

SW Engineering CSC 648/848
Section 01, Team 01
Spring 2018

R-Earth

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Milestone 5

Document Version	Notes	Submission Date
Version 1.0	First Draft	05/21/2018

1) Product Summary:

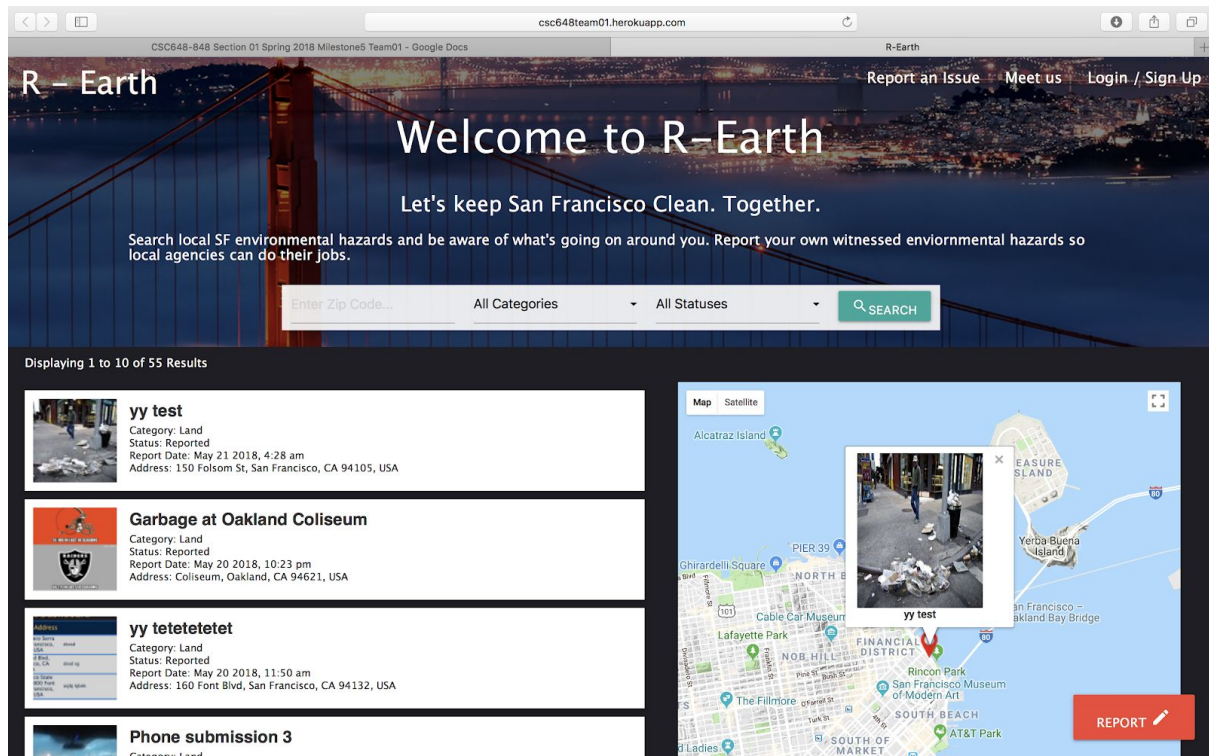
R-Earth is a web application that allows citizens of San Francisco to post their concerns about local environmental issues that need resolution. Environmental agents and officials can in turn access these listings in order to direct their day-to-day work. Below are a list of features made available by R-Earth.

Confirmed features:

