

HornSync

Jasmine Xu



Motivation: Why Hornsync?

1. College is overwhelming.

- So many things are happening all at once - how can we consolidate and keep track of it all?

2. It's important to find your people.

- ...by joining clubs.
 - UT has over 1000 student organizations - how do we narrow that down?

Hornsync: What is it?

A UT student's home base for keeping in sync with their club activities!


- Consolidate events from all your followed organizations into a single subscribable Google Calendar
- Explore recommended organizations based on your interests

Web application built with Streamlit (Python)



Demo: User Authentication

- Implemented via **Firestore**
 - Supports logging in, signing up, resetting passwords, and deleting an account
- Student and Organization pathways for sign up




Do you have an account?

Yes

Email

Password

Sign In



Do you have an account?

No

Name

Email

Password

Role

Student Organization

Create Account

Demo: User Preferences

- User preferences are maintained in a **Firestore** database
 - Preferences can be updated

[Home](#) [Info](#) [Recommendations](#)

Welcome back, Jasmine Xu!

Update preferences ^

Select organizations to follow

Austin Bodyb... x Machine Lear... x Women in Co... x



Select your interests

Computer Sci... x Fitness x Technology x Data Science x



Submit

Preferences saved!

Demo: Calendar

- Leverages Google Oauth and the Google Calendar API

Generate consolidated calendar

Today < > February 2025 Month

| MON 27 | TUE 28 | WED 29 | THU 30 | FRI 31 | SAT Feb 1 | SUN 2 |
|-----------|----------------------------|-----------------------|--|-----------|------------------------------|---------------------------|
| | | | • 19:00 [ABB] - General Me | | | |
| 3 | • 19:00 [MLDS] - General m | 5 | [ABB] - FAMILY CHALLENGE | 7 | 8 | • 08:00 [WICS] - WiCS Hac |
| 10 | • 19:00 [MLDS] - General m | [ABB] - Fees Due \$45 | • 17:00 [ABB] - Cabo Bob's • 19:00 [ABB] - General Me | 14 | • 22:00 [ABB] - Flex & Flirt | 16 |
| 17 | • 19:00 [MLDS] - General m | 19 | [ABB] - FAMILY CHALLENGE | 21 | • 10:00 [WICS] - UT STEM C | 23 |
| 24 | • 19:00 [MLDS] - General m | 26 | • 19:00 [ABB] - General Me | 28 | Mar 1 | 2 |

Your Hornsync Clubs
Events shown in time zone: (GMT-06:00) Central Time - Chicago
[Add to Google Calendar](#)

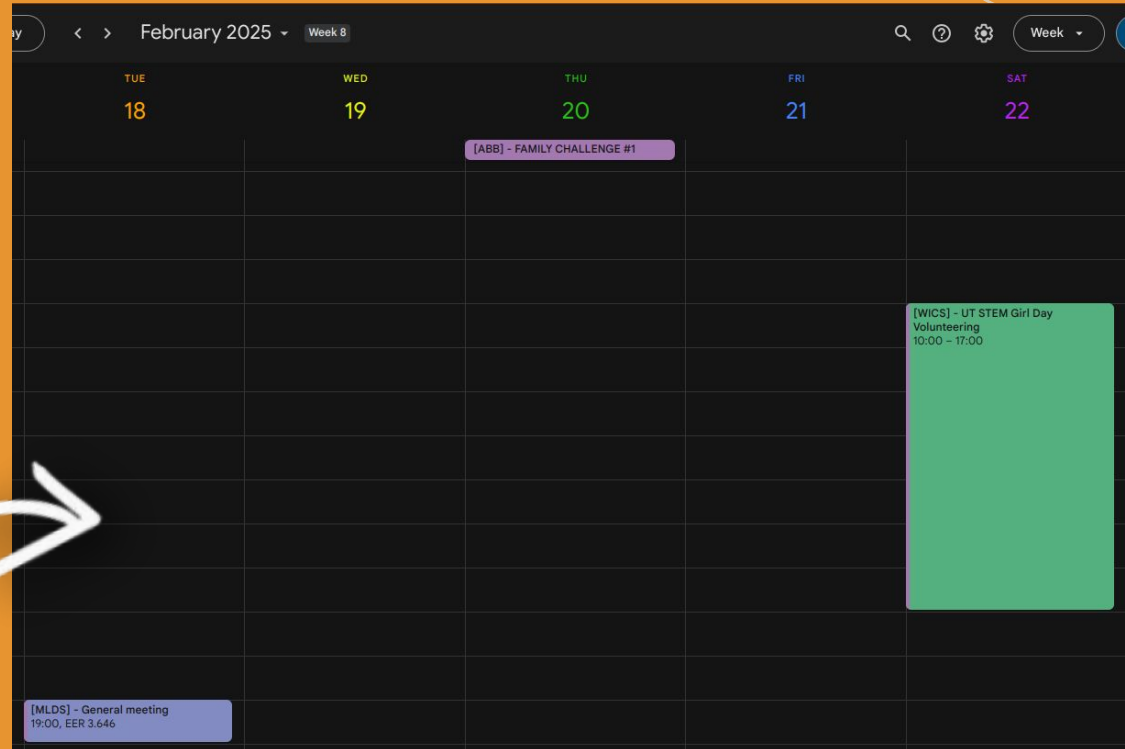
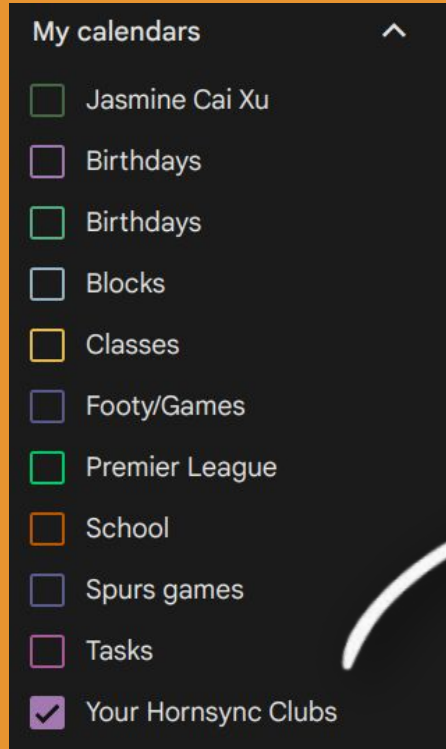
Google Calendar

