Milestone 2
CU CSCI 3308
2019-March-10

404 Group Not Found
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Product Feature List:

Wifiology allows user to:

- **check traffic on a node**

This is the app's primary feature. Traffic on a node can serve as a rough proxy to how physically crowded is the area near the node. User can use our app to estimate whether they wish to study in a certain area of campus or if it is too crowded.

- **list out all available wifi connections in the vicinity of the node**

This goes hand in hand with our core feature. In any given area on campus there are multiple wifi connections available. In order to provide a reasonable estimate of traffic in the area, it is necessary to consider wifi traffic on all available connections.

- **list out traffic on each of those connections**

In conjunction with feature number 2, this portion of the data allow us to compute the final estimate for traffic in the area.

- **export data to csv file**

Primarily useful for future implementations of the app. The ability to export data to csv is always useful. In addition to various administrative data analysis functions for our team, we envision future features giving users the ability to graph traffic in an area over time. Exporting data would be the first step in either of those pipelines.

- **view time stamp of last batch update to DB**

Users need to know how current are the data. Since our device(s) will not be running constantly it is important to give the user the ability to see when our last batch update ran.

- **Notify user via email and/or sms when traffic is above or below a certain threshold**

This is actually a whole class of features. The first and most basic notification system that we would like to see running is to allow users to set a custom threshold for traffic and receive notification when traffic crosses this threshold.

Functional and Non-Functional Requirements

1. check traffic on node:
    - FUNCTIONAL: allow users to check 802.11 traffic on a given node
    - NONFUNCTIONAL: 80211 traffic can be used to provide an estimate for amount of people in the area of the node. Need to come up with a formula for that estimate.

2. list out available wifi connections
    - FUNCTIONAL: All the wifi base stations broadcast access points. App collects all available access points
    - NONFUNCTIONAL: no nonfunctional requirements here. List of access points should be accurate

3. list out traffic on each connection
    - FUNCTIONAL: Store a count of number of devices trying to access each access point, and report.
    - NONFUNCTIONAL: This is at its most accurate when a batch update has just finished on our DB. So to provide the best service minimize time between batch uploads without overwhelming the DB.

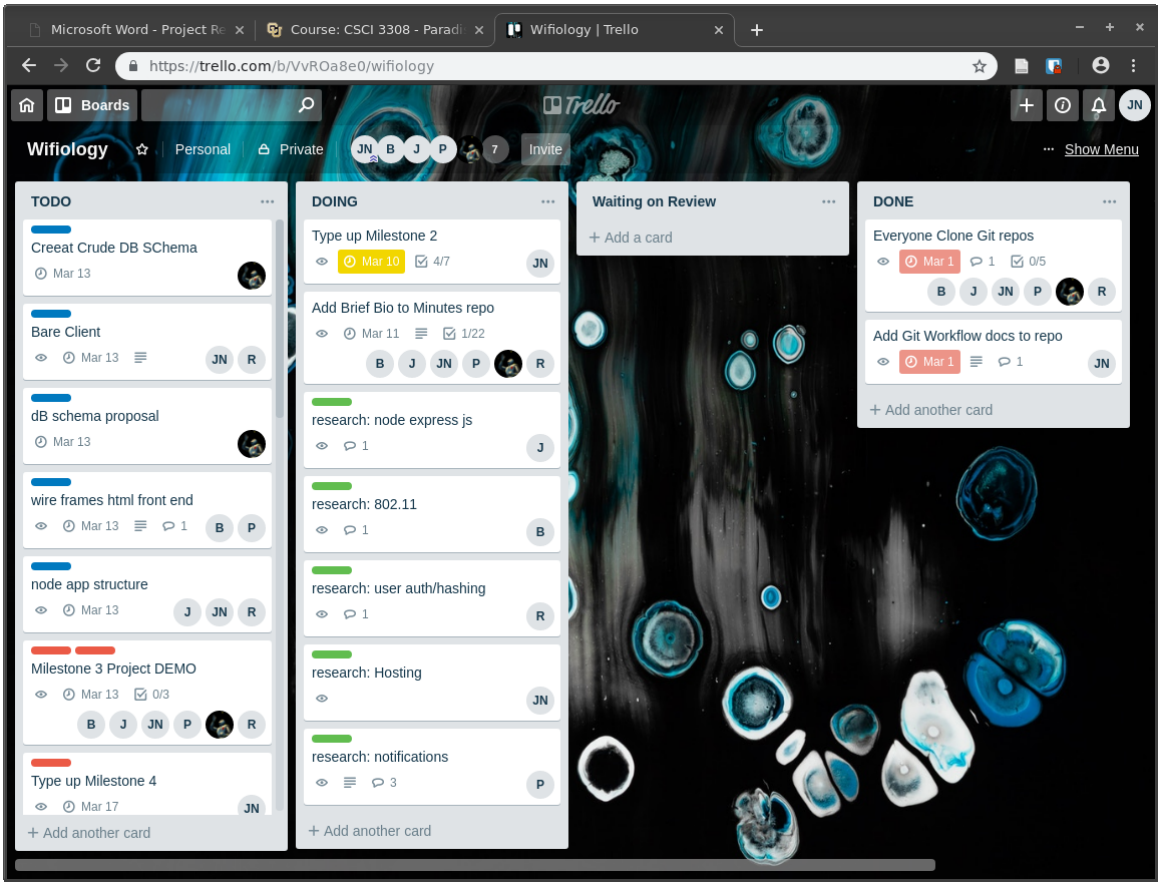
4. export data to CSV (for user use and for admin use)
    - FUNCTIONAL: Run report on DB -> transform to needed data output -> output data as CSV
    - NONFUNCTIONAL: Can be used for administrative tasks or to build future features which allow users to see performance metrics over time.

