Bunch

Improving social interaction and happiness with a website for online event planning and attendance

Senior Capstone Design - CSCE 482 Fall 2020

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Dr. Tracy Hammond & Samantha Ray



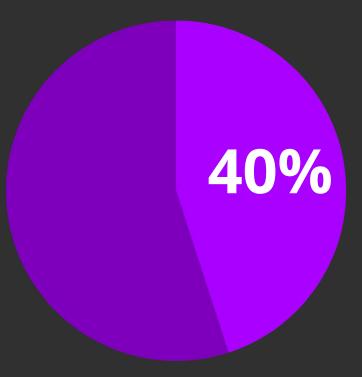
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Strict social distancing, implemented widely to curb the spread of COVID-19, has the unintended consequences of prolonged social isolation and adverse impact on mental health

-Psychiatry Research, vol. 293



Motivation



- COVID has led to over 40% of US adults reporting symptoms of anxiety or depression this July (up from 34.5% in May)
- Meeting others in person is risky
- Need a way to meet people and try new things without risking infection

Prior Work



Meetup

- Event finding application For **local events** only



Facebook Events

- Organizing community events
- Does not support online-only events



Discord

- **Online chat** server
- No tools for event creation

User Stories

- As an **event finder**, I need to **be able to browse events** so that I can find ones I want to participate in.
- As an event finder, I need to be able to filter events while browsing so that I can only see ones relevant to my interests.
- As an event organizer, I need to be able to create new events so that users can discover the events I want to plan.



59 Total User Stories & Tasks



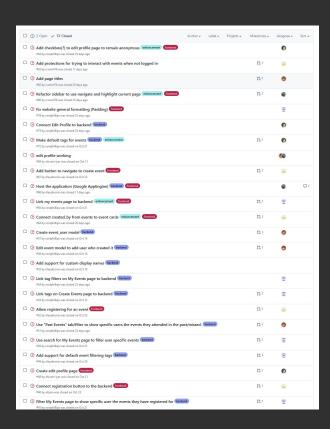
Definition of Success

- If successful, Bunch will significantly reduce social anxiety and isolation by providing a website for users to find new social groups and hobbies.
 - Users will first log in through a Google tied account.
 - Users will be able to create, register, view, edit and delete events.
 - When users create and register for events these will be added to their 'My Events' tab.
 - When an event is created, participants will get links provided by the event creator that will take them to the specific online activity.
 - Once users done with their events, they can log off.



Before Evaluation

- Completed 57 of 59 total user stories
- Polished website functionality and aesthetics
- Made sure all our target features are on the live website
- Created events for evaluation



Our Application

Features



My Events

Edit Profile

Browse Events Q =











UFC Blades vs. Lewis Lasts 4 hours





Starts: 11/28/2020, 6:00 PM Ends: 10:00 PM

Description

Come watch the Blaydes vs. Lewis fight night, we'll

DETAILS



Monopoly with Friends





The Joy of Painting Watch Party Lasts 1 hour, 30 minutes





Starts: 11/25/2020, 6:00 PM Ends: 7:30 PM

Description

Regardless of if you're a new or experienced painter,

DETAILS



Warzone





Twilight Saga Book Discussion





Starts: 10/31/2022, 11:11 PM Ends: 11/1/2022, 12:11 AM

Description

Join us for a fun group discussion/happy hour where we talk about the Twilight Saga. Team Edward or Team Jacob? Join our Zoom discussion