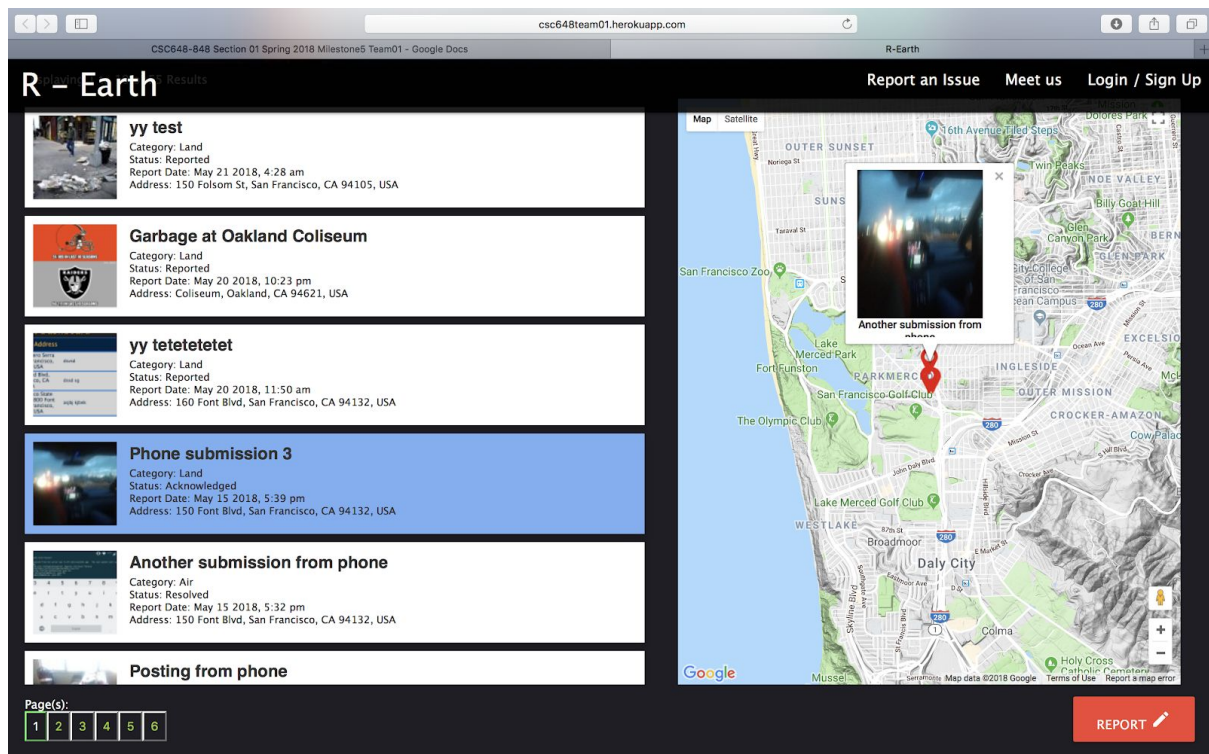
- Browse all posted listings, sorted by most recent date
- Search all listings by zip code with filtering options for category and status
- View the full details of an individual listing
- Google maps integration to allow users to easily visualize location and proximity of environmental issues
- Create and login to an account with R-Earth
- Submit a listing that describes a current local environmental issue
- Environmental agents are given an additional Dashboard tool to help them quickly review and update listings based on their work

R-Earth can be found at: <https://csc648team01.herokuapp.com/>

2) Final Product Screenshots:



Home Page



Home Page Scrolled Down

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R-Earth

Report an Issue Meet us Login / Sign Up

SFSU Software Engineering Project, Spring 2018. For Demonstration Only

LOGIN

Username

Password

GO

[Forgot your password?](#)

[Terms and Conditions](#)

Register

Join R-Earth

R-Earth is a platform for people to help keep their city clean.

You can search for local environmental hazards to be aware of what's going on around you and report your own witnessed environmental hazards to alert local agencies.

Login

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R-Earth

Report an Issue Meet us Login / Sign Up

SFSU Software Engineering Project, Spring 2018. For Demonstration Only

REGISTER

Username

Name

Password

Repeat Password

Join R-Earth

R-Earth is a platform for people to help keep their city clean.

You can search for local environmental hazards to be aware of what's going on around you and report your own witnessed environmental hazards to alert local agencies.

Sign Up

R – Earth [Report an Issue](#) [Meet us](#) [Logout](#)

Report An Issue

[Auto-Detect Address & Zip](#)

Upload an Image Here

Submit a Listing

R – Earth [Report an Issue](#) [Meet us](#) [Logout](#)

