

Final Project for SW Engineering Class CSC 648-848 Spring 2023

May 15th, 2023

CrisisConnect

Team Details:

Class Section: 2

Team: 4

Contributors:

Team Lead: Mo Moses (mmoses3@mail.sfsu.edu)

Frontend Lead: Marc Castro

Backend Lead: Axel Biehler

FrontEnd Dev: Nicholas Chan

FrontEnd Dev: Virel Patel

BackEnd Dev: Raquel Lutges

BackEnd Dev: Lokesh Telaprolu

Site URL: <https://www.abiehler.com/>

Product Summary

Product Name:

CrisisConnect

Functionality:

- Our product provides a dashboard giving users access to real-time reported data about critical events in their area
- We give our users access to information and resources for use in an emergency.
- We provide a way for people to search for critical events pertaining to Fire, Weather, Security, and Health in the state of California and more specifically in their counties by selecting or telling us which county is relevant to them.
- Not all events are relative to all people so we make it possible for users to filter to events based on the kind they are interested in (the results of the filtration are displayed on the Map). Now you can hone in on what matters to you.
- To make it easier to gauge the impact of the event on our users, we provide a display of events/incidents on a live Map showing an icon which represents the event. So users can see clearly where the event is and what it is at a glance. No more guessing if that county is near you or not.
- To keep track of what is and has happened, we provide our users with access to a live feed showing current and past incidents.
- For users that want greater engagement, we've added the ability to register with the application service either as a citizen or even a county official.
- If our users register as citizens, one of the added features they will be able to participate in is an alerting system where they will receive alerts submitted by county administrators about emergent events.
- If county officials register they receive a privileged status and are able to input and update data about critical events happening in their county to keep their citizens informed.
- Registered county officials are also recognized as admins and can trigger alerts to users that are registered to receive them.

Website address: <https://www.abiehler.com>

Screenshots of final product (as shown in the demo)

