

# **Campus Catalog**

## **Phase 1 Technical Report**

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# I. Motivation

University is not just a place to learn. It is a place where you will find a community filled with new people and experiences. It is a place where you will make friends for life and explore your own potentials. It is a place where you will discover new opportunities and reach new heights. It is a place where you start a new chapter of life. However, a question remains: how do you decide which university to attend?

We created [campuscatalog.me](https://campuscatalog.me) to help people make more educated university decisions. 43.2 million students in the U.S are in debt by an average of \$39,351 each and we would like to help. By providing a wide range of helpful information, our website will help students make one of the most important decisions in their life. We want to help you find the best university option for the price you deem acceptable by providing information regarding the university, cost of living on or off-campus, and other amenities available.

# II. User Stories

## More information on Animal Friendly Filter

*"Hello, I am a user looking for an animal-friendly apartment, but my pet is a large dog whose breed is not frequently allowed in apartments. In the Animal Friendly filter, I'd like more information on which animals are allowed at a particular apartment. This will help prevent misunderstandings when looking into animal-friendly apartments, and it will help me narrow my search more effectively."*

We have addressed this request by adding more detailed pet limitation data in our API response body including the number of pets allowed and weight restrictions. However, due to the lack of available APIs, we will not be able to provide breed limitations by building.

## Search Filter for Apartments with Accessible Amenities

*"Hi development team, I am a university student who has some friends with disabilities. I would like a feature that would allow me to filter for apartments that are wheelchair or handicapped accessible. This will be particularly useful for those with limited mobility."*

We have addressed this request by including accessibility features in the building amenity section on our housing pages. We will be utilizing both Apartments.com API and Google Places API to search for accessibility features. The only existing limitation is that Apartments.com contains client property posts that may not include all the accessibility details.

### Search feature for Amenities for Apartments

*"Hi! I'm a user who would like to know about any amenities that an apartment offers. These include free electricity, free wifi, free water, gyms, pool, elevator, roof terrace, etc. While price helps me choose an apartment, allowing me to search for common amenities will make the apartment search a lot easier."*

We have addressed this request by including lists of amenities provided by listed properties in our property pages. Users will be able to search for certain desired amenity options. We have also provided types of utilities that properties will cover.

### Safety rating attribute for each student apartment

*"Hello, I'm a user who heavily prioritizes how safe the area around an apartment is when choosing where to live and to figure this out, I typically have to search a lot on Google for crime statistics and safety ratings of neighborhoods. I was wondering if you could add some more information to the website regarding how safe the area around each student apartment is to ease this process. For example, maybe you could add a general safety rating for each apartment based on this [website](#) which has a map showing the safety of specific areas in cities like Austin."*

We have not yet provided support for this request due to the lack of APIs. We plan to address this request by including safety scores on our property pages as demonstrated on our Postman design documentation which we work on for the next phase.

## Affiliated Safety Resources for University Students

*"Hello, I am a user who enjoys going out for entertainment until late in the night. However, I do not have a car, and I am worried about my safety if I have no ride home. Is there a way to check if a certain university has any affiliated safety resources to help me get back home? Some examples of this include UT Austin's Sure Walk system and UT Night Rides."*

We will not be able to address this request because there is no available API for retrieving this information. Finding this information for each school will require scraping over hundreds of official school websites and our team does not have the capacity to write a scraper at the moment.

## III. RESTful API

You can find our postman API here:

<https://documenter.getpostman.com/view/17627995/UUy3A7Rd>

## IV. Models

### University

- |                              |          |
|------------------------------|----------|
| • Name                       | (Search) |
| • City                       | (Search) |
| • State                      | (Search) |
| • Number of Enrolled Student | (Sort)   |
| • Public/Private             | (Filter) |
| • Mascot                     | (Search) |
| • Acceptance Rate            | (Filter) |
| • Graduation Rate            | (Filter) |
| • In-state tuition           | (Sort)   |