BAD LAWN

REPORT DATE: MAY 21 2018, 3:08 PM PDT

ADDRESS: HOLLOWAY AVE, SAN FRANCISCO, CA, USA

SUBMITTED BY: SOMENAME

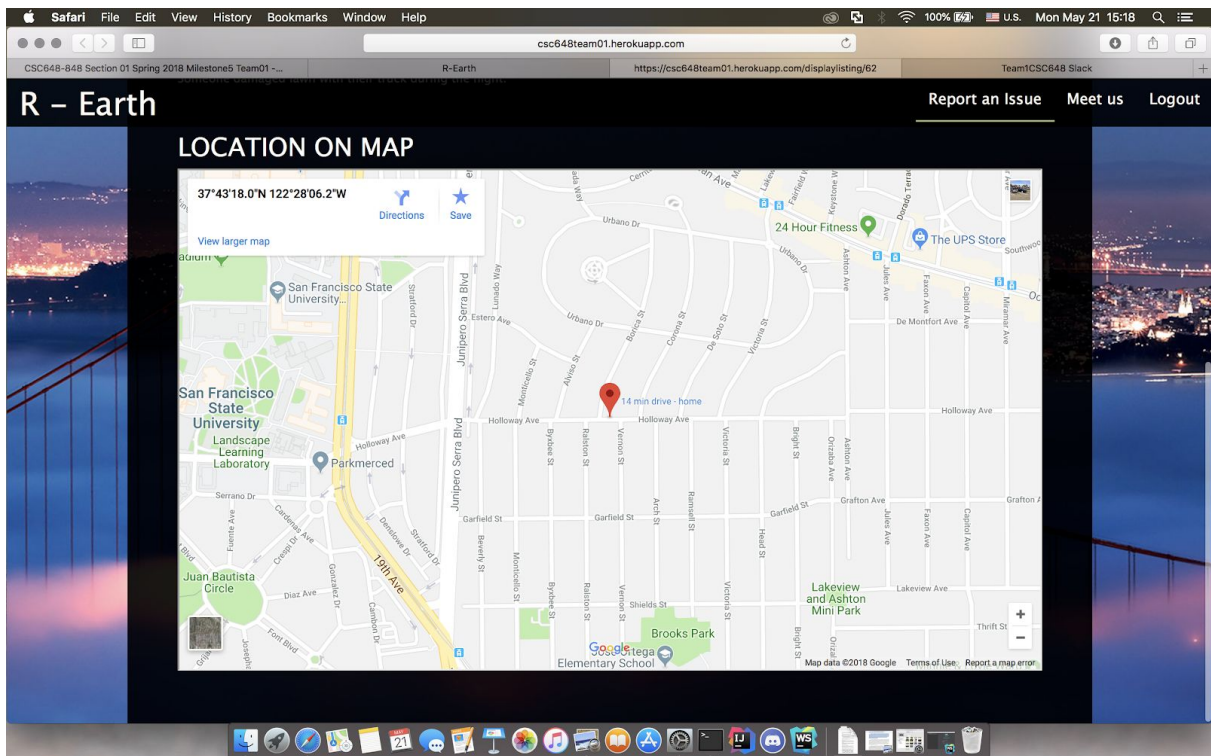
CURRENT STATUS: REPORTED

CATEGORY: LAND

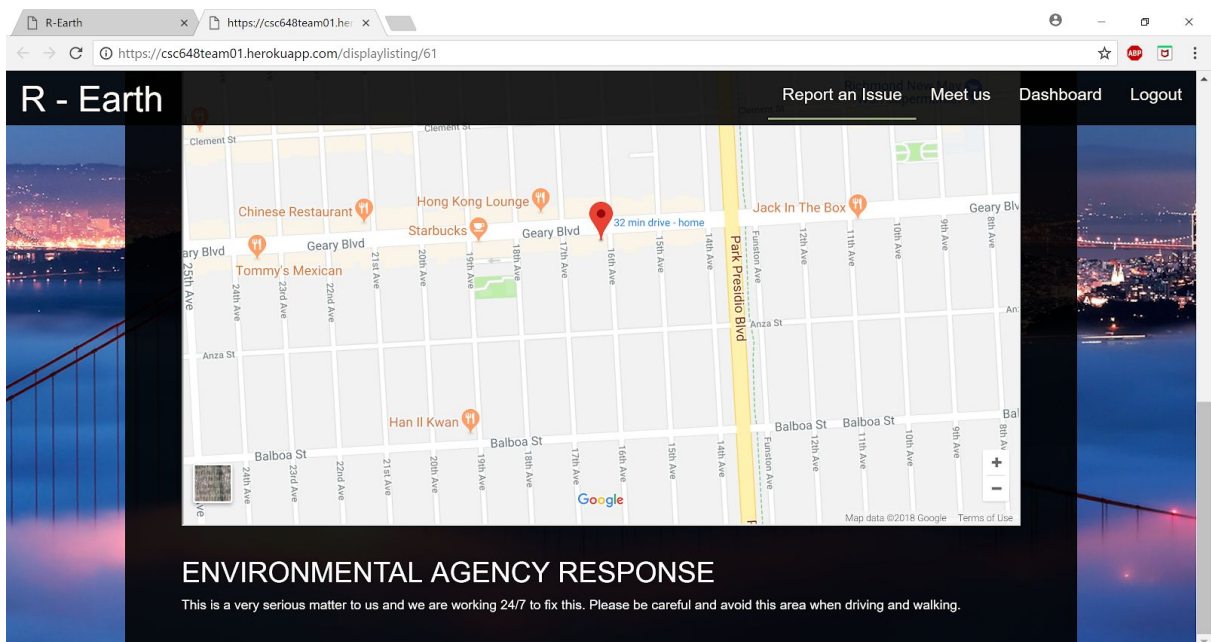
DESCRIPTION
Someone damaged lawn with their truck during the night.

