

CULib Study Spot

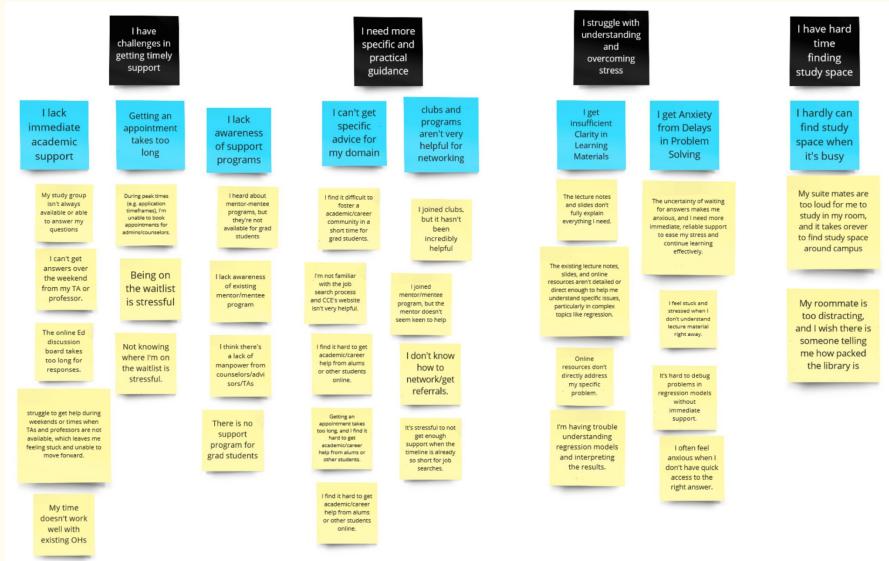
Find your study spaces

- Problem Statement
- Design Concept
- Solution Evaluation
- Demo

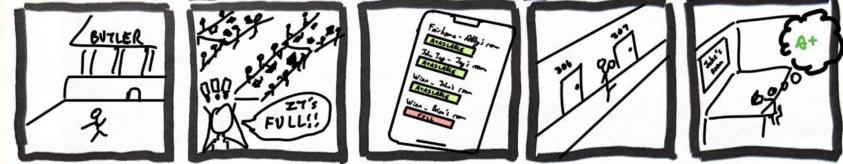
Problem Statement

Students struggling to find study space on campus

Design Concept



✗ Room Sharing app



✓ Library Occupancy app



2 fold problem

Students:

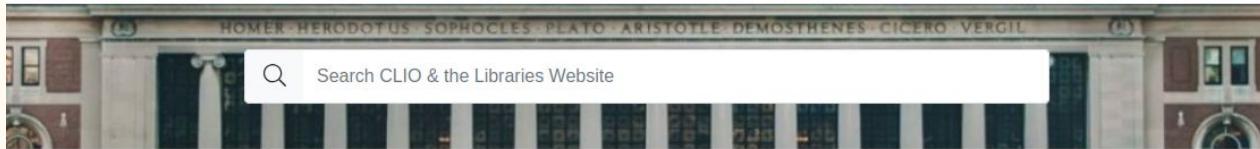
- Help students find study spaces easier
- Ensure upkeep for library capacity meter

Librarians:

- Intuitive frontend UI to remove reliance CUIT

COLUMBIA UNIVERSITY LIBRARIES

Services & Tools ▾ Libraries ▾ Collections ▾ Using the Libraries ▾ Research & Teaching ▾ About ▾



LIBRARIES OPEN NOW

Click on a location for its full schedule.