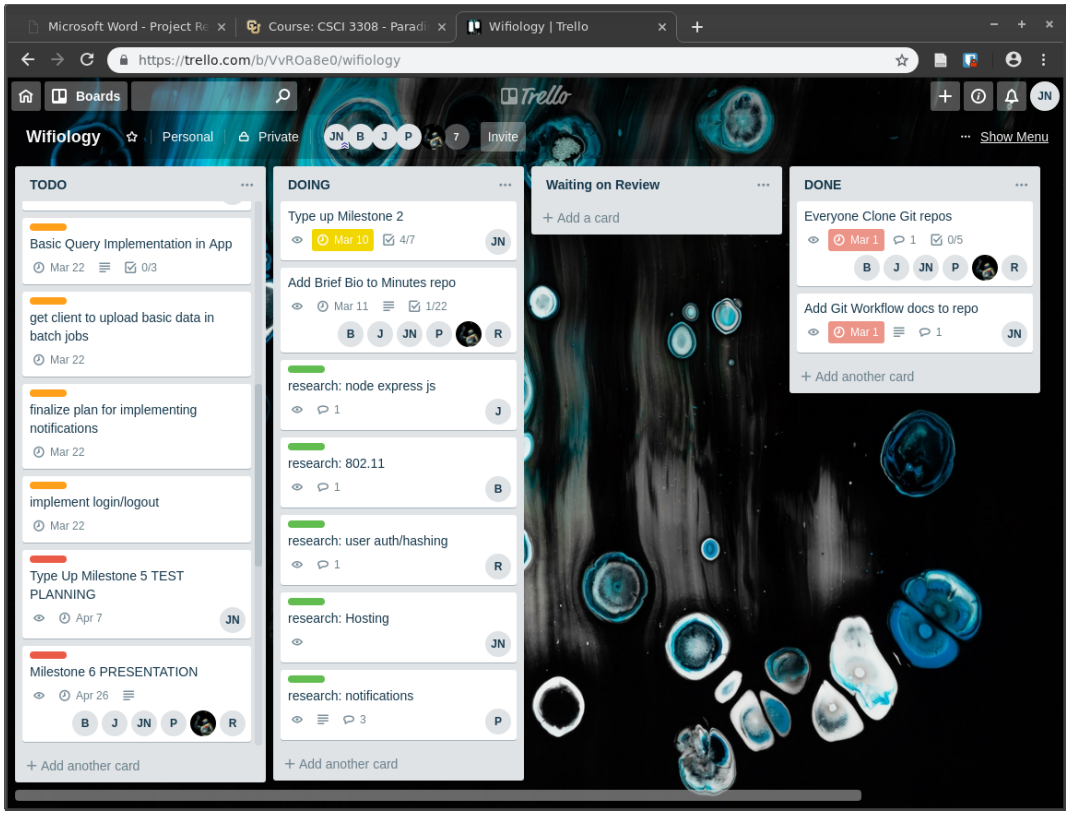
5. view time stamp of last batch update to DB
    - FUNCTIONAL: Time series data will contain timestamps
    - NONFUNCTIONAL: App may want to run another batch job if the time stamp is old.

6. Notifications (this can be a whole class of features)
    - FUNCTIONAL: user can receive notification (email or phone) if node traffic above or below certain threshold
    - NONFUNCTIONAL: This email is sent immediately when node crosses threshold.

Project Plan

The team is using Trello as a kanban board for project planning. We have broken the project down into three major sprints. The first sprint is getting a working skeleton app. The second sprint is dedicated to getting operations involving the data base to provide basic functionality for user authentication. The third sprint is devoted to finalizing all major features. Deadlines for all sprints have been assigned although currently only sprint 1 tasks have been delegated to specific team members. This will allow the team members to continually assess which parts of the project they feel that they can contribute to the most. The team will stay in communication via Groupme and our weekly meetings to assign tasks as they are needed. Screenshots of our kanban board are provided below. Green tags are for research tasks, red tags are for milestones, blue tags are sprint 1, orange tags are sprint 2 and purple tags are sprint 3.