LOCATION ON MAP
37°43'18.0"N 122°28'06.2"W

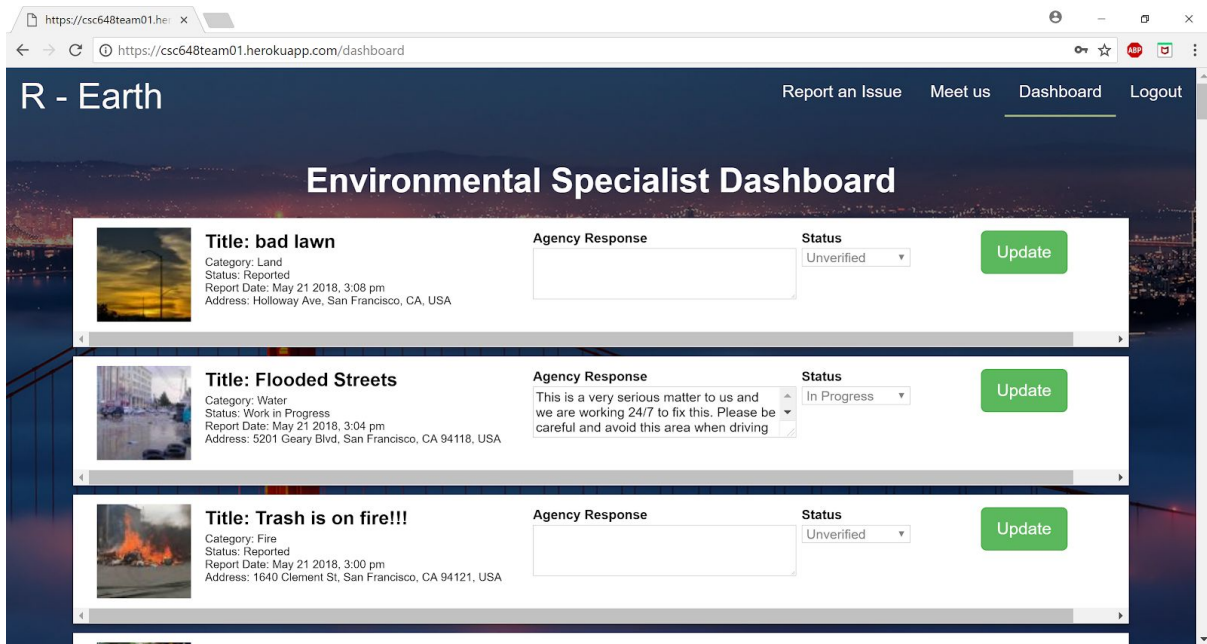
Individual Listing part 1



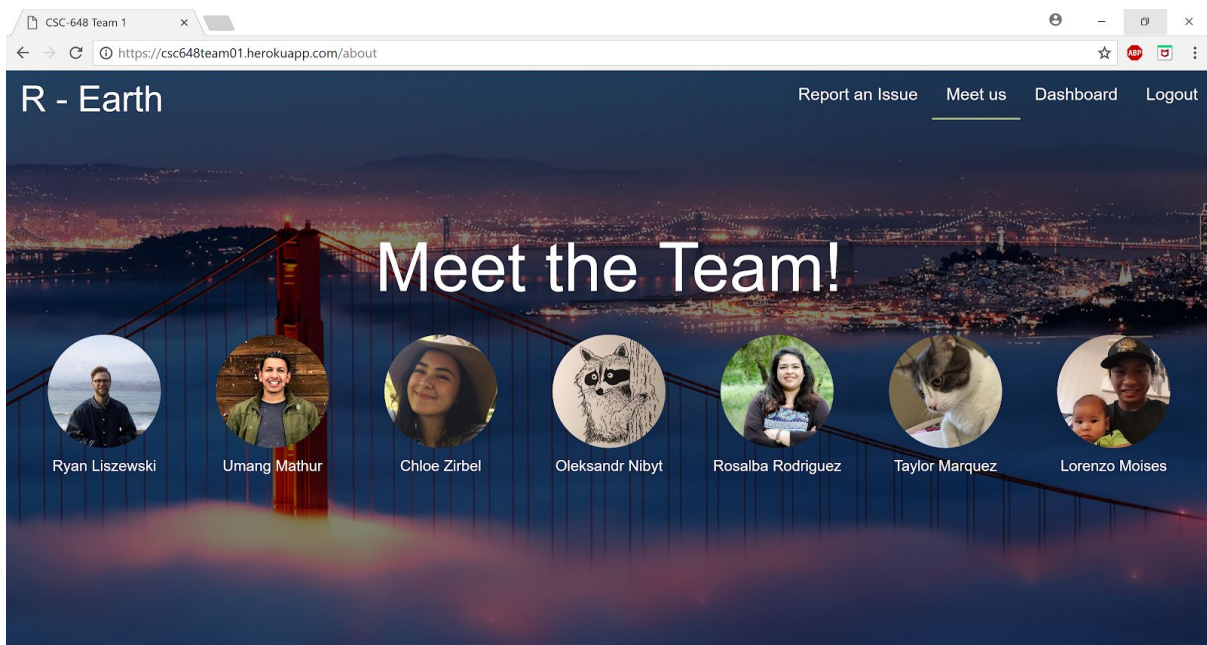
Individual Listing part 2



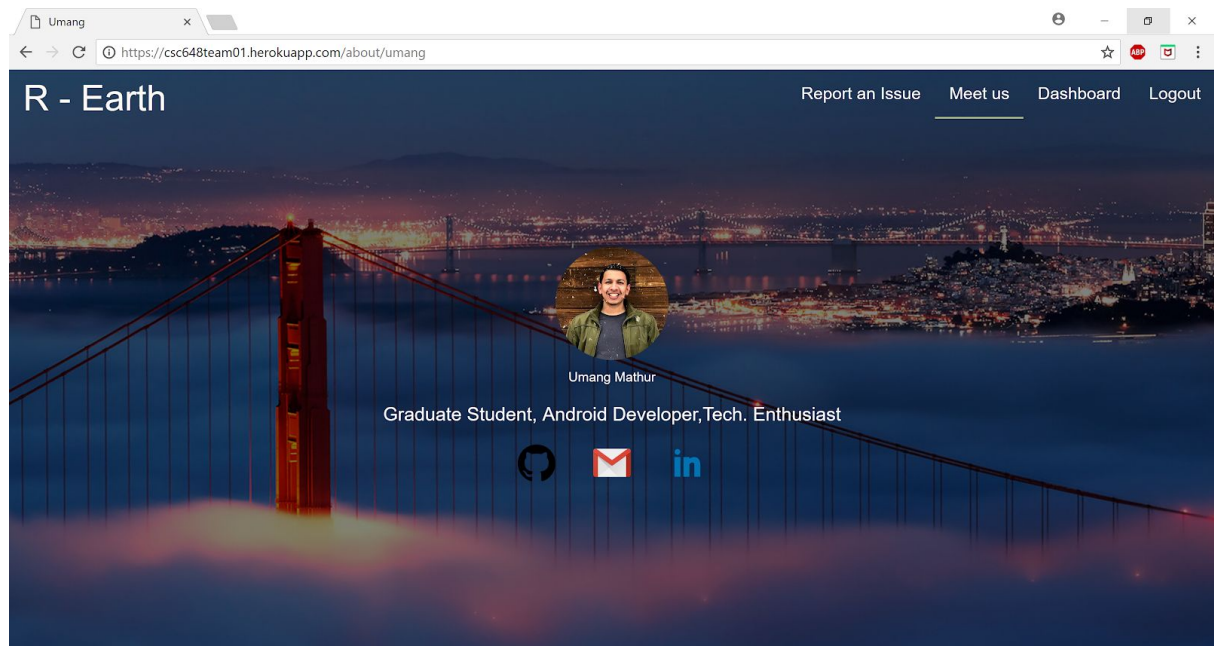
Environmental Agent Response



Environmental Agent Dashboard



Team Members



Individual Team Member

3) Database Screenshots:

The screenshot shows the pgAdmin 4 interface. On the left, the 'Browser' pane displays a tree view of the database structure, with 'users' selected under 'Tables (6)'. The main pane shows the 'SQL' editor with a query: `SELECT * FROM public.users ORDER BY user_id ASC`. Below the editor, the 'Data Output' tab displays the results of the query in a table format.