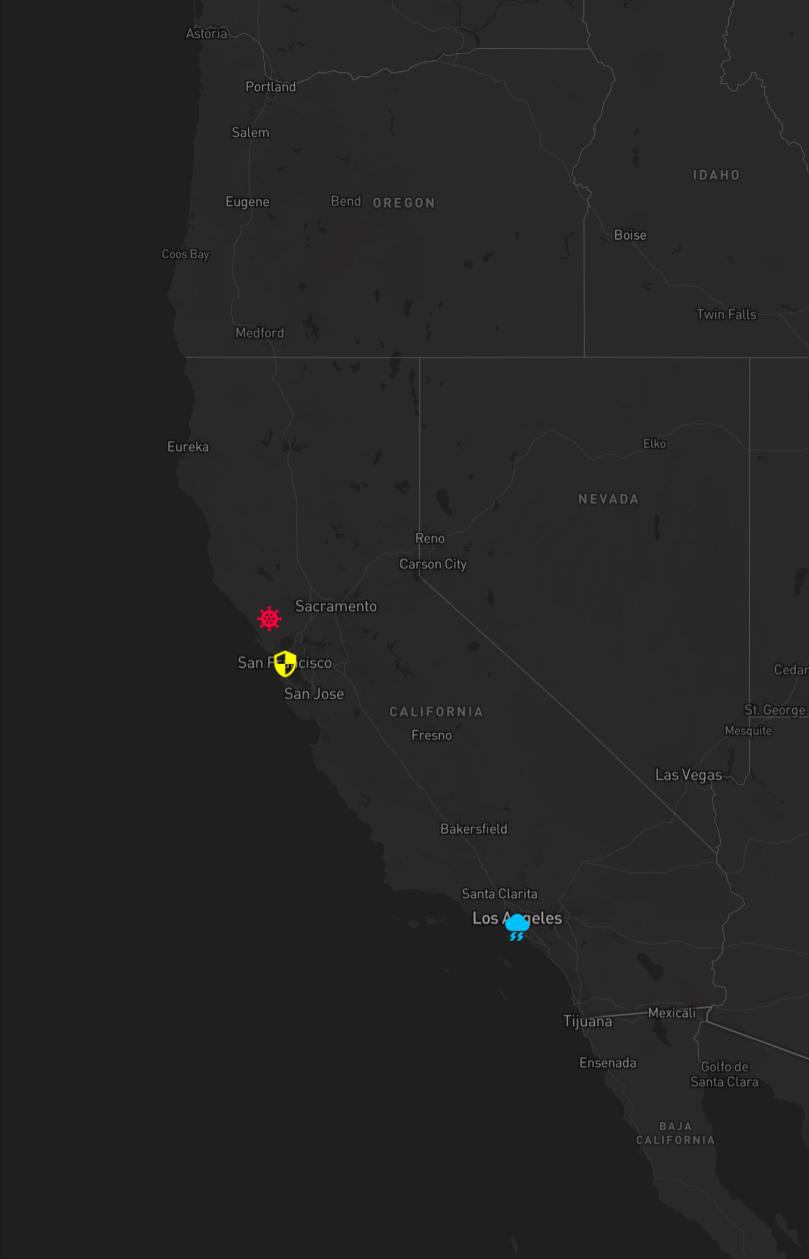
CRISIS CONNECT

HOME NEWS/FEED RESOURCES ABOUT DASHBOARD M

Choose a county

- Health/Infections
- Weather
- Wildfire
- Security

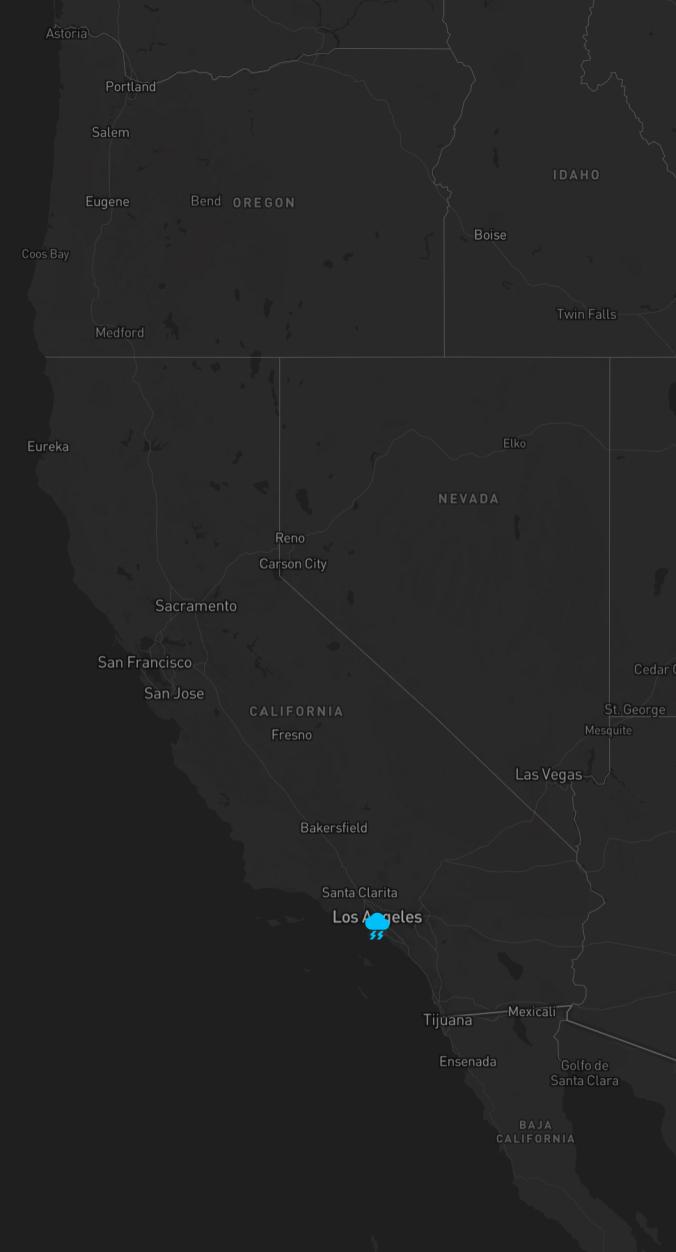
Search 



The map displays the western coast of North America, including parts of Oregon, California, Nevada, and Baja California. Specific crisis locations are marked with colored icons: a red gear icon near Sacramento, a yellow shield icon over San Francisco, and a blue cloud-like icon over Los Angeles. The map also shows state and provincial boundaries, major cities like Portland, Eugene, Medford, Reno, Carson City, Eureka, and Las Vegas, and various geographical features.

Choose a county

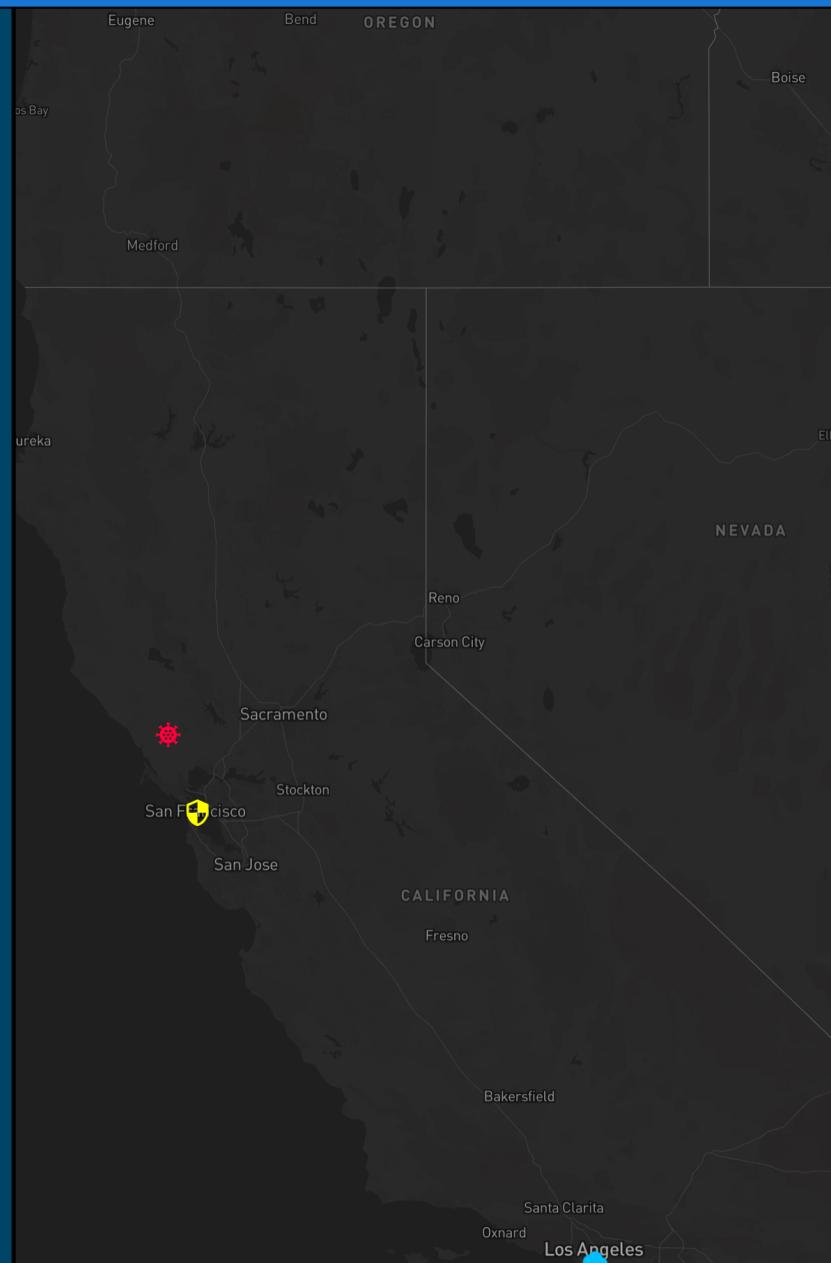
- Health/Infections
- Weather
- Wildfire
- Security

