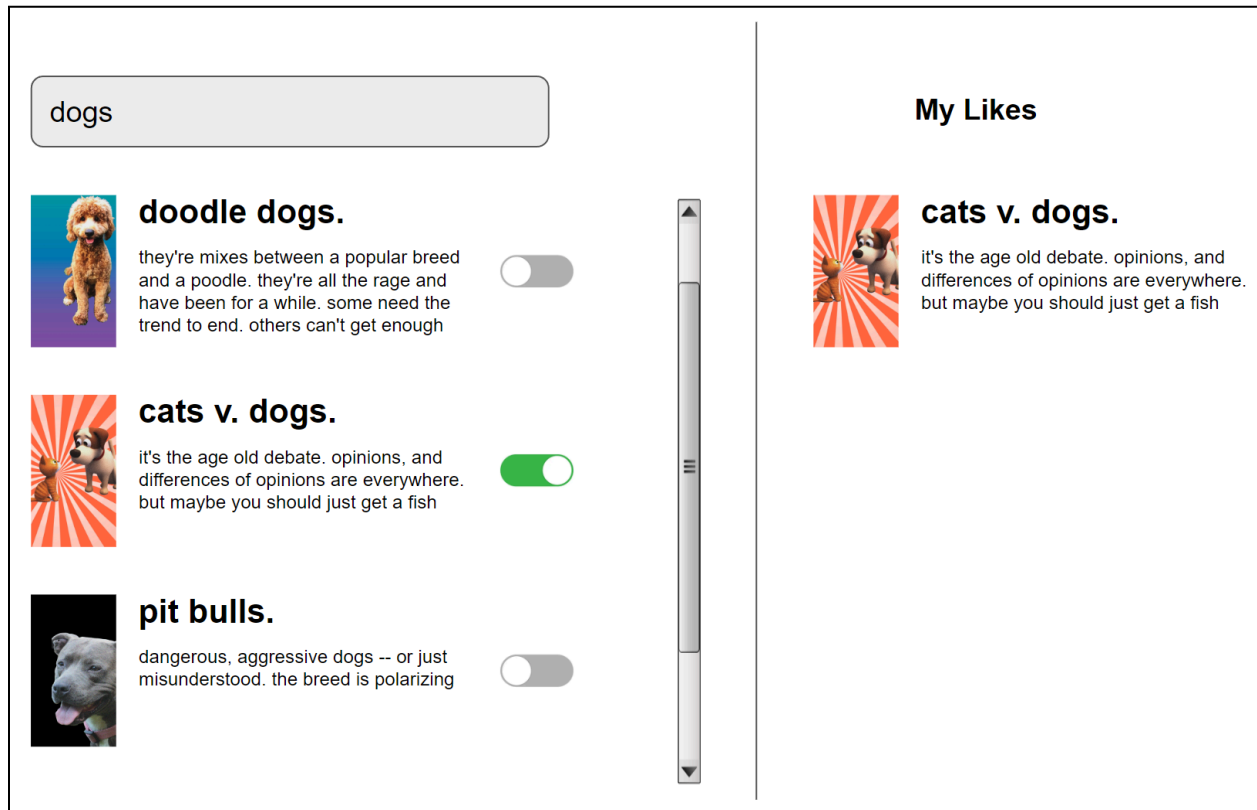
Your task
Create a website that does the following:
- Lets the user enter a freeform search term into a search box.
- Once the user makes a search, show matching tiles from Sanity (see below for explanations of our terminology).
    - Display tile 1x2 image, tile title, and tile summary.
- Display a toggle that indicates whether the user "likes" this tile. Toggles start as off, but the user can toggle them on for any tile result after a search.

- ○ State should persist across searches and across sessions. You can assume that anyone accessing the URL is the "same person" (no need to store multiple user like records – assume there's only one user ever).
- Display a running list of all tiles that the user has liked.

