



study
spotter

Outline

Problem Statement

Audience and Goal

Our Solution

Demo

Technical Implementation

Next Steps

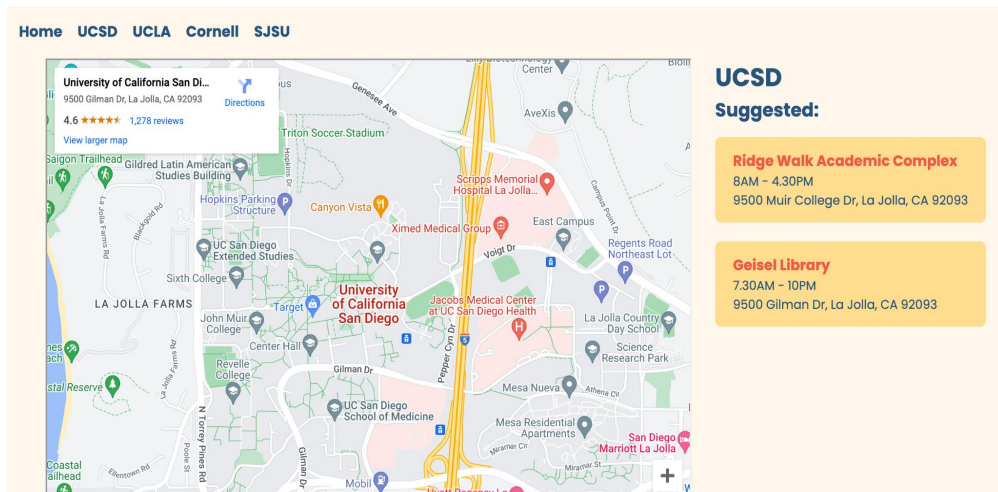
Reflection

Q&A

The Problem [Alan]

- Finding a productive place to study is crucial to student's academic success
- However, libraries can often be crowded, coffee shops loud, and the outdoors unpredictable
- There is a clear need for an easy and convenient way to find places on campus to study
- Our goal: Create a tool that painlessly finds on campus spots to work using crowdsourced data

Our Solution [Jenny]: Study Spotter!



- App to store study spots on college campus and their information
 - More efficient for students to study and discover new places
- App to review study spots
 - Allows students to voice their opinions, see what others think about certain location, and find the study spot best for them

Demo !

Technical Components [Jenny] - Set-up & Tech Stack

- Frontend: JavaScript, HTML, CSS
- Backend: Java, Google App Engine, DataStore
- SPA Routing
- Template HTML for the college's list of study spots and reviews page → filled in dynamically with data from DataStore

```
const routes = {  
  404: {  
    template: "/templates/404.html",  
    title: "404 | " + pageTitle,  
    description: "Page not found"  
  },  
  "/": {  
    template: "/templates/index.html",  
    title: "Home | " + pageTitle,  
    description: "this is the homepage"  
  },  
  reviews: {  
    template: "/templates/reviews.html",  
    title: "Reviews | " + pageTitle,  
    description: "Reviews page"  
  },  
  locations: {  
    template: "/templates/locations.html",  
    title: "Pick a Study Spot | " + pageTitle,  
    description: "College page"  
  }  
}
```



locations.html



reviews.html

Technical Components [Jenny] - Storing & Displaying User Reviews

- **Storing:** Java servlet architecture + DataStore to store reviews
- **Displaying:** Fetch from DataStore + filter by location

Kind
Reviews

+ ADD QUERY CLAUSE

<input type="checkbox"/>	Name/ID ↑	college	description	location	name	rating	timestamp
<input type="checkbox"/>	id=5660308458700800	UCSD	great place to study, except that the conferen...	Ridge Walk Academic Complex	Jenny	4	1658789342533
<input type="checkbox"/>	id=5726966351134720	UCSD	The upper floors are very quiet nice to study i...	Geisel Library	Jenny	3	1658789511204

UCSD

Ridge Walk Academic Complex

Leave a review!

Name Rating (out of 5)

