

# *Mvents*

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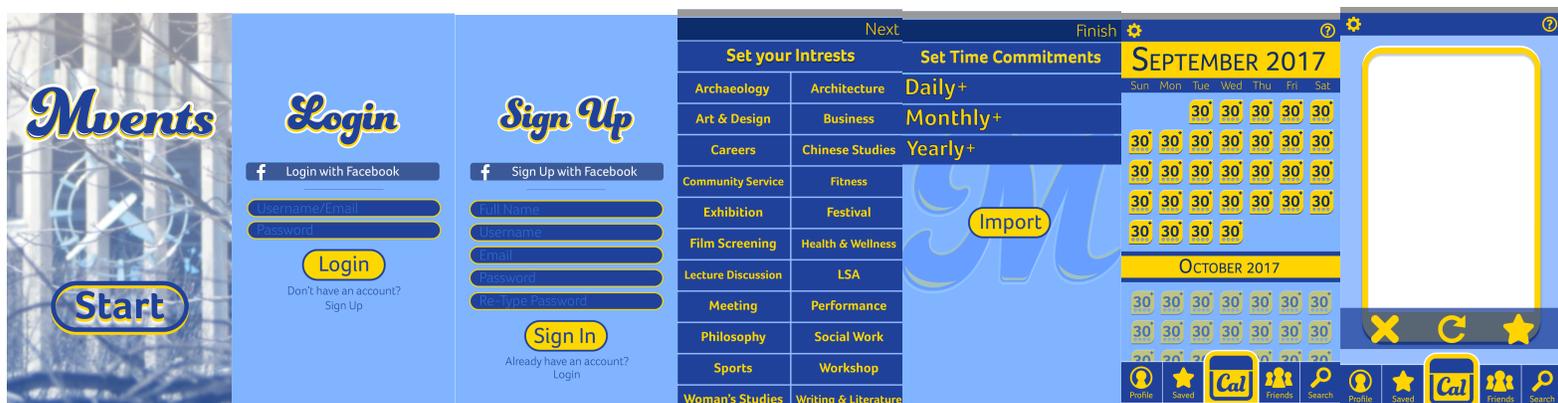
## Introduction

### Summary

At the University of Michigan, there is a disconnect between students and available resources. The university and its affiliated organizations put on events every day, but many students struggle to find out about them. So, we created Mvents.

Mvents is a smartphone application that connects users with University of Michigan Events based on their time commitments and interests. Users enter their interests and time commitments, and are shown a calendar, which displays the number of events suggested for them on each day. When a user selects a day, they are shown the top events on that day one at a time. They can then swipe through those events discarding the ones that do not interest them and saving the ones that do.

### Prototype



Link to View Live Prototype - <https://pr.to/PNH539/>

Sign Up for Beta Version at [Mvents.net](http://Mvents.net)

## Project Timeline

- **January**
  - Group formed
  - Brainstormed ideas
  - Met with Dr. Fretz and got idea approved
  - Creating and Distributing Survey
- **February**
  - Analyzing Survey results
  - Learning about Michigan API and API app development
  - Developed application flowchart
  - Started interface and back end design
- **March**
  - Developed Logo
  - Finalized application flowchart
  - Created Interface screens
  - Joining Interface and Back end of application
  - Began promo video
  - Explored Marketing options
- **April**
  - Video Finished
  - Designed and Printed Stickers
  - Present Prototype in Entrepreneurial Creativity
  - Application launch

## Team Dynamics

### **The Team**

#### **Addison Viener**

I am an Art and Design and Information double major, and an Entrepreneurship Minor. I originally was trying to gather a team, then decided to reach out to Parth, who found Austin through speed dating. My particular role on the team was prototype, design, and develop the application while also making sure everyone kept on track and moving towards our ultimate goal of creating Mvents.



#### **Austin Witt**

I study film and political science. I joined the group when I read Parth's bio and have been in charge of the advertising media and content. I used my skills in public speaking to present our final project to the class. Apart from creating our initial video, I have also helped with ideation and various other tasks.



#### **Josh Bell**

I joined the group last and my role was organizer. I am a sociology major and a computer science minor. My role in the group was to strategize and connect everyone's work with each other. I performed and analyzed the survey, helped with the designs, connecting the front and back end of the application, and worked with Austin on the video and presentation.