Search 

Choose a county ▾

- Health/Infections
- Weather
- Wildfire
- Security

Search 



Push Alert

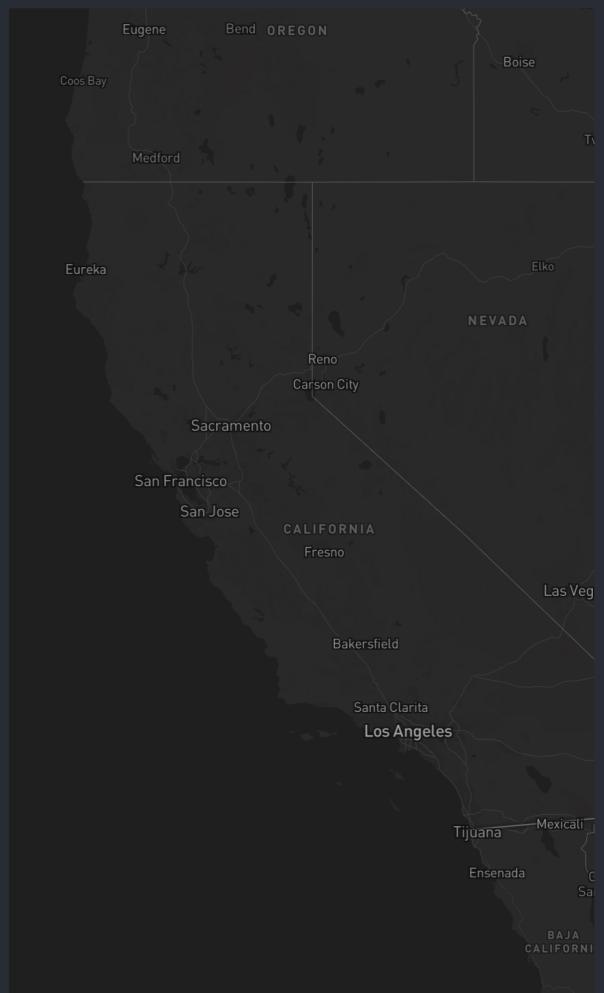
Title

Choose a county

Cases

Death

- Health/Infections Weather Wildfire
 Security

SEND ALERT

Screenshots of key DB tables (1-2 pages)