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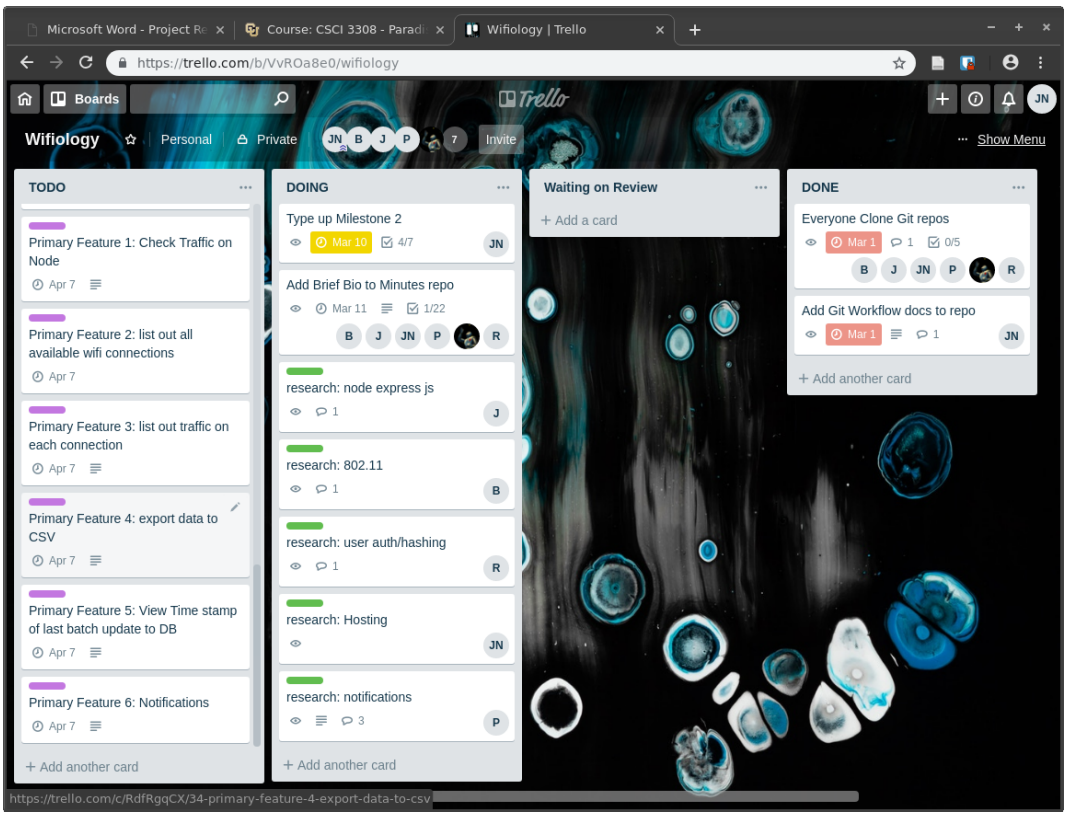
Course: CSCI 3308 - Paradi
Wifiology | Trello
https://trello.com/b/VvROa8e0/wifiology
Boards
Trello
Wifiology
Personal
Private
Invite
Show Menu
TODO
Basic Query Implementation in App
Mar 22
0/3
get client to upload basic data in batch jobs
Mar 22
finalize plan for implementing notifications
Mar 22
implement login/logout
Mar 22
Type Up Milestone 5 TEST PLANNING
Apr 7
Milestone 6 PRESENTATION
Apr 26
Add another card
DOING
Type up Milestone 2
Mar 10
4/7
Add Brief Bio to Minutes repo
Mar 11
1/22
research: node express js
research: 802.11
research: user auth/hashing
research: Hosting
research: notifications
Add another card
Waiting on Review
Add a card
DONE
Everyone Clone Git repos
Mar 1
0/5
Add Git Workflow docs to repo
Add another card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TODO
Primary Feature 1: Check Traffic on Node
Apr 7
Primary Feature 2: list out all available wifi connections
Primary Feature 3: list out traffic on each connection
Primary Feature 4: export data to CSV
Primary Feature 5: View Time stamp of last batch update to DB
Primary Feature 6: Notifications
Add another card
DOING
Type up Milestone 2
Mar 10
4/7
Add Brief Bio to Minutes repo
Mar 11
1/22
research: node express js
research: 802.11
research: user auth/hashing
research: Hosting
research: notifications
Add another card
Waiting on Review
Add a card
DONE
Everyone Clone Git repos
Mar 1
0/5
Add Git Workflow docs to repo
Add another card
https://trello.com/c/RdfRgqCX/34-primary-feature-4-export-data-to-csv