#### **Parth Shah**

I study computer science with an entrepreneurship minor. I was the technical guy in the team and thus really wanted to make something cool with this class. I used my skills to make the iOS app for the team. I worked with Addison in planning



and implementing the screen designs into the app. My main focus was the backend and making sure the app worked.

## Table of Individual Strengths

We took the Gallup strengthsfinder test in february. We used the results to inform how we divided our tasks after that point.

<b>Gallup StrengthsFinder Results</b>					
	Strength #1	Strength #2	Strength #3	Strength #4	Strength #5
Addison	Ideation	Relator	Futuristic	Input	Learner
Austin	Strategic	Learner	Restorative	Command	Self-Assurance
Josh	Ideation	Strategic	Context	Analytical	Adaptability
Parth	Strategic	Futuristic	Communication	Includer	Connectedness

## Team Dynamics at the Start

We started this project by meeting once a week for two to three hours in the fishbowl. During the first two or three meetings we used a whiteboard to write out ideas. Eventually our pattern became that the team would sit around Addison's computer. This setup was not very effective for enabling communication. We started by communicating through Slack but transitioned to mostly iMessage because

not everyone would check Slack consistently and we realized if we wanted to communicate to everyone quickly iMessage was much more effective.

### **Team Dynamics at the $\frac{2}{3}$ Mark**

At around the  $\frac{2}{3}$  mark of this project our team hit our first mud. People started skipping meetings and not communicating where they were. To deal with this we first created a when to meet so that we could coordinate our schedules and set up a second meeting time. Unfortunately our schedules were conflicting and we were unable to find a second time during the week that the entire team could meet consistently. We started having smaller sub team meetings during this period. Unfortunately since we were not meeting as a team it was hard to discuss issues with our team dynamics.

When we could finally get everyone together we had an open conversation where we talked about how we felt we were doing and what kind of team norms we had established. This conversation helped to pull us out of our “first mud” period and propel us into the final sprint.

After that meeting we stopped meeting in the fishbowl as much and started meeting in environments where we could all look at each other when we talked. Being able to look at each other when we talked improved communication and made us more effective.

### **Team Dynamics at the End**

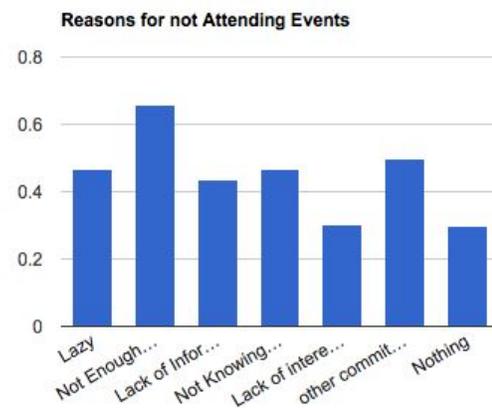
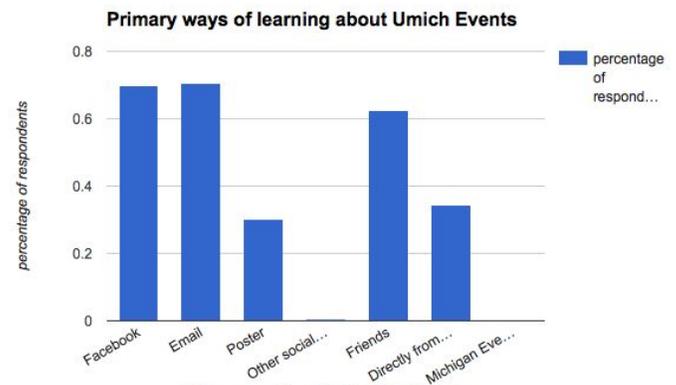
At the end of the semester everyone was very busy and it was difficult to meet as a whole group. Most of our meetings involved only partial parts of the group and we would work on different parts of the project when we were in different subgroups. When either Parth and Addison were both present we would program and integrate the interface of the app with the back end. When Austin was present we would work on the video. The constraints of our schedules limited our effectiveness but our communication

during this period was better. If we were struggling to meet we would check in with each other over facetime.