Events

Result Grid

	id	name	county_name	type	createdAt	updatedAt	CountyId	AddressId
▶	19ec5dd2-1a16-4c0d-a478-2bc70...	High temps	Plumas	WeatherEvent	2023-05-16 08:38:00	2023-05-16 08:38:00	4	12
▶	Tedcc883-d9e2-40cb-83ad-6125c...	Sacramento Fire	Calaveras	WildfireEvent	2023-05-16 08:31:45	2023-05-16 08:31:45	31	6
▶	25601b15-a660-428e-adc6-43829...	High temps	Kings	WildfireEvent	2023-05-16 08:39:21	2023-05-16 08:39:21	1	14
▶	30390622-1b1e-4b10-a807-9fb50...	High temps	Butte	WildfireEvent	2023-05-16 08:40:12	2023-05-16 08:40:12	57	15
▶	335ad09-11b5-4642-934b-a1e03...	test covid	San Francisco	CovidEvent	2023-03-30 09:52:50	2023-03-30 09:52:51	35	1
▶	3881d0da-8959-461e-99ab-9c570...	Sacramento Fire	Calaveras	WildfireEvent	2023-05-16 08:32:07	2023-05-16 08:32:07	31	7
▶	3c27c9e2-1027-4652-9ea0-9a0bb...	Los Angeles	SecurityEvent	2023-05-16 10:17:12	2023-05-16 10:17:12	53	29	
▶	3d9e3c5b-d2a1-4371-85b8-28989...	High temps	Stanislaus	WildfireEvent	2023-05-16 08:40:25	2023-05-16 08:40:25	58	16
▶	633eb6-8edc-45c1-aac5-c31f1c...	Sacramento Fire	Calaveras	WildfireEvent	2023-05-16 08:32:12	2023-05-16 08:32:12	31	8
▶	67133789-2cd0-4f87-996c-35a8f1...	test wildfire	San Francisco	WildfireEvent	2023-03-30 19:58:50	2023-03-30 19:58:54	35	2
▶	74ee263a-7930-4f61-92e3-5c07...	High temps	Sierra	WeatherEvent	2023-05-16 08:38:29	2023-05-16 08:38:29	5	13
▶	7cb04d5c-0fac-4107-8e1a-cab38...	Flood	Los Angeles	WeatherEvent	2023-05-16 10:15:57	2023-05-16 10:15:57	53	25
▶	8b17377e-f92e-43b2-a1fd-16fa34...	Sever Fire Eva...	San Francisco	WildfireEvent	2023-05-16 09:58:00	2023-05-16 09:58:00	35	21
▶	8fce54ac-859b-40aa-83f3-8d21ca...	test weather	Amador	WeatherEvent	2023-03-30 19:58:47	2023-03-30 19:58:53	34	3
▶	a558b7d0-90d6-4583-a368-03128...	San Bernardin...	WildfireEvent	2023-05-16 08:33:04	2023-05-16 08:33:04	27	9	
▶	ac9202c4-2207-469d-9e71-94a65...	severe fire	Los Angeles	WildfireEvent	2023-05-16 10:14:54	2023-05-16 10:14:54	53	22
▶	b97ff5b-4d44-44ad-9130-8af2b38...	High temps	Yuba	WeatherEvent	2023-05-16 08:36:44	2023-05-16 08:36:44	27	10
▶	dc8154d2-8b7b-4cbe-add8-b0926...	Violence	San Francisco	SecurityEvent	2023-05-16 08:46:18	2023-05-16 08:46:18	35	19
▶	e442823-0cf8-4204-bbd6-80750e...	Bloomingdales	San Francisco	SecurityEvent	2023-05-16 08:44:54	2023-05-16 08:44:54	35	18
▶	e864a162-227c-42e2-be6f-11fd7c...	test security	Amador	SecurityEvent	2023-03-30 19:58:51	2023-03-30 19:58:56	34	4
▶	f72bf11d-b9b2-4cbo-9344-94d9af...	High temps	Plumas	WeatherEvent	2023-05-16 08:37:44	2023-05-16 08:37:44	4	11
	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	18 01:45:05	SELECT * FROM db.Events LIMIT 0, 1000	16 row(s) returned	0.0012 sec / 0.00001
✓	19 14:31:43	SELECT * FROM db.Events LIMIT 0, 1000	21 row(s) returned	0.0014 sec / 0.00001

Counties

Result Grid

	id	name	lat	lon	createdAt	updatedAt
▶	1	Mono	+43.9158363	-118.8751668	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	2	Kings	+36.0724780	-119.8155301	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	3	San Benito	+36.6116507	-121.0858108	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	4	Fresno	+36.7610059	-119.6550193	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	5	Plumas	+39.9922953	-120.8243709	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	6	Sierra	+39.5769252	-120.5219926	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	7	Madera	+37.2098213	-119.7498023	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	8	Mendocino	+39.4328767	-123.4428811	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	9	Marin	+38.0518169	-122.7459738	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	10	San Luis Obispo	+35.3852242	-120.4475445	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	11	Shasta	+40.7605142	-122.0435556	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	12	Alameda	+37.6471385	-121.9124980	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	13	Irvo	+36.5619770	-117.4039269	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	14	Contra Costa	+37.9194790	-121.9515431	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	15	Alpine	+38.6217831	-119.7983522	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	16	Humboldt	+40.7606554	-123.9261757	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	17	Sutter	+39.0361898	-121.7039397	2023-04-10 22:55:55	2023-04-10 22:55:55
▶	18	San Diego	+33.0236041	-116.7761174	2023-04-10 22:55:55	2023-04-10 22:55:55

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	22 14:41:39	SELECT * FROM db.Addresses LIMIT 0, 1000	29 row(s) returned	0.0013 sec
✓	23 14:42:01	SELECT * FROM db.Users LIMIT 0, 1000	2 row(s) returned	0.0012 sec

Query Completed

Users

Google Analytics plot for your WWW site

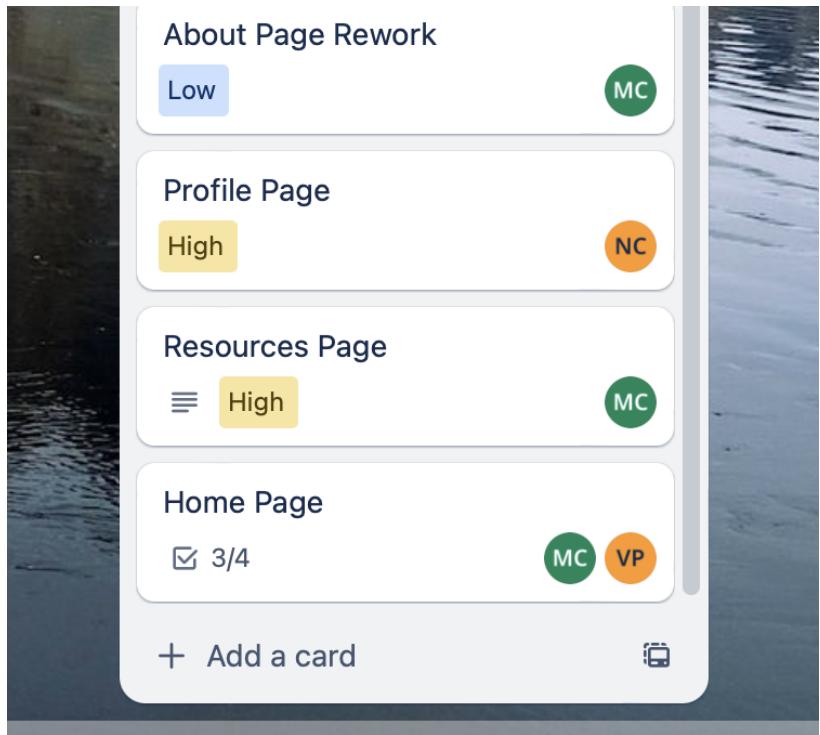
```
2 <html lang="en">
3   <head>
4     <!-- Google tag (gtag.js) -->
5     <script async src="https://www.googletagmanager.com/gtag/js?id=G-9MZJ8MDM2R"></script>
6     <script>
7       window.dataLayer = window.dataLayer || [];
8       2 usages  ↳ rlutges
9       function gtag(){dataLayer.push(arguments);}
10      gtag('js', new Date());
11
12      gtag('config', 'G-9MZJ8MDM2R');
13    </script>
14    <meta charset="utf-8" />
15    <link rel="icon" href="%PUBLIC_URL%/favicon.ico" />
16    <meta name="viewport" content="width=device-width, initial-scale=1" />
17    <meta name="theme-color" content="#000000" />
18    <meta
19      name="CSC 648"
20      content="CSC 648 app"
21    />
22
23    <link rel="manifest" href="%PUBLIC_URL%/manifest.json" />
24    <title>CSC 648</title>
25  </head>
```