✓ REGISTERED



Settlers of Catan Online Board Game





Harry Potter Discussion





Starts: 11/19/2020, 2:15 PM Ends: 5:15 PM

Description



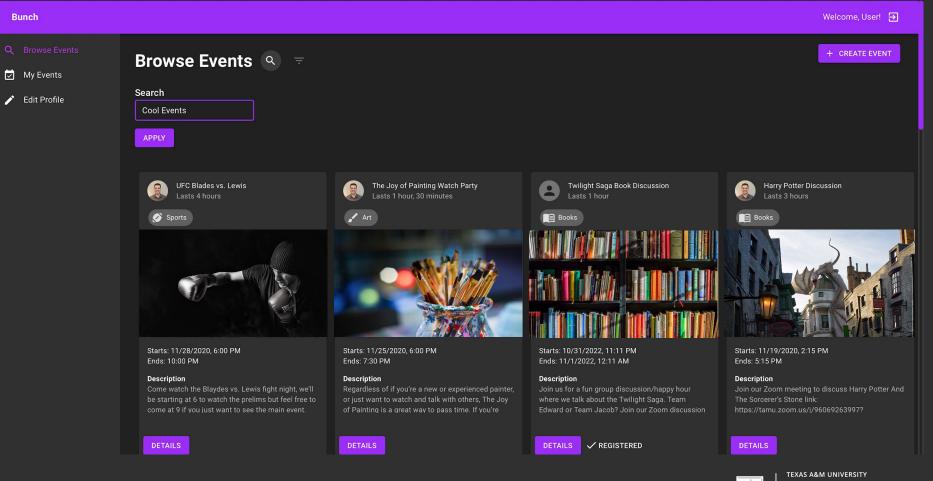


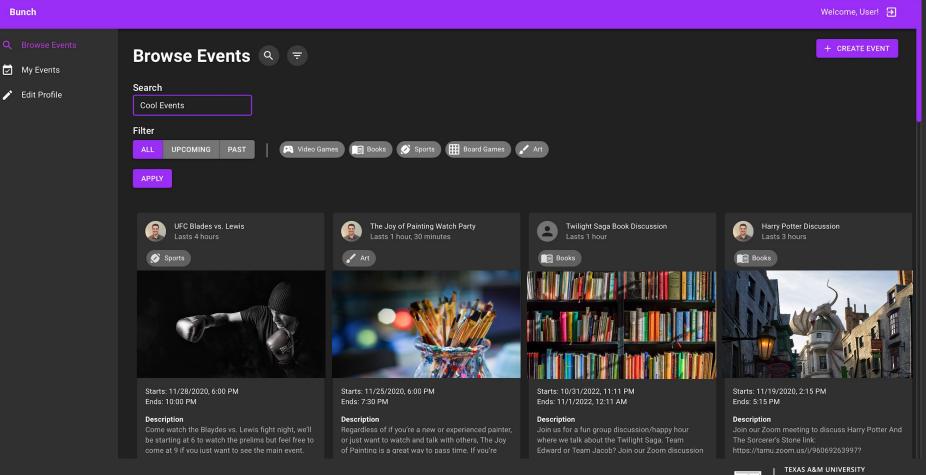
Halo Master Chief Collection

Video Games

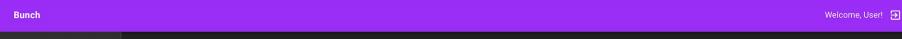


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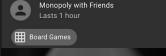
Edit Profile

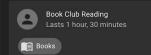


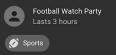












Starts: 11/28/2020, 6:00 PM

Ends: 9:00 PM

Description

DETAILS



Starts: 10/31/2022, 11:11 PM Ends: 11/1/2022, 12:11 AM

Description

where we talk about the Twilight Saga. Team Edward or Team Jacob? Join our Zoom discussion



✓ REGISTERED

Virtual Painting With a Twist



Starts: 10/10/2021, 9:00 PM Ends: 10:00 PM

Description

Come play Monopoly with us Online! We are all New players welcome! Zoom Call Link:



✓ REGISTERED

Among Us Group Play



Starts: 11/16/2021, 7:00 PM Ends: 8:30 PM

skribbl.io

Description

We will be reading the book "Crossing to Safety" by Wallace Stegner. We will come together every week to discuss a few chapters of this book



✓ REGISTERED

All Bad Cards

Come watch the Aggies take down LSU!!!