Here's an example of how the website could look (but you can structure it however you want):

Details on our structure/schema
- Tile = the highest-level unit of information in our content system. A tile represents the internet's discourse on a given topic.
- Developing tiles = the breaking news that you see every 4 cards in the Shades home feed. Don't worry about these for the sake of this project (you should show tile search results for shaded tiles only).
- Shaded tile = the main tiles that make up 3/4 of the Shades home feed. These are the tiles you'll work with for this project. Shaded tiles have a "shades page" that the user can swipe/tap into.

cf. dev

	Developing Tiles	>
	Draft Developing Tiles	>
	Unpublished Developing Tiles	>
	Shaded Tiles	>
	Draft Shaded Tiles	>
	Unpublished Shaded Tiles	>
	Tiles By Owner	>
	Sources	>
	Thoughts	>
	Categories	>
	Copy	>
	Videos	>

Shaded Tiles

- long distance love.
- cali sober.
- title 42.
- listening to birds.
- deadbots.
- flores v. nfl.
- solar energy.
- no more two party system?
- mlb lockout.
- medina spirit.
- pickleball.
- jack harlow.
- liquid death.

- Fields within a tile: See below.

Title

pit bulls.

Slug

pit-bulls   Generate

Emoji

Publish Date

2021-10-25

Owner

Lauren

Subtiles

1. if you didn't already know, october was national pit bull awareness month. the breed is deemed dangerous by some, and misunderstood by others -- the dogington post.

2. delta banned pit bulls as service animals on their flights in 2019 -- citing an uptick in onboard animal attacks.

3. ny post says we should consider banning them everywhere in nyc -- there's been an alarming amount of pit bull attacks -- especially among children.

4. and newsweek reports a story of a little boy who suffered a horrific bite from a pit bull.

Summary

dangerous, aggressive dogs -- or just misunderstood. the breed is polarizing

Other considerations / FAQ
- If you have any questions as you're implementing, your first approach should be to consult documentation online. For anything beyond that, you can email me at jeff@shades.news.
- No need to worry about anything related to aesthetics of the website you create. Spend all of your time on functionality/performance/structure – you won't get extra credit for making it look pretty (in fact, I'll be disappointed if it looks too pretty because I'll know you could have spent that time on other things).
- No need to make it work well on mobile – you can assume all users will be on desktop.
- Feel free to use any tools you want for deploying.
- It doesn't matter what you name your URL. Anything works.
- There shouldn't be any need for you to pay for tools to complete the project, although if you feel it's necessary, please let me know (if it really ends up being necessary, then Shades can cover the cost, assuming it's reasonably priced).

Code snippet to get access to Sanity
See below for a snippet that will get you started. For all other pointers on how to navigate the Sanity schema, please consult [their documentation](#).

```
import { createClient, ClientConfig, SanityClient } from
"@sanity/client";

const
SANITY_API_TOKEN="sknYR53pYso8HNnC6DGdqIRNPsWPoA5ZqKNaQSoFqq7mvdTA8b4
Z9dLCyv4kaYZXpyeA0Tgr6mdd0Rd90F7NZnTmG2uDxPOMOQRJw9lDrVrvTlJXJIJ1uNQT
h0bXh0uv0bKWcNVmhRbwFInkarlYjpAvNsoV9ht1Ojtz2EUcwmCWh7Fl6ydC"

const config: ClientConfig = {
  projectId: "0unlbb72",
  dataset: "dev",
  apiVersion: "2022-03-29",
  token: SANITY_API_TOKEN,
  useCdn: false, // We can't use the CDN for writing
};

const client: SanityClient = createClient(config);

export default client;
```

Misc resources that may be helpful
- [JavaScript client for Sanity](#)
- [Vercel's free Hobby Plan](#)
- [Example Sanity schema (for a tile)](#)
  - password: shades1

Extrapolating to a personalized recommendation system

As mentioned above, please come to the interview prepared to discuss how you'd leverage user likes data at scale to create a personalization system for Shades. You shouldn't build anything here; just be prepared to discuss your approach.

Assuming that our starting point is that every user's home feed is the same (purely chronological order), you should be able to outline a plan to make a good recommendation system that takes into account user interaction data (such as likes) to ensure that a user who engages often with basketball content, for example, will become more likely to see basketball content in the future. The new home feed would be a combo of chronological input and personalization input.