## Process

### Survey

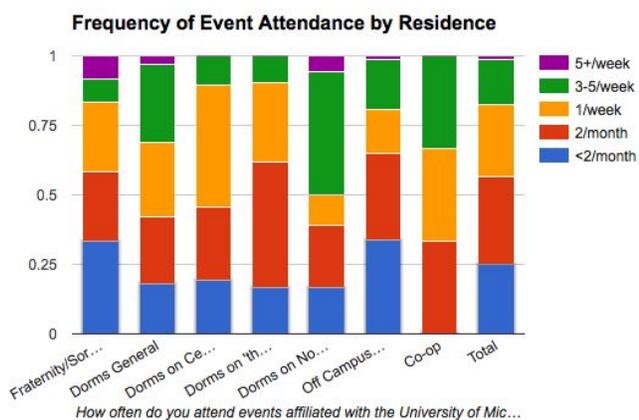
We used our survey to learn more about how students attend Michigan events. We asked demographic questions about gender, affiliation with university(class standing), where students live, and how much free time they have per week. We then asked how often they attend events, what methods they use to learn about Umich events, how well those methods work for them, how they usually attend events (alone or with friends), whether they want to attend more events, and what factors hinder their involvement in campus events. We used a snowball sampling technique by distributing the survey through Facebook and social media, and by asking acquaintances to pass the surveys on for us. The method is non random and the sample we found is likely not representative of the whole campus population. However, the information we gathered was useful as a starting point to guide our creation of the app.



The majority (66.7%) of our respondents identified as female and 31% identified as male. The overwhelming majority of respondents were students, most of whom were underclassmen, 35% were sophomores, 32% were freshman, 18% were seniors, and 9% were juniors.

71.7% of respondents said that they wish they attended more events. This affirmed our assumption that students want to attend more events. Before we performed the survey we thought that facebook and email

would be the most prominent methods of learning about events and we conjectured that few people used the michigan events page. Our hypothesis was be consistent with our responses. Less than 10% of



respondents marked the Michigan Events page. The main methods that our participants used to learn about events were email (70%) and Facebook (69%) respectively. These methods were followed by word of mouth which 62.5% of our participants listed. This data suggests that the Michigan events page and app are either not known by many students, not useful for them, or just not enjoyable to use. Since we created an app that fills the same role as the Michigan Events page we should have conducted, further research into why our participants did not use the michigan events page.

65.7% of respondents listed not having enough information as a reason why they do not attend events. Not knowing anyone at the event, lack of information, and laziness were all

marked by 45 to 47% of respondents. Our app provides information about events, so this data suggests that it could fill a deficit possessed by 65.7% of respondents.

The majority of respondents (75%) usually attend events with friends, 14% usually attend alone, and 11% do not attend Umich events at all. Respondents who identified as female, attended events alone 5% more than those who identified as male.

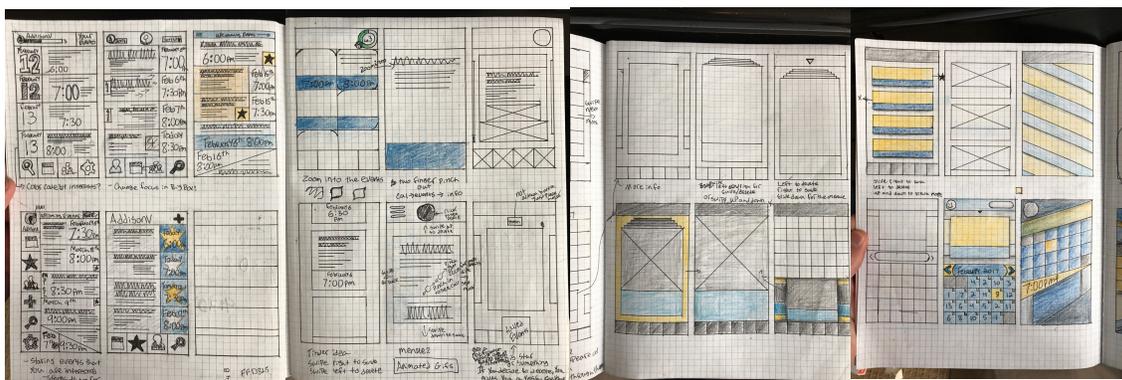
We asked multiple subjective questions on a 1 to 5 scale including, “how well do these methods for finding events work for you?” and “how often do you hear about past events that you would have liked to attend?”. The results were fairly evenly distributed centered around 3. These questions did not give us significant useable information.