My calendars ^

- ☐ Jasmine Cai Xu
- ☐ Birthdays
- ☐ Birthdays
- ☐ Blocks
- ☐ Classes
- ☐ Footy/Games
- ☐ Premier League
- ☐ School
- ☐ Spurs games
- ☐ Tasks
- ☒ Your Hornsync Clubs





Demo: Calendar (cont).

- Leverages Google Oauth and the Google Calendar API



Demo: Info

- User and organization information is stored in a **Firestore** database

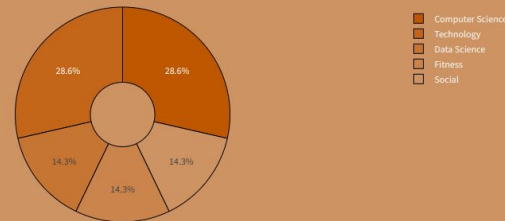
| Home Info Recommendations | | | |
|--|---|--|--|
| Available Clubs | | | |
| Logo | Name | Categories | Description |
|  | Creative Writers at UT | Arts,Humanities,Writing | We are a community of student creative writers open to all mediums (fiction, nonfiction, poetry, screenwriting, etc.). We provides fun opportunities to share and receive feedback on personal projects, network with other writers, and get connected with resources such as writing competitions, internships, and networking and publication opportunities. |
|  | Austin Bodybuilding (ABB) | Fitness.Social | A community of bodybuilders, gym-goers, and like-minded people! |
|  | Texas Convergent | Computer Science,Technology | Texas Convergent is an entrepreneurial, product-building organization at UT Austin. We provide students the necessary skills and resources to drive the future of innovation through a hands-on, project-based curriculum. |
|  | Machine Learning and Data Science Club (MLDS) | Computer Science,Technology,Data Science | We promote data science and machine learning through our general meetings every Tuesday at 7 pm. These meetings include technical workshops, career advice, industry speakers, and socials. We also host |

Demo: Recommendations

Recommendations are curated for each user by computing a composite score that combines:

1. The ratio of common categories between the student's interests and the club's categories
2. **Cosine similarity** between the student's interests and each club's description (converted to vectors via **TF-IDF**)
 - TF-IDF looks not only for term relevance but also for their rarity - this helps highlight unique clubs.

Your Top Categories



Recommended Organizations

Hornsync recommends organizations for you based on the overlap between your interests and each organization's categories, as well as by analyzing each organization's description.

Your interests: Computer Science, Fitness, Technology, Data Science

Recommended clubs for you:

- Texas Convergent (0.4)
- American Statistical Association (0.22)
- Creative Writers at UT (0.0)

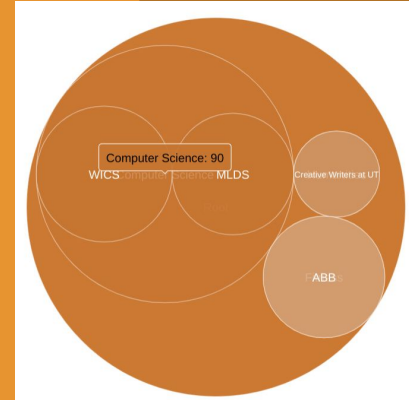
Conclusions

Challenges:

- This was my first time working with **Firestore** and **Firebase** - took me half of yesterday to get user authentication working

What's next for Hornsync?

- More refined recommendation system
 - Take into account club popularity; how can we highlight lesser-known clubs?
- Integration with Hornslink





Thank You!



And Hook'em!