Screenshot(s) of the task management system

The image shows a task management application interface, likely Trello, overlaid on a photograph of a mountainous coastline. The board is divided into four columns: To do, Doing, In review, and Done.

- To do:** Contains one card: "Resources Page".
- Doing:** Contains one card: "Refacto Events" (Priority: Highest, Story Points: 7). A plus sign indicates "+ Add a card".
- In review:** Contains one card: "+ Add a card".
- Done:** Contains several cards:
 - "Get Events" (Priority: High, Story Points: 5)
 - "News/Feed Page" (Priority: High)
 - "Login Page" (Priority: High)
 - "Route register" (Priority: Critical, Story Points: 2)
 - "Route login" (Priority: Critical, Story Points: 2)
 - "Add Weather Event" (Priority: Critical, Story Points: 2)
 - "Add Security Event" (Priority: Critical, Story Points: 2)
 - "Add Wildfire Event" (Priority: Critical, Story Points: 2)
 - "Delete Covid Event" (Priority: Medium, Story Points: 1)A plus sign indicates "+ Add a card".

The application header includes tabs for Application, Board, Card Priority, Story Points, Card Dependencies, Power-Ups, Automation, Filter, and user icons (AB, MC, N).



Done

+ Add a card

Change user role

Critical 1 P RL

Security Event

6 0/3 High 7 P RL

Wildfire Event

6 0/3 High 7 P RL

Weather Event

6 0/3 High 7 P AB

Delete Wildfire Event

1 Medium 1 P AB

Delete Weather Event

1 Medium 1 P AB

Delete Security Event

This card is a template.

1 Medium 1 P AB

Covid Event

6 0/3 High 7 P RL

Add Covid Event

+ Add a card

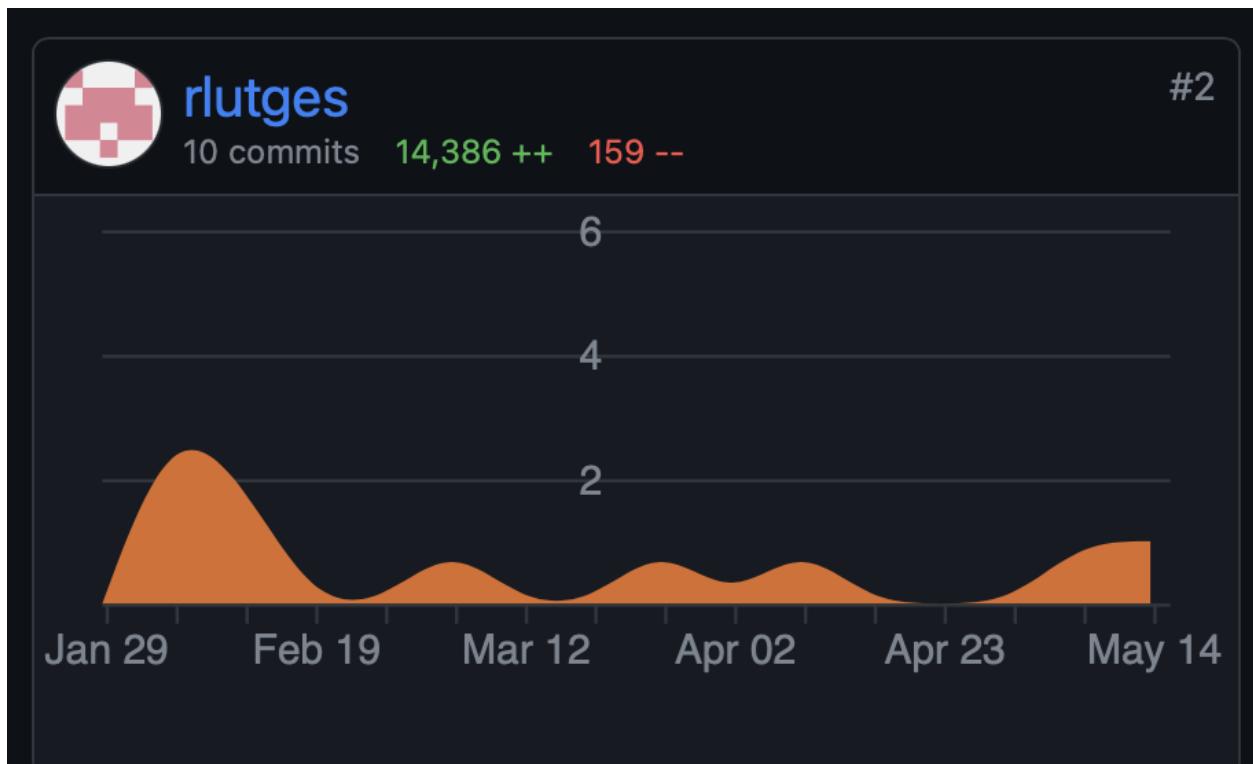
Team member contributions

Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>

Tue 5/16/2023 4:38 PM

To:

Virel Patel <vpatel7@mail.sfsu.edu>;
Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>;
Nicholas Chan <nchan5@sfsu.edu>;
Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>;
Mo Moses <mmoses3@mail.sfsu.edu>;
Axel Aubin Biehler <abiehler@sfsu.edu>



My Contributions:

- Scribe
- Security QA in M4
- Made db organization outline
- Worked on creating routes
- Worked on adding event tables in the db + queries
- Worked on filtering events for front end and back end

- Worked on the Alerts feature
 - Debugging front end and back end
 - Google analytics implementation
-

Axel Aubin Biehler <abiehler@sfsu.edu>

Tue 5/16/2023 4:32 PM

To:

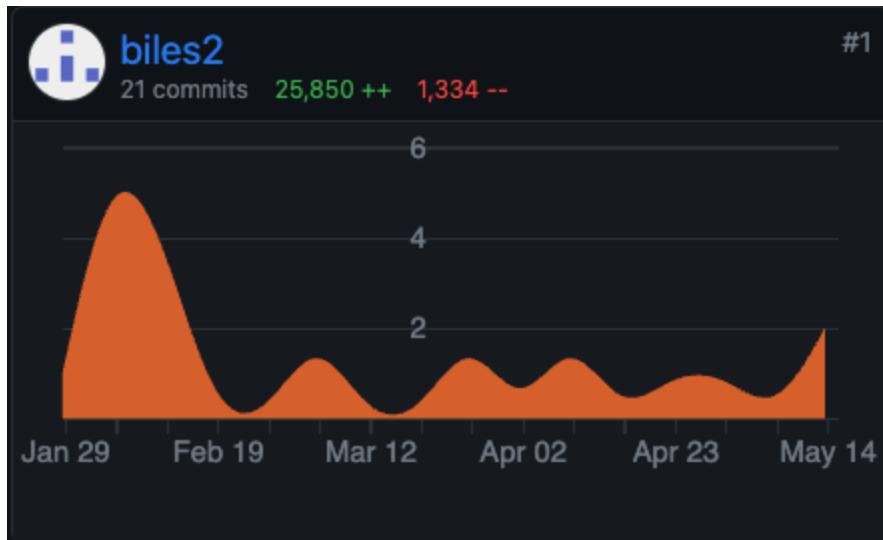
Mo Moses <mmoses3@mail.sfsu.edu>;
Virel Patel <vpatel7@mail.sfsu.edu>;
Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>;
Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>;
Nicholas Chan <nchan5@sfsu.edu>;
Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>

Hi Team,

My contributions:

- Architecture of the project
- DevOps (deploy and create the infrastructures)
- Login, register and authorization on the API
- Backend and frontend development
- Backend lead

Contributions:



From: Virel Patel <vpatel7@mail.sfsu.edu>
Sent: Monday, May 15, 2023 10:36 PM
To: Marc Joseph Guerrero Castro <mcastro16@mail.sfsu.edu>; Nicholas Chan <nchan5@mail.sfsu.edu>; Durga Siva Lokesh Telaprolu <dtelaprolu@mail.sfsu.edu>; Mo Moses <mmoses3@mail.sfsu.edu>; Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>; Axel Aubin Biehler <abiehler@mail.sfsu.edu>
Subject: Re: #8 for M5 document: Team member contributions

Hi Team,

My contributions:

- Part of the Front-End Development Team
- Worked on User Personas
- Worked on Functional Requirements
- Worked on Competitive Analysis
- Worked on UI Mockups and Storyboards
- Helped with Search functionality
- Coded and Integrated Map
- Coded Dashboard
- Coded Admin Portal



From: Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>

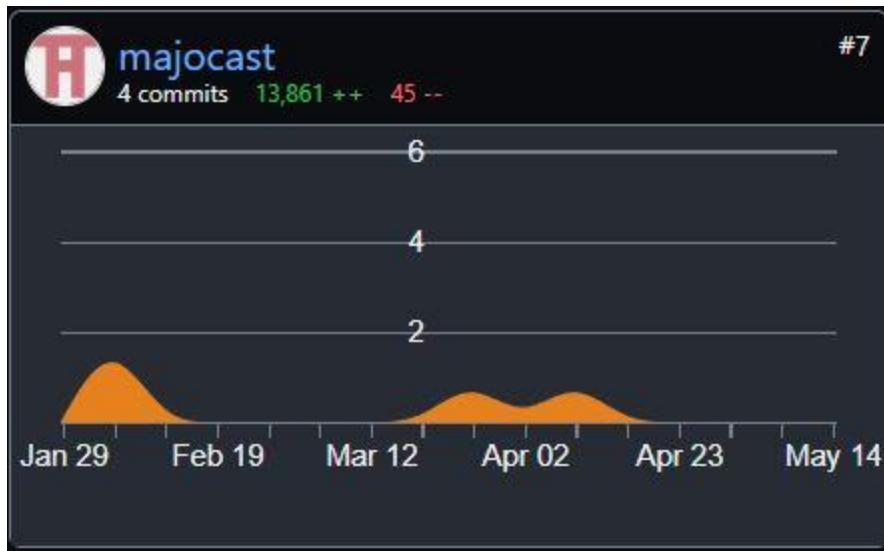
Sent: Monday, May 15, 2023 9:57 PM

To: Nicholas Chan <nchan5@sfsu.edu>; Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>; Mo Moses <mmoses3@mail.sfsu.edu>; Virel Patel <vpatel7@mail.sfsu.edu>; Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>; Axel Aubin Biehler <abiehler@sfsu.edu>