The majority of respondents attended either 2 events per month (31%) or less than 2 events per month (25%). Approximately three quarters of people who attend between 2 events per month to 3-5 per week responded that they would like to go to more events. The only groups that less than 50% of respondents wanted to attend more events were those who attended 5+ events per week or < 2 per month. We compared respondents place of residence with how often they attend events and will likely use that information later in our process.

The information we gathered from this survey was useful because it validated our purpose of creating an application that delivers information about events to students better. We planned to perform a second survey once we had a functioning prototype. Unfortunately, our development schedule was pushed back and we did not have the opportunity to test user responses to our products. After our app is released on the app store we will perform more surveys to get user feedback.

## Design Progression

For the interface, we have been working through some ideas about the user experience, the usability of the application, and the application's screen flow. Taking the best ideas from our group meetings, I began to design many paper prototype iterations of the main features of the application. From these paper prototypes, I proceeded to mock up three interfaces using Adobe Illustrator.

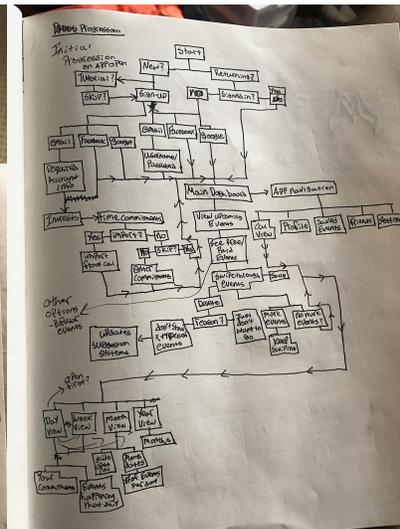
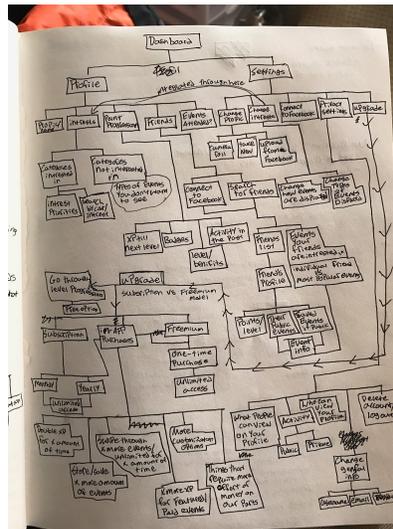
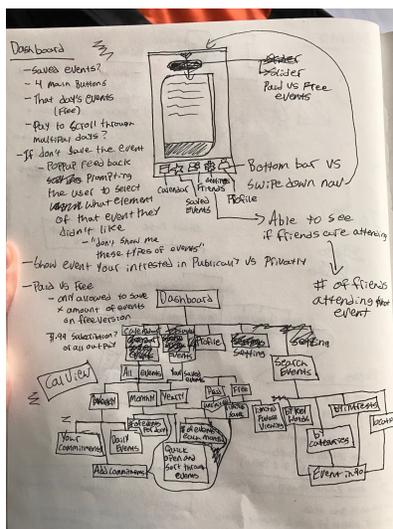
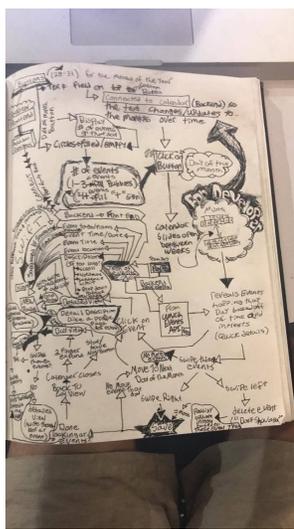


I then presented these designs to my sophomore studio class get feedback on the design concepts. Some of the reactions that I got were that they liked the idea of the calendar opening up to show the events, they liked the design shape in the second interface mock-up and pointed me in the direction of exploring color theory in more depth. In addition to commenting on the design, they stated that they liked the application concept and wanted to see it made so that they can use it.