Review

Submit

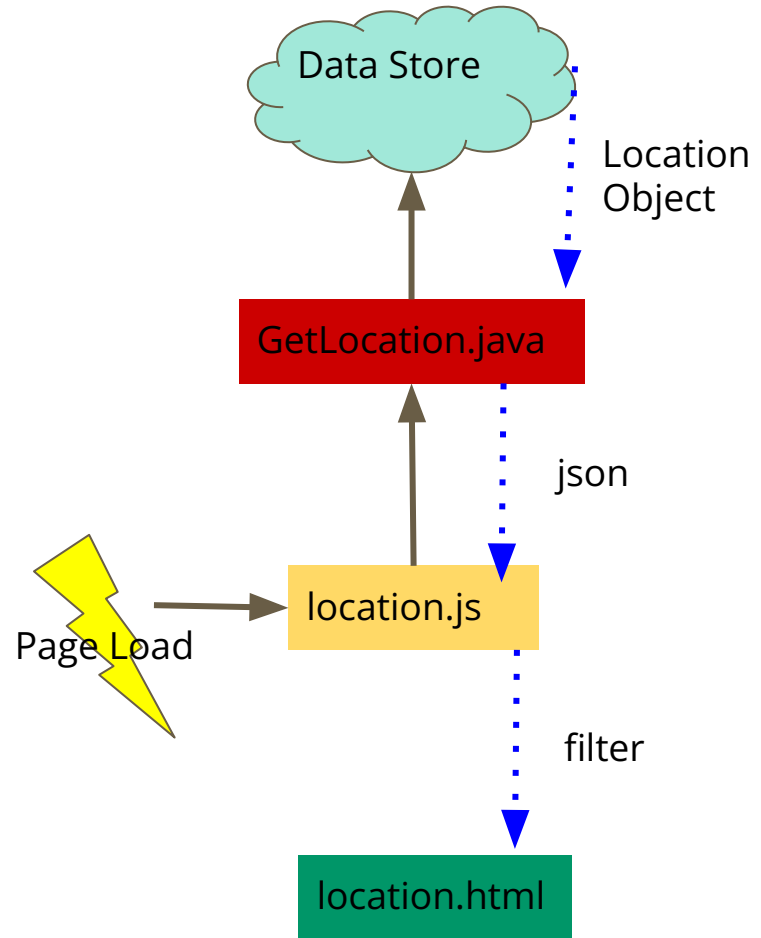
Reviews

Jenny at 7/25/2022
4 / 5 stars

great place to study, except that the conference rooms are always unavailable now

Technical Components [Alan]

- One of the main challenges of this project: making it dynamic
 - This means our data is not hardcoded in the HTML file
- How did we do this?
 - By connecting our application to the datastore
- Steps between Data Store and App (exp.):
 1. location.js calls GetLocations.java on page load
 2. GetLocation.java returns a json to location.js
 3. location.js checks if that data entry is valid
 - a. In this case, if the college matches the name
 4. If it does, it creates a new HTML card element to be displayed



Technical Components [Sahiti]

New feature:

Google Translation to all pages of the website

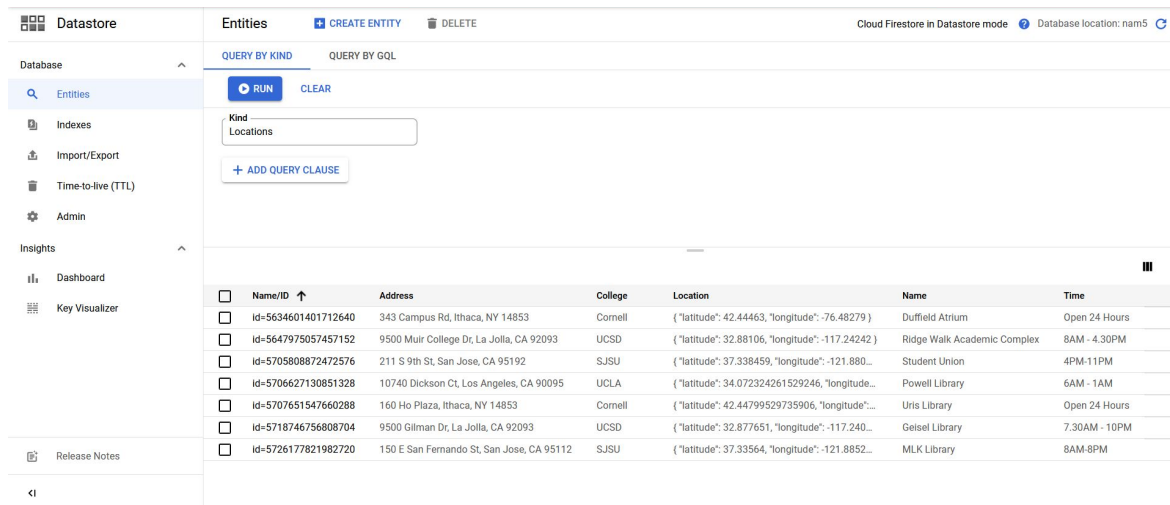
- More accessible info to all
- Offers translation in all languages

The screenshot shows a web interface for the UCSD Geisel Library. At the top, the text "UCSD Geisel Library" is displayed in a dark blue font. Below this is a yellow rectangular box containing a review form. The form has the heading "留下评论!" (Leave a comment!) in bold. It includes input fields for "姓名" (Name) and "评分 (满分 5 分)" (Rating (out of 5 points)), followed by a "提交" (Submit) button. Below the form is a section titled "评论" (Comments). A light blue box displays a submitted review from "珍妮于 2022 年 7 月 25 日" (Jenny on July 25, 2022) with a rating of "3 / 5 颗星" (3 out of 5 stars). The review text reads: "如果需要深度集中并且有很好的视野，较高的楼层非常安静，很适合学习。2楼拥挤，吵闹，肮脏，适合有朋友的人。" (If you need deep concentration and a good view, the higher floors are very quiet, very suitable for study. The 2nd floor is crowded, noisy, and dirty, suitable for people with friends.)