Subject: Re: #8 for M5 document: Team member contributions

My contributions:

- Front End Development Lead
- Worked on M1 Use Cases
- Worked on M1 Personas
- Worked on M1 Functional Requirements
- Worked on M2 UI Mockups and Story Boards
- Coded Front-End Home Page UI
- Coded Front-End Resources Page



From: Nicholas Chan <nchan5@sfsu.edu>

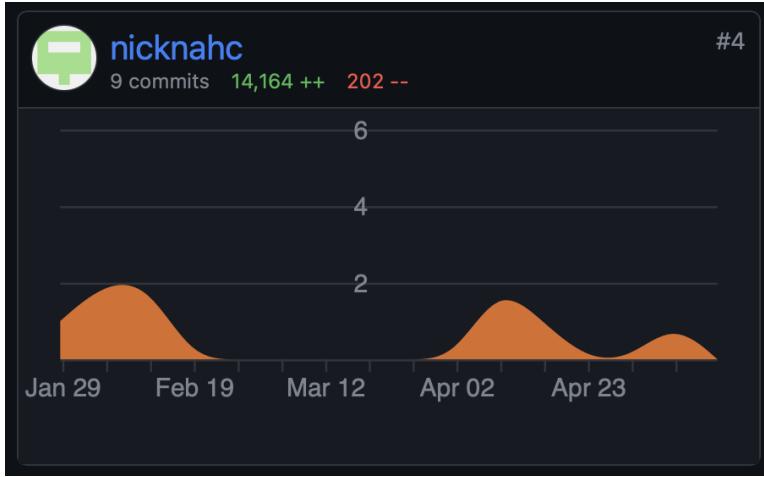
Sent: Sunday, May 14, 2023 10:43 PM

To: Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>; Mo Moses <mmoses3@mail.sfsu.edu>; Virel Patel <vpatel7@mail.sfsu.edu>; Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>; Axel Aubin Biehler <abiehler@sfsu.edu>; Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>

Subject: Re: #8 for M5 document: Team member contributions

My contributions:

- Front End Development
- Worked on M1 Use Cases
- Worked on M1 Competitive Analysis
- Worked on M2 UI Mockups and Story boards
- Coded the front-end login page
- Coded the front-end registration page
- Coded the front-end profile page
- Coded the front-end newsfeed page
- Wrote the Usability Test Plan for M4



From: Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>

Sent: Monday, May 8, 2023 9:33 PM

To: Mo Moses <mmoses3@mail.sfsu.edu>; Virel Patel <vpatel7@mail.sfsu.edu>; Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>; Axel Aubin Biehler <abiehler@sfsu.edu>; Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>; Nicholas Chan <nchan5@sfsu.edu>

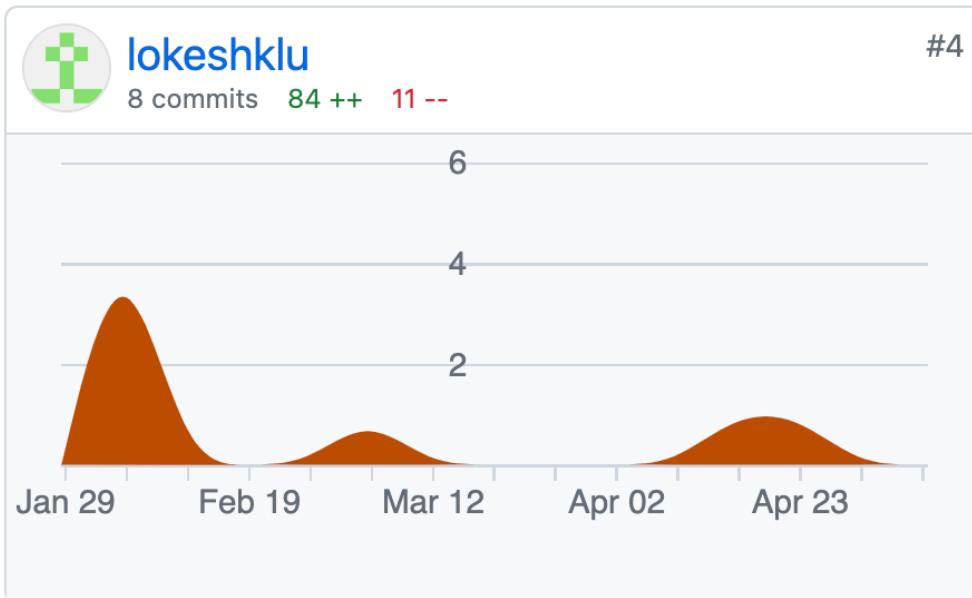
Subject: Re: #8 for M5 document: Team member contributions

Hi Team,

My Contributions:

- 1/ Was part of Backend development.
- 2/ Participated in listing out data items and entities and database schema organization.
- 3/ Listed out the Non-Function Requirements.
- 4/ Derived UML diagram based on database organization.
- 5/ Made few code fixes for ESLint and Database sync configuration
- 6/ Responsible for developing QA Test Plan.
- 7/ Reviewed the git commits of team members.
- 8/ Contributed to Documentation for all the Milestones.