**Written feedback from the critique:**

- "Please make a working app!"
- "I'd love to download and use this app"
- "I'd love to see a 'filter' option, just because there are many types of event that i'll never be interested ( e.g. engineering events) in and types of events that I'd like to know more about (e.g. job fairs, career fairs, CJS events, etc.)"
- "I like the 3rd design how you can see both months, but it stays on the month. I like the rounded design of the second one though"
- "Continue developing calendar designs. Neutral background to more color variation. Play with color schemes. Have it not be as abruptly 'Michigan.'"

From there, we began to map out the entire application at a more detailed level. To do this, we used flow charts to help us see the interconnectivity of what we wanted to have in the application. Through the flowcharts, we were able to see which figures of the application were essential to include in the minimal viable product, and which we could push off to a later update.



Once we figured out how the application was going to work on a fundamental level, and which pages needed to be designed/programmed, we began to design and develop the application. We started to connect the backend systems that Parth has been working on to the front end interface that Addison has been designing.



After designing the screens, and putting what we could into XCode, we made a Proto.io Prototype to help show how our application works. We are currently working on developing and designing the final screens needed to launch our application, while also using the Proto.io Prototype for promotional purposes.



## **Making the Code**

Developing the app was a challenge. Though Parth has previously made iOS apps, he had never gotten data from an online API (Application Program Interface) in an app. Furthermore working with date and time in the calendar view was tricky and new for him. Thus before starting to make the app Parth had to learn how to get data from an the umich events API, parse the data based on interests and dates and finally store and display the information.

Parth initially worked with Addison to understand the layout of the app, how all the screens connected and worked together. Then we started making very basic version of the screens in Xcode, the platform used to make the app. Once each screen was in place, Parth connected the buttons, text fields and other components to the back end programming so that the application would work.

We used the JTAppleCalender, which is an open source calendar library. Using the library helped us to implementation of the calendar view. We also used Firebase as our backend database. It stores the user's information and provides a login/signup authentication service. Once Parth learned how to use these services the basic implementation of them in our prototype went relatively smoothly without any particularly challenging bugs.

## **Making the Video**

The Video was a way to supplement our product if it was not finished by the end of the class. The company BOX used a video to help pitch their product to potential investors. They're video walked through the main function of their product with stop motion animation on top of cheerful music. We used this concept as inspiration for our video.

The initial design of the video was to be both informative and motivational for the audience to want to use our product. There were many setbacks in the video, one of them being that in order to film on campus you must have a special permit. Austin being a film student suggested that we use stop motion

animation for the video but due to time this was only partially possible. It took lots of thinking to figure out how to make a respectable video for the presentation and after storyboarding we finally set on creating a half stop-motion, half informative video.

We used Adobe Premiere Pro CC to create the video and it took us a few days of work to complete. Overall, we struggled for ideas on how best to inform our audience and we also struggled to perfect the sound to video aspect of the short piece.

## Marketing Strategy

<b>Competition Matrix</b>				
	<b>Facebook Events</b>	<b>Hangify</b>	<b>events.umich.edu</b>	<b>MVents</b>
<b>All Michigan Events</b>			✓	✓
<b>Event Recommendations Based on Interest</b>	✓	✓		✓
<b>Event Recommendations by time commitments</b>				✓
<b>Can Save Events for Later</b>	✓	✓		✓

## Conclusion

### **Where We are Now**

We have a functioning prototype for our application. We plan to submit to the App Store before the end of the month.. We are currently making a few last minute adjusts to some of the settings and polishing up the UI. Our app currently features an exclusive calendar view filled with events tailored to user's interests. Users can select days on the calendar and then use swipe functionality to quickly browse through that day's events quickly. Users can make an account to save events to the cloud and access them on any device. Each device can also remember usernames and passwords resulting in a quick auto-login so that users can see their events faster.

### **What We Learned**

The biggest takeaway from this design process was that content needs to come before presentation. We had planned to have our application available on the app store well before we presented it in class. That did not work out. While we put a lot of time and effort into the project, we are not as far along the design process as we planned to be. There are a lot of factors that contributed to us falling short of our goal. However even if we had done more work and communicated more effectively we still would not have used our resources as well as we could. We put too much focus into the surface elements of the app design before we had a functioning prototype. If we had strategized better, and prioritized the key aspects of our minimal viable product, we could have had an ugly app that worked much sooner. After that point we could have tweaked and developed the interface with knowledge of how it was being used. The interface on our app is beautiful and the time invested in it was not wasted. However, the utility of that time could have been maximized if we had prioritizing creating a functioning application before everything else..