	user_id [PK] integer	name character varying (255)	username character varying (255)	password character varying (255)	user_type integer	active integer	agency character varying (255)
2	2	Chloe Zirbel	chloe	\$2a\$10\$DPI57IUTORVs8...	0	0	
3	3	Pompeia Jones	pompeia	\$2a\$10\$0BnK8cLPwNY1Vl...	0	0	
4	4	Ferdinand Jones	ferdinand	\$2a\$10\$kAOajpcX0OcG6E...	0	0	
5	5	Chloe Zirbel	zirbel	\$2a\$10\$3laQixmWGgyun7...	1	0	
6	6	Ryan	ryan	\$2a\$10\$MfhwhWbgj4CPV/...	0	0	
7	7	Chloe	admin	\$2a\$10\$9d:xtukH0wjjuWbf...	1	0	
8	8	TEST	test	\$2a\$10\$BMbTeNcN9ihzAsZ...	0	0	
9	9	TTTT	tttt	\$2a\$10\$flUTUptSSWT8vLZ...	0	0	
10	10	AAAA	aaaa	\$2a\$10\$em5/5PXD6DhsC1...	0	0	
11	11	BBBB	bbbb	\$2a\$10\$/NrsJfGvMzr5MRt...	0	0	
12	12	DDDD	dddd	\$2a\$10\$oiGYIAUieHE6pCw...	0	0	

Screenshot of the users table

The screenshot shows the pgAdmin 4 interface. On the left, the 'Browser' pane displays a tree view of the database structure, with 'listings' selected under 'Tables (6)'. The main pane shows the 'SQL' editor with a query: `SELECT * FROM public.listings ORDER BY listing_id ASC`. Below the editor, the 'Data Output' tab displays the results of the query in a table format.

	listing_id [PK] integer	user_id integer	title character varying (255)	picture character varying (255)	post_date timestamp with time zone	description character varying (255)	longitude numeric	latitude numeric
36	36	2	ujhbsvhjz	jj3ebhvqzgk6ptkbtio	2018-05-15 12:23:25.612164-07		38.7569999997	37.84388
37	37	2	skjsbgrnks	wzlfko5pcinqkm9wf9hw	2018-05-15 12:25:09.648587-07	ljing/zn	38.7569999997	37.84388
38	38	2	rajkrnfzkn	nlgrl3rzlva6lma5ilw	2018-05-15 12:25:44.058225-07	kjsfkjz	38.7569999997	37.84388
39	39	2	Category Check	nvpslql0yyj7xbwggpyf	2018-05-15 14:06:23.184474-07	check	38.7569999997	37.84388
40	40	2	Category Check - Air	rcfkeaowbifyfw6mgff	2018-05-15 14:07:08.341038-07	Air check	38.7569999997	37.84388
41	41	2	Submit	lg7drzfyforoor40yvaq	2018-05-15 16:34:48.728754-07	check	38.7569999997	37.84388
42	42	2	Field Test	wk4p2uzejwmaq0edcls	2018-05-15 16:45:56.063458-07		-122.255338	37.8444919
43	43	2	Field Test	hqejvgawcj6phazskl0t	2018-05-15 16:48:25.019151-07	Test	38.7569999997	37.84388
44	44	2	Test 2	mo6sv8d40l46ajns9clo	2018-05-15 16:49:00.336775-07	t2	38.7569999997	37.84388
45	45	2	Air Pollution	ei3rgbzqgdex9kjobtpx	2018-05-16 09:16:24.236692-07	There is air pollution in my ...	-122.2553522	37.8445024
46	46	2	Air Pollution	iao8gd2yyysvnt31e3h	2018-05-16 09:18:07.655857-07	There is air pollution in my ...	38.7569999997	37.84388

Screenshot of the listings table (first half)

pgAdmin 4 File Object Tools Help

Browser

Dashboard Properties SQL Statistics Dependencies Dependents Edit Data - team1... Edit Data - team1 on chloe@CSC648Team1