Technical Components [Stephanie] - Location Datastores

Use cloud datastore

- More dynamic
- Allows for more complex queries, e.g. filtering by college



The screenshot displays the Google Cloud Datastore console interface. On the left, a sidebar menu includes options like Database, Entities, Indexes, Import/Export, Time-to-live (TTL), Admin, Insights, Dashboard, and Key Visualizer. The main panel is titled 'Entities' and shows a query by kind for 'Locations'. Below the query bar, a table lists eight entities, each with a checkbox, ID, Name, Address, College, Location (coordinates), Name, and Time.

<input type="checkbox"/>	Name/ID ↑	Address	College	Location	Name	Time
<input type="checkbox"/>	id=5634601401712640	343 Campus Rd, Ithaca, NY 14853	Cornell	{ "latitude": 42.44463, "longitude": -76.48279 }	Duffield Atrium	Open 24 Hours
<input type="checkbox"/>	id=5647975057457152	9500 Muir College Dr, La Jolla, CA 92093	UCSD	{ "latitude": 32.88106, "longitude": -117.24242 }	Ridge Walk Academic Complex	8AM - 4.30PM
<input type="checkbox"/>	id=5705808872472576	211 S 9th St, San Jose, CA 95192	SJSU	{ "latitude": 37.338459, "longitude": -121.880...	Student Union	4PM-11PM
<input type="checkbox"/>	id=5706627130851328	10740 Dickson Ct, Los Angeles, CA 90095	UCLA	{ "latitude": 34.072324261529246, "longitude":...	Powell Library	6AM - 1AM
<input type="checkbox"/>	id=5707651547660288	160 Ho Plaza, Ithaca, NY 14853	Cornell	{ "latitude": 42.44799529735906, "longitude":...	Uris Library	Open 24 Hours
<input type="checkbox"/>	id=5718746756808704	9500 Gilman Dr, La Jolla, CA 92093	UCSD	{ "latitude": 32.877651, "longitude": -117.240...	Geisel Library	7.30AM - 10PM
<input type="checkbox"/>	id=5726177821982720	150 E San Fernando St, San Jose, CA 95112	SJSU	{ "latitude": 37.33564, "longitude": -121.8852...	MLK Library	8AM-8PM

Technical Components [Stephanie] - Landing Page

CSS + HTML

```
1 <html lang="en-US">
2 <head>
3   <meta charset="UTF-8">
4   <title>Landing Page</title>
5   <link rel="stylesheet" href="templates/home-style.css">
6 </head>
7
8 <body>
9   <div id="content">
10     <div style="position:relative; left:200px;">
11       <div align="right" class="fade-in-image">
12         
13       </div>
14       <div style="position:relative; left:80px;" class="fade-in-image">
15         <p>find the perfect study spot today!</p>
16       </div>
17     </div>
18   </body>
19
20 body {
21   background-image: url('images/bg.png');
22   background-attachment: fixed;
23   background-size: cover;
24 }
25
26 .fade-in-image {
27   animation: fadeIn 8s;
28   -webkit-animation: fadeIn 8s;
29   -moz-animation: fadeIn 8s;
30   -o-animation: fadeIn 8s;
31   -ms-animation: fadeIn 8s;
32 }
33
34 @keyframes fadeIn {
35   0% {opacity:0;}
36   100% {opacity:1;}
37 }
```

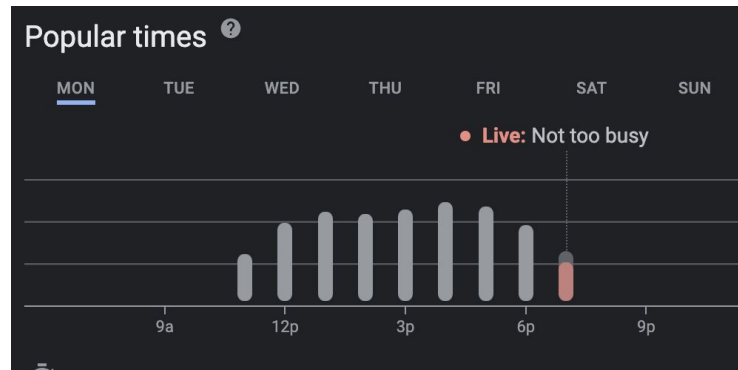


Home UCLA UCSD



Future features [Sahiti]

- Images of study spots
- Star-based ranking
- Live graphs with up to date metrics (# of people, how busy, etc)
- Recommendations
 - Favoriting option that could influence the recommendation system



Reflection [Stephanie]

What went well

- Product looks good!

Challenges

- Splitting up tasks evenly/modularly
- Bugs along the way

Things we learned

- Using libraries, interacting with datastores
- Git, html, css, javascript, java servlets

Q&A