Avery Architectural & Fine Arts Library  13% 9:00 AM - 11:00 PM

Barnard College Library 8:00 AM - 2:00 AM

Business & Economics Library in Uris 9:00 AM - 11:00 PM

Butler Library Building Hours  23% OPEN

Butler Library Circulation Hours 9:00 AM - 9:00 PM

C.V. Starr East Asian Library CLOSED

Columbia University Archives 10:00 AM - 4:00 PM

Health Sciences Library CLOSED

Journalism Library 10:00 AM - 5:00 PM

Law Library OPEN

Lehman Social Sciences Library  9% 9:00 AM - 3:00 AM

Library Information Office 9:00 AM - 5:30 PM

Mathematics Library 9:00 AM - 11:00 PM

Music & Arts Library (Wiener) 9:00 AM - 9:00 PM

Rare Book & Manuscript Library 10:00 AM - 4:00 PM

S. Steven Pan '88 Business Library (Manhattanville) 10:00 AM - 5:00 PM

Science & Engineering Library OPEN

Social Work Library 10:00 AM - 8:00 PM

Teachers College 9:00 AM - 10:00 PM

The Burke Library at Union Theological Seminary 9:00 AM - 10:00 PM

Solution Prototype - Students

FIND YOUR STUDY SPACES

Current Date: 12/10/2024 (Saturday)

| Library Name | Seat Occupancy | Quiet or Talk Area | Best Floor | Open Hours |
|---|----------------|--------------------|---------------|--------------|
| Avery Architectural & Fine Arts Library | 60% | Quiet | 2nd | 9 AM - 9 PM |
| Barnard College Library | 82% | Quiet & Talk | Not Available | 9 AM - 10 PM |
| Burke Library at Union Theological Seminary | 55% | Quiet | 3rd | 9 AM - 10 PM |
| Business & Economics Library in Urs | 45% | Talk | 1st | 9 AM - 11 PM |
| Butler Library | 68% | Quiet & Talk | 2nd, 5th | 24H |
| Lehman Social Sciences Library | 49% | Talk | 3rd | 9 AM - 11 PM |
| Science & Engineering Library | 58% | Quiet & Talk | 2nd | 9 AM - 3 PM |
| Teachers College | 45.3% | Talk | 2nd | 9 AM - 10 PM |

Butler Library

Previous Library | Next Library

| Each Floor | Seat Occupancy |
|-------------------|----------------|
| 2nd Floor (Talk) | 48% (Average) |
| 3rd Floor (Quiet) | 88% (Busy) |
| 4th Floor (Talk) | 67% (Busy) |
| 5th Floor (Quiet) | 45% (Average) |
| 6th Floor (Quiet) | 81% (Busy) |

Best Floor: 2nd Floor(48%), 5th Floor(45%)

Booking study rooms: 4th Floor

Open Hours: 24 hours [HOME PAGE](#)

Butler Library

4th Floor

| Each Room | Seat Occupancy |
|-----------|-------------------|
| Room 403A | N/A (Study Rooms) |
| Room 404 | N/A (Study Rooms) |
| Room 405 | N/A (Study Rooms) |
| Room 407 | N/A (Study Rooms) |
| Room 408 | N/A (Study Rooms) |
| Room 409A | N/A (Study Rooms) |

Booking Study Rooms [HOME PAGE](#)

FIND YOUR STUDY SPACES

Current Date: 12/10/2024 (Saturday)

Avery Library

60% Full

2F is most free
Open until 9PM

Barnard Library

82% Full

Not Available
Open until 10PM

Burke Library

55% Full

3F is most free
Open until 10PM

Business Library

32% Full

3F is most free
Open until 11PM

Butler Library

70% Full

2F is most free
Open All Day

Lehman Library

20% Full

3F is most free
Open until 11PM

Science Library

58% Full

1F is most free
Open until 3PM

Teachers Library

28% Full

3F is most free
Open until 10PM

Barnard College Library

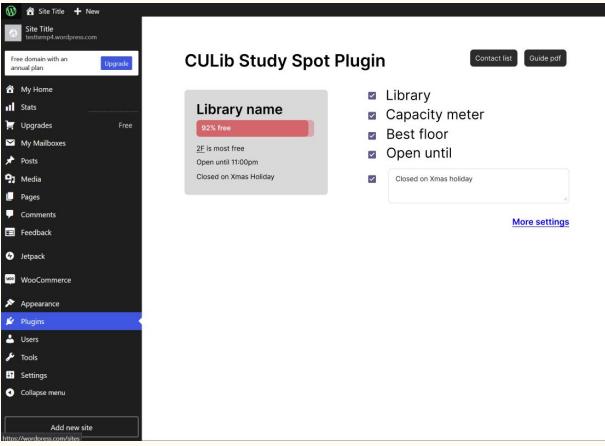
Suggest Libraries:

| Each Floor | Seat Occupancy |
|------------|----------------|
| 1st Floor | 96% Full |
| 2nd Floor | 86% Full |
| 3rd Floor | 70% Full |
| 4th Floor | 76% Full |