team1 on chloe@CSC648Team1

```

1 SELECT * FROM public.listings
2 ORDER BY listing_id ASC

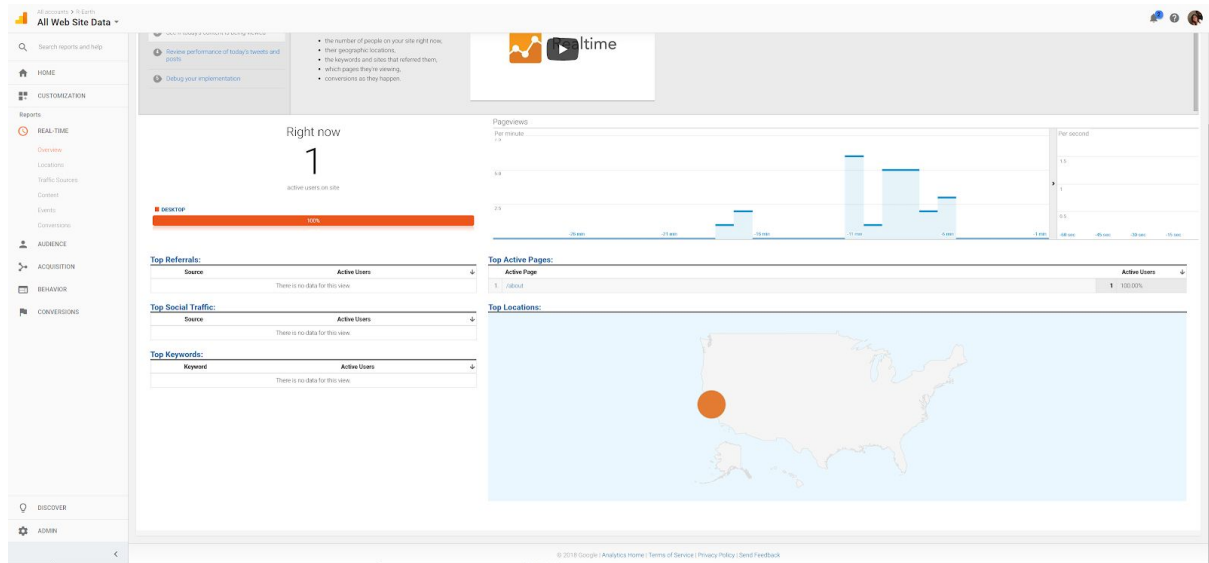
```

Data Output Explain Messages Query History

listing_id	latitude	address	zipcode	status	category	response	agency	response_date
numeric	numeric	character varying (255)	character varying (255)	integer	integer	character varying (255)	character varying (255)	timestamp with time zone
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	3	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	2	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	3	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	0	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	2	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	2	[null]	[null]	[null]
2.255338	37.8444919	502-506 Forest St, Oakland...	94618	0	1	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	0	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	1	[null]	[null]	[null]
2.2553522	37.8445024	506 Forest St, Oakland, CA ...	94618	0	2	[null]	[null]	[null]
99999997	37.84388	6041-6051 Acacia Ave, Oakl...	94618	0	2	[null]	[null]	[null]

Screenshot of the listings table (second half)

4) Google Analytics Plot:



5) Team Member Contributions:

Please note that the number of submissions for each member is approximate, as submissions were made up until the demo deadline. All individual contributions listed below have been emailed to all team members.

Lorenzo Moises



Lorenzo Moises <moiseslorenzo13@gmail.com>

Mon 5/21/2018 12:34 PM

To: ● Umang Mathur

Cc: ● Chloe Zirbel; ● Lorenzo Ecija Moises; ● Oleksandr Nibyt; ● Ryan Donald Liszewski; ● Rosalba Edith Rodriguez; ● Taylor James Marquez ↗

- My contributions include:

- 1) Landing Page Map
- 2) Front-End UI and functionality of report an issue page
- 3) Front-End UI and functionality of Environmental Specialist Dashboard
- 4) Documentation

-Number of GitHub commits: ~10

...

Rosalba Rodriguez



Rosalba Edith Rodriguez

to Umang, Chloe, Lorenzo, Ryan, Oleksandr, Taylor ▾

- I was a member of the Front End team for the project
- I set up a template for the detailed listings page
- I later helped clean up the CSS for the page
- I contributed to Milestones 1 and 2

Number of commits to Github: 16

Chloe Zirbel



Chloe Zirbel <chloe.zirbel@gmail.com>

5:36 PM (16 hours ago)



to umathur, rlszews, lmoises, rodri10, onibyt, tmarque1

- I was the back end lead for this project
- I implemented the majority of the code that interfaced with the database (Postgres). This included searching the database and sorting results, entering new listing information, updating a listing, entering and updating user information, etc.
- I worked on all routes, often in collaboration with others. This included general behavior for all routes (like session management) and specific behaviors (authenticating login information, photo upload/download, password encryption, etc.)
- I managed and organized much of the overall database structure and content with regards to migrations/seeding/etc.
- In very few cases, I worked on front end java scripts to help connect the back end to the front end
- I contributed to all Milestone documents (except M3)
- I supported team lead with task assignment/management