This process also taught our a lot about communication. At the midpoint of this project we hit our “first mud”. We were not communicating well, we were not meeting enough, and it was not always clear what everyone was responsible for. As our team became increasingly dysfunctional it was frustrating to meet with each other because of the unresolved tension. We eventually had an honest conversation about our group norms and discussed what was working and what wasn’t. By bringing our frustrations with each other out into the open we were able to address and move on from them. After that conversation our communication became significantly better and we were more focused on achieving our goal. That experience taught us that if something is not working in a group, the best solution is to talk about it.

Through this process we also discovered how important the space we met in was to the effectiveness of our meetings. During the first month of our project we would always meet at the fishbowl and huddle around one person’s computer. We discovered that when we met in areas where we could all face each other and look each other in the eye when we talked, we could communicate our ideas more clearly and we felt more heard. This made it so that our meetings became more productive.

Another lesson that this course drove home was the value of diversity. Each member of our group came from a different background and had different strengths and interests. This diversity helped us to come up with ideas well and delegate tasks so that everyone was working to their strengths. Unfortunately, after we took the Gallup strengthsfinder test we realized that none of our group members had strong relationship building skills. This made it more difficult to resolve tension and find the problems with our group dynamic as they occurred.



## Appendix A: Individual Task Lists

### Addison's Tasks

- January
  - Explore ideas and possibilities during team meetings
  - Get idea approved
  - Go over ideas for the application
  - Work on survey 1
- January 27th - February 3rd
  - Finalize survey
  - Send out survey
- February 3rd - 10th
  - Work on getting responses for survey 1
  - User Interface and User Experience ideation
- February 10th - 17th
  - UI/UX general concept wireframe prototypes
  - Familiarize self with application interface development using XCode and Swift
- February 17th - 24th
  - 3 detailed iterations/examples of the application interface (Further Prototyping)
  - Begin familiarize self with application interface development using XCode and Swift
- February 24th - March 3rd
  - Application Flowchart Ideation
  - Logo Ideation
- March 3rd - 10th
  - Logo Ideation/Creation
  - Application Flowcharts Ideation
  - Work on final interface design
  - Continue learning XCode and Swift for interface design
- March 10th - 17th
  - Continue working on interface design
  - Continue learning XCode and Swift for interface design
  - Logo Iterations
- March 17th - 24th
  - Began connecting the backend development to the front end design
  - Continued/Continue learning XCode and Swift for interface design
  - Continue working on finalizing the interface and logo
- March 24th - March 31st
  - Continue working on developing the application interface in XCode
  - Continue learning XCode and Swift for interface design
  - Finish Logo
  - Get/Pay for iOS developer's count
  - Work on getting a website up (Mvents.net)

- March 31st - April 7th
  - Aim towards finishing the application's interface development
  - Release the application if finished
  - Work on Mvent's website mvents.net
- April 7th - 14th
  - Release the Application if not already released
  - Have a decent website up and running (mvents.net)

### **Josh's Tasks**

- January
  - Explored ideas and possibilities during team meetings
  - Got idea approved
  - Went over ideas for the application
  - Worked on survey 1
- January 27th - February 3rd
  - Finalized survey
  - Distributed survey
- February 3rd - 10th
  - Distributed survey
  - Started statistical analysis of responses
- February 10th - 17th
  - Statistical analysis of survey responses
  - Helped develop application flowchart
- February 17th - 24th
  - Started learning Xcode to help with front and backend integration
- February 24th - March 3rd
  - Spring break
- March 3rd - 10th
  - Exploring marketing options for the application
  - Researched application launch videos
  - Ideated with Austin and Addison for our promotional video
- March 10th - 17th
  - Worked with Austin on storyboarding promotional video and finding b-roll
  - Researched marketing outlets
  - Looked into analytics to use once application is released
  - Created Profile page and explored calendar options
- March 17th - 24th
  - Attended events to get footage for video
  - Work on final presentation
- March 24th - March 31
  - Designed flyers and stickers and explored merchandise pricing
  - Work on user feedback and application analytics