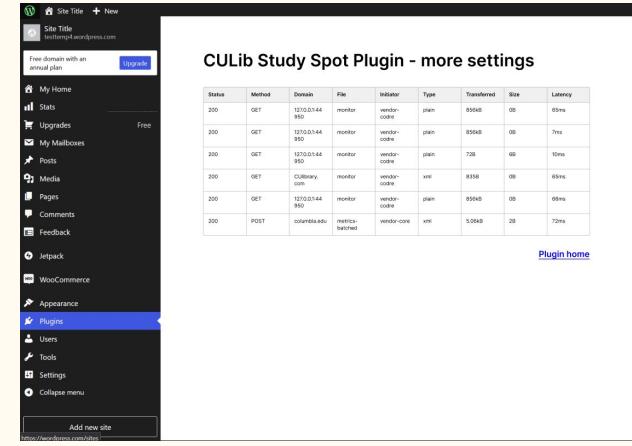
Best Floor: Not Available

Open Hours: 9AM - 9PM [Home Page](#)

Solution Prototype -Librarians



The screenshot shows the 'CULib Study Spot Plugin' settings page within the WordPress dashboard. The left sidebar is the standard WordPress admin menu. The main content area is titled 'CULib Study Spot Plugin' with 'Contact list' and 'Guide pdf' buttons. It displays a 'Library name' section with a red '92% free' button. Below it are four checked checkboxes: 'Library', 'Capacity meter', 'Best floor', and 'Open until'. A fifth checkbox, 'Closed on Xmas holiday', is unchecked. A 'More settings' link is at the bottom right of the list.



The screenshot shows the 'CULib Study Spot Plugin - more settings' page. The left sidebar is the standard WordPress admin menu. The main content area is a table titled 'Status' with columns for 'Status', 'Method', 'Domain', 'File', 'Initiator', 'Type', 'Transferred', 'Size', and 'Latency'. It lists several log entries. At the bottom right is a 'Plugin home' link.

| Status | Method | Domain | File | Initiator | Type | Transferred | Size | Latency |
|--------|--------|---------------|---------------|-------------|-------|-------------|------|---------|
| 200 | GET | 122.0.0.1:443 | monitor | vendor-code | plain | 9354B | 0B | 69ms |
| 200 | GET | 122.0.0.1:443 | monitor | vendor-code | plain | 8564B | 0B | 7ms |
| 200 | GET | 122.0.0.1:443 | monitor | vendor-code | plain | 72B | 0B | 10ms |
| 200 | GET | library.com | monitor | vendor-code | xhr | 9353B | 0B | 69ms |
| 200 | GET | 122.0.0.1:443 | monitor | vendor-code | plain | 8564B | 0B | 69ms |
| 200 | POST | colombia.edu | metrics-teach | vendor-code | xhr | 5264B | 2B | 72ms |

Risks and Problems we faced in the Process

- **Technical risk:**
 - Not being able to retrieve CUIT WiFi data from AWS S3 ticket. Not being able to extract WiFi information for each room/floor of the library. CUIT WiFi feed is not stable
- **Design risk:**
 - Not being able to aesthetically differentiate ourselves from the current hours.library.columbia.edu page when technical risk manifests.
 - The interface needs to be intuitive and accessible, especially for users in a hurry. If users find it difficult to navigate or if the occupancy data isn't easily understandable, they may abandon the tool, indicating a potential mismatch with our design goal for users.
- **Scheduling/Project Management Risk:**
 - Not being able to manage the project after graduation, the project becomes obsolete and poorly maintained.
- **Wordpress/front-end dev portal usage intuition:**
 - Our primary objective is to bring back control to Librarians to independently manage front-end website read/write access and with cumulate relevant back-end dev members from CUIT. While we believe many of this can be tackled with a ReadMe documentation and wordpress website with the objective to simplify the entire process as much as possible, our final concern is that our proposed solution may still remain too complicated for a technology novice.

Demo Time