Repository Submissions:



From: Mo Moses <mmoses3@mail.sfsu.edu>

Sent: 09 May 2023 08:11

To: Virel Patel <vpatel7@mail.sfsu.edu>; Raquel Tatyana Lutges <rlutges@mail.sfsu.edu>; Axel Aubin Biehler <abiehler@sfsu.edu>; Marc Joseph Guerrero Castro <mcastro16@sfsu.edu>; Nicholas Chan <nchan5@sfsu.edu>; Durga Siva Lokesh Telaprolu <dtelaprolu@sfsu.edu>

Subject: #8 for M5 document: Team member contributions

Hello Team,

I'm creating this thread to capture team member contributions as specified in #8 or Milestone 5 documentation.

I'll start, for me:

Team Contributions:

Was team lead

Assisted in the initial setup of our repository

Facilitated discussions to make product decisions

Handled communications between CEO/CFO professor and the team

- Turning in of milestones
- Relaying feedback from the CEO/CFO

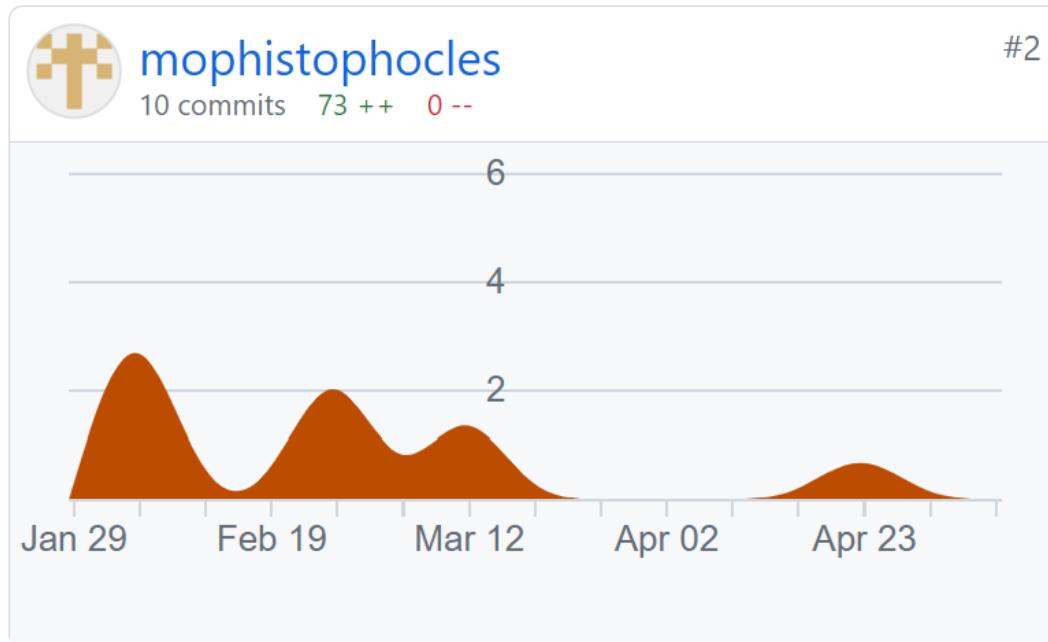
Worked to ensure we were meeting our Milestone goals

- Evaluated progress against what was in the milestone documentation
- Communicated to the team where we may be short of the goal

Decided the work distribution for Frontend vs Backend sections

Contributed to documentation

Repository Submissions:



Post Analysis

Just at the outset I'd like to say, as a team lead, I couldn't be happier to have worked with this team. It was awesome to watch the coordination occur throughout and see each person contribute to the end product. There was a great deal of willingness to get involved and move the needle on the project by every member of the team and it was exciting to see the excellent work that was happening from the beginning.

If I had to cite a problem I think time management would be one of them. Unlike a normal business product team, time for a project of this sort is inevitably divided with other projects in other classes and life challenges (prioritization is more difficult when what you're working on isn't exactly your livelihood). In this environment it's like having more than one manager so prioritization is difficult as all responsibilities (in school) have equivalent priority and impact. Not sure how that would be fixed going forward, but I believe it needed to be acknowledged.

Another issue we had would've been around over complication. Some ideas we went after, in initial conception, ended up being more complicated than necessary creating a loss of valuable resources engaged in difficult implementations where the ROI was low if any. Going forward I believe more communication around design and approach where the team digs into best directions and value of proposition vs the cost would've been better. Personally, as the lead, I see here is one place I could've been more present and helped to sway final decisions on the design of the different components. The cost, of course, is that this puts us at risk of missing crucial parts of the application, and also limits how many, if any, extra awesome features we can add to give it that 'WOW!' factor.

Finally, I would say administration. And what I mean by that is the work of deploying developed components to the endpoint system and ensuring it is configured to execute properly. Moving development work to production. These are tedious and error prone tasks, and would have benefitted from greater investment in the creation and implementation of automation to handle or, at the least, simplify these processes. That would have also served to democratize that work. With more team members able to execute those pieces we would've had faster deployments with less toil allowing quicker review of the product and faster turnaround times for fixes and updates.