- Find music for video
- March 31st - April 7th
  - Finished editing video
  - Planned final presentation with Austin
  - Helped set up facebook
  - Promoted app by distributing promotional material physically and online
  - Worked on phase 4
  -
- April 7th - April 14th
  - Posted video
  - Prepared presentation
  - Worked on phase 4

### **Austin's Tasks**

- January
  - Explore ideas and possibilities during team meetings
  - Get idea approved
  - Go over ideas for the applicatio
- January 27th - February 3rd
  - Distributing Survey
- February 3rd - 10th
  - Distributed Survey
  - Organizing search tags and keywords from Umich Events page
- February 10th - 17th
  - Refining recommended interests from tags and keywords
  - Ideating suggestion system
- February 17th - 24th
  - Market research
    - On competition and on other applications as design references
- February 24th - March 3rd
  - Begin ideating for promotional video
- March 3rd - 10th
  - Filming the promotional video
  - Look into marketing outlets with Josh
- March 10th - 17th
  - Research advertising methods best for promotional video
  - Continue Filming the promotional video
- March 17th - 24th
  - Finish Filming
  - Start Editing promotional video
- March 24th - 31st
  - Finish editing video
  - Work on Pitch and presentation

- Work on marketing outlets (Social Media Sites)
- March 31st - April 7th
  - Post Video
  - Work on marketing outlets
  - Prepare and perfect pitch
- April 7th - April 14th
  - Prepare, perfect, and present Mvents pitch

### **Parth's Tasks**

- January
  - Explore ideas and possibilities during team meetings
  - Get idea approved
  - Go over ideas for the application
  - Work on survey 1
- January 27th - February 3rd
  - Finalize survey
  - Send out survey
- February 3rd - 10th
  - Work on getting responses for survey 1
- February 10th - 17th
  - Research how the umich events API works
  - Start interacting with the umich events API
- February 17th - 24th
  - How to organize and display the information of events
  - How to parse the json data returned from the umich events API
- February 24th - March 3rd
  - Setting up the backend part of the App
  - Getting the required events based on interest, date and time
- March 3rd - 10th
  - Continuing to work on the backend of the App
  - Setting up the database
- March 10th - 17th
  - Setting up the facebook login and user's login
  - Setting up the Signup feature
- March 17th - 24th
  - Setting up the tutorial screen
  - Setting up the Calendar screen
- March 24th - 31st
  - Finish the calendar view
  - Set up the Profile screen
- March 31st - April 7th
  - Finish Up developing the application
  - Connect all the front end elements together and to the backend.

- Test everything works!
- April 7th - April 14th
  - Tweaking the UI to look better
  - Incorporating final designs into the app
  - Getting ready to submit to the App Store

## Appendix B: Survey Questions

1. What's your gender?
  - a. Female
  - b. Male
  - c. Other
2. What is your affiliation with the University of Michigan?
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
  - e. Alum
  - f. Faculty
  - g. Not Affiliated
3. Where do you live?
  - a. Dorms on central campus
  - b. Dorms on North Campus
  - c. Dorms on 'the hill'
  - d. Fraternity/Sorority House
  - e. Co-op
  - f. Off Campus Housing
  - g. Other
4. How much free time do you have per week?
  - a. 1 to 5 subjective scale
5. How often do you attend events affiliated with the University of Michigan?
  - a. 5+/week
  - b. 3-5/week
  - c. 1/week
  - d. 2/month
  - e. <2/month
6. What are the primary ways you learn about Umich Events?
  - a. Email
  - b. Poster
  - c. Facebook
  - d. Other social media

- e. Michigan events page
  - f. Directly from your clubs or groups on campus
  - g. Friends (word of mouth)
7. How well do these methods for finding events work for you?
- a. 1 to 5 subjective scale
8. How do you usually attend campus events?
- a. Alone
  - b. With friends
  - c. I don't attend Umich events
9. How involved are you with events on campus?
- a. 1 to 5 subjective scale
10. Do you wish you attended more events on campus?
- a. Yes
  - b. No
11. What factors usually hinder your involvement?
- a. Being lazy
  - b. Not enough time
  - c. Lack of information
  - d. Not knowing anyone there
  - e. Lack of interesting events
  - f. Other commitments
  - g. Nothing
  - h. Other
12. How often do you hear about past events that you would have liked to attend?
- a. 1 to 5 subjective scale