✓ REGISTERED



Board Games







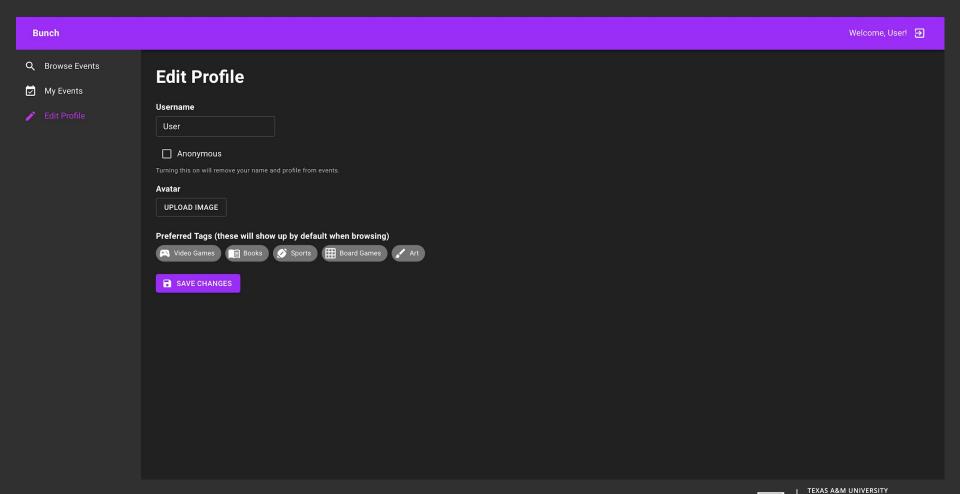






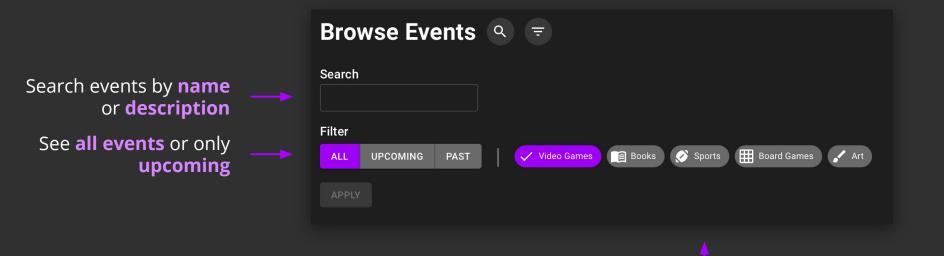


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Advanced Filtering



Choose tags relevant to

you



Event Cards

Tags allow users to find events **most relevant** to them



Add **images** to events to make them stick out

Add more **detail** to explain events to others



Regardless of if you're a new or experienced painter, or just want to watch and talk with others, The Joy of Painting is a great way to pass time. If you're interested in painting

DETAILS

Ends: 7:30 PM

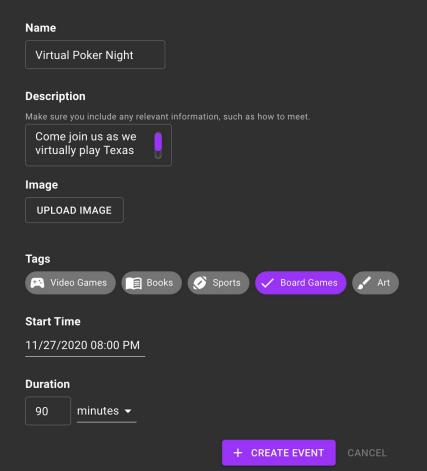
Description

✓ REGISTERED

Starts: 11/25/2020, 6:00 PM

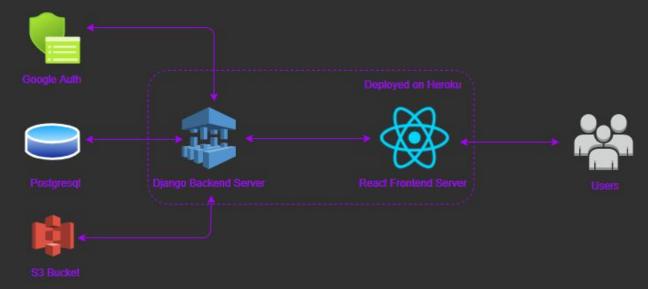


Create New Event





System Architecture



Version Control: Git & GitHub

Issue Tracking: GitHub

Communication: Discord

Server Hosting: Heroku

Backend: Django/Python

Frontend: TypeScript/React

Database: PostgreSQL













Difficulties

- Full Stack Web Development: we used a database, API routes, backend, routing, frontend, authentication, and static file hosting
- Ensuring a good user experience by making sure the website is clean, intuitive and easy to use

User Study: Testing the Usability of our System

Study, Results, and Evaluation



Testing the System





Pre-Survey

- ▶ To test the initial state of users
- Information about social habits



Interview

- Information about user experience
- Feedback on usability and possible future use



User Study

- Users tested system with basic instructions
- Tested **usability** and how intuitive our system was



Post Survey

- See how users felt about the website
- Information about how users felt about the event they attended and using the site in the future

Evaluation Questions & Experiences

Goals

- Is using the website easy?
- Did users **enjoy** going to events?
- Would they continue to use the site?

Pre-Survey

- Likert-scale questions
- Measure mental health

Persona Testing

- Picking persona
- Interacting with Bunch Interface

Real Event Registration

Participants register for an actual event

Semi-Structured Interview

- Oualitative Feedback
- Subjective/Objective

Post Survey

- Likert-scale questions
- Event feedback
- Participants experience



Evaluation Results

Pre-Survey

- Over 50% of users have trouble meeting new people
- 53% of users primarily meet people throughsocial media