Number of commits made to GitHub: 68

Umang Mathur



Umang Mathur

to Chloe, Lorenzo, Oleksandr, Ryan, Rosalba, Taylor

- I worked as the team lead
- My tasks included:
 - Project management (Task assignment and management)
 - Documentation (Contributed in most milestone documents)
 - Coded significant parts of the front-end and some parts of the backend
- Number of commits made to Github: 73

Ryan Liszewski



Ryan Liszewski <ryanliszewski@gmail.com>

to Umang, me, lmoises, rodri10

Here were my contributions for our project R-Earth:

- I was the front end lead for this project.
- I templated the entire front-end of the site using EJS, and Bootstrap.
- Created the front-end signup/login UI, validation and routing.
- Designed the listings screen along with the help of my teammates.
- Designed and templated the meet us UI for my teammates.
- I supported the front end team with showing them how to use CSS flexbox and AJAX requests.
- Delegated tasks to team members.

Number of commits: 83.

Oleksandr Nibyt



Oleksandr Nibyt

Mon 5/21/2018 2:04 PM



Reply all | ▾

To: ● Umang Mathur; ● Chloe Zirbel; Ryan Liszewski <ryanliszewski@gmail.com>; ● Lorenzo Ecija Moises;
● Rosalba Edith Rodriguez; ● Taylor James Marquez ↗

- I was part of frontend and backend teams.
 - I contributed to Milestone 1, Milestone 2, Milestone 3, Milestone 5
 - I did a few UI mockups
 - I worked on a submit page and input validation.
- Number of GitHub commits: 3

Taylor Marquez



Taylor James Marquez

to Umang, Chloe, Lorenzo, Ryan, Oleksandr, Rosalba ▾

- I was member of both back-end and front-end teams for the project.
- I added filters to the search function.
- I added features to the navbar (dashboard button, logout button, highlight active page).
- I created and linked the error page.
- I contributed to the Milestone 1 and 2 documents.

Number of commits to GitHub: 9

6) Post Analysis:

These are various issues that came up in a team discussion on 05/17/18 when our team lead, Umang, asked about any lessons we learned or particular problems we faced in developing the application. These challenges and issues have been shared with all members.

Initially, during the time of Milestone 0, the setting up of the back end framework (node.js) was quite challenging for those without any previous experience. This seemed to be a common theme with students throughout the class. Any delay in learning these basic tools propagated throughout the rest of the course. Therefore, in hindsight more time would have been spent in the earlier part of the class discussing these tools and laying groundwork for the later development.

Although the milestones were helpful in establishing the overall architecture and requirements for the application, the implementation of the application was much more time consuming and presented unforeseeable challenges. Thus, it would have been advantageous to begin coding earlier in the course, even if the full specifications were not known. Having a basic structure and navigation system in place would have given us more time to focus on the more complicated and detailed aspects of the application that would make it stand out against others in terms of aesthetics and functionality.

Because we were working in a larger group than we are accustomed to, developing effective communication strategies took some time. Initially, we attempted to meet once a week outside of class. However, everyone has very different schedules and we could not all attend each meeting. Thus, there was always one person who needed to be informed of what was discussed. Additionally, there would be many individual developments throughout the week that needed to be communicated to the team and could not wait until the next class or outside meeting. Thus, we eventually phased out the in-person meetings and began to rely more heavily on Slack. This ultimately, proved equally effective in terms of group and individual communication as the in-person meetings.

Additionally, at the outset of the course we were not using any sort of task management tool. Instead, we would agree on tasks verbally or over Slack messages. However, as time went on and the implementation process became more involved, this strategy suffered from certain weaknesses. First, we would often forget what tasks we had already discussed and what we had decided to do with them. So at each meeting we would be repeating ourselves about how to solve a problem and who would be assigned to do it. Secondly, we couldn't really be sure about the status of other members' tasks because we would only really check in during class or occasionally on Slack. Finally, we started to use Trello to list and assign tasks, which ultimately proved to be a better solution and improved overall efficiency of work and communication.

Ultimately, this project was the largest teamwork effort any of us has engaged in and therefore presented a number of new and unfamiliar challenges. Most of these challenges arose from interacting with and managing such a large number of people, rather than any impossibly difficult coding issues. However, we were able to adapt and grow as necessary.