- Out-of-state tuition (Sort)
- Ranking (Sort)
- Average Financial Aid Granted (Search)
- Safety Resource (Search)

## Housing

- Property Name (Search)
- Property Type (e.g. apartment, condo, house) (Filter)
- City (Search)
- State (Search)
- Min & Max Rent (Filter)
- Min & Max Bedroom (Filter)
- Min & Max Bathroom (Filter)
- Min & Max Square footage (Filter)
- Pet Friendly (Filter)
- Pet Limitations (Search)
- Schools nearby (Search)
- Building Amenities (Search)
- Walk Score & Transit Score (Search)
- Rating (Sort)
- Accessibility Features (Search)
- Safety Score (Search)
- Included Utilities (Search)

## Amenity

- Name (Search)
  - Category (Search)
  - Rating (Sort)
  - Number of Reviews (Sort)
  - City (Search)
  - State (Search)
  - Age Restriction (Filter)
  - Pricing (Search)
  - Delivery / Takeout (For restaurants) (Filter)
  - Operating Hours (Filter)
-

## Media

**University:** Pictures, Videos, Map, News Feed

**Housing:** Pictures, Texts, Map, Property Description

**Amenity:** Pictures, Map, Yelp Reviews

## Connection

**University:** University connects to Housing because most universities provide their housing and some people live in housing areas near universities for an easier commute. It also connects to amenities because universities provide students with entertainment, shops, and restaurant. Otherwise, students will go to these areas near campus because they are more accessible.

**Housing:** Housing connects to universities because housing is an essential part of universities. You most certainly have to live in the city where the university is located. Housing also connects to Amenities because a lot of places provide their amenities to residents or they have amenities like restaurants and convenience stores nearby.

**Amenity:** Amenities connects to university because universities provide students with amenities or they have many amenities located nearby. Amenities also connect to housing because many apartments and condos have their amenities. They also tend to have an abundance of amenities nearby.

## V. Tools

We used a large variety of tools to make this project possible. Here's a list of tools we used, a link to their original pages, and the purpose we used them for:

- GitLab (<https://gitlab.com>)
  - GitLab provides us flexible source control, good issue tracking, communication with other teams, and more
- Postman (<https://www.postman.com>)
  - Postman allows us to manage the API for our website
- React (<https://reactjs.org>)
  - React provides a more usable framework for front end development

- React Bootstrap (<https://react-bootstrap.github.io>)
  - React Bootstrap is a CSS framework that incorporates React
- TypeScript (<https://www.typescriptlang.org>)
  - TypeScript provides a typing system on top of JS, allowing us to be more explicit about how functions work and what to expect from our code
- Namecheap (<https://www.namecheap.com>)
  - Namecheap allowed us to procure a domain for our website
- Discord (<https://discord.com>)
  - Discord allows us to have very active discussions and voice chats to keep all the members of our team as informed as possible.
- Amazon Web Service (<https://aws.amazon.com>)
  - Amazon Web Service helped us host our GitLab repository online and even incorporates live redistributing new code
- NodeJS (<https://nodejs.org/en>)
  - NodeJS provides a more useful JS runtime for us to experiment with our changes on
- Node Package Manager (<https://www.npmjs.com>)
  - NPM allows us to easily manage dependencies and packages for our code
- Different API and Data sources:
  - <https://www.yelp.com/developers/documentation/v3>
  - <https://collegescorecard.ed.gov/data/documentation/>
  - <https://apify.com/tugkan/apartments-scraper#apartments-scraper>
  - <https://developers.google.com/maps/documentation/places/web-service/overview>
  - [https://docs.gitlab.com/ee/api/api\\_resources.html](https://docs.gitlab.com/ee/api/api_resources.html)

## VI. Hosting

We used NameCheap to obtain our domain name campuscatalog.me. We hosted our frontend using AWS Amplify, which syncs to our GitLab repository and redeploys when any changes are made to the production branch.

## VII. **GitLab**

You can find our repository here: <https://gitlab.com/RG8452/campus-catalog>