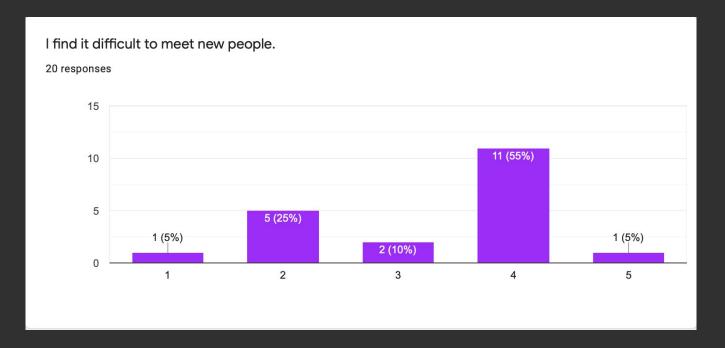
Semi-Structured Interview

- Useful design feedback
- Future feature ideas

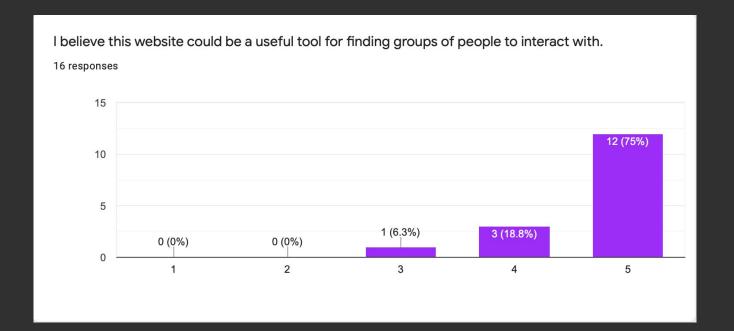
Post Survey

- Positive response to experience
- Over 68% of users said they would use the application in the future

Proof of the Need



Proof of Effectiveness



Our Team

8

Alizain Ali

Frontend Development: Profile Pictures, Event Registration



Ryan Conn

Project Initialization, **Database**, **API**, **Frontend Development**



Shivani Iyer

Frontend Development: Edit Profile Page, Anonymous Users, Sidebar



Riley Norris

Database, **Image Uploads**, Website Hosting, Frontend Development

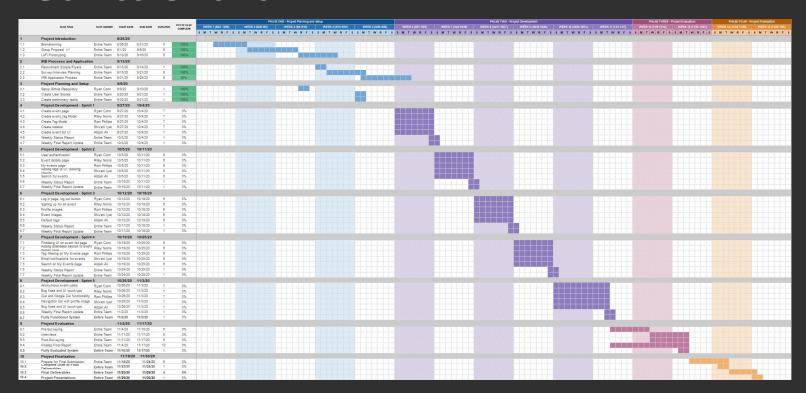


Veronica Phillips

Database, API, Event Users, **Event Registration**, Tags



Gantt Chart





Budget

Internal Course Equipment Needs

| Personal Computers Previously Purchased | \$0 |
|-----------------------------------------|------|
| Web Server Hosting | \$20 |
| Database Hosting | \$30 |
| Domain Hosting | \$2 |
| Total | \$52 |

Monthly Upkeep Costs (to an Outside Company)

| Web Server Hosting | 1 x \$1 = | \$1 |
|-------------------------|--------------|--------|
| Database Hosting | 1 x \$20 = | \$20 |
| Domain Hosting | 1 x \$1 = | \$1 |
| Application Maintenance | 1 x \$1200 = | \$1200 |
| Total | | \$1222 |

Development Costs (to an Outside Company)

| <u> </u> | | | <u> </u> | | |
|-------------------------------------------|-----|---|----------|---|---------|
| Personal Computers | 5 | х | \$1200 | = | \$6000 |
| Web Server Hosting | 1 | х | \$20 | = | \$20 |
| Database Hosting | 1 | х | \$30 | = | \$30 |
| Domain Hosting | 1 | х | \$2 | = | \$2 |
| Cost of Labor (\$30hr/120 hrs per person) | 600 | х | \$30 | = | \$18000 |
| Total | | | | | \$24052 |



Engineering Concerns

Environment:

purely online, no significant issues

Health/safety:

no moderation, minors should avoid using the app until improvements are made

Social, political, ethical:

potential for **misuse**, vigilance is needed if the website takes off

Sustainability:

needs moderation and some continued development

Economics:

relatively low hosting and maintenance costs mean that the site should be viable with some monetization scheme (ads, sponsored events?)



Future Work



Calendar Integration

Allowing events to be **downloaded** to calendars, formatted for Google Calendar, iCal, and Outlook



Event Notifications

- Allow users to toggle notification settings
- Email **reminders** sent to users for events they have registered for

Conclusion

Technology is changing the way we socialize and meet people

Bunch provides a platform to help social isolation in a **new era**



Thanks for listening!

Questions?

