Creds:

normal user
username: normalgrader
email: normalgrader@gmail.com
pass: topsecret123

admin user
username: supergrader
email: supergrader@gmail.com
pass: topsecret123

cse151bgaming.online
reporting.cse151bgaming.online

Authentication

For authentication, we considered many options. One was having a table of every session id issued, and whether or not the user was logged in and had permission to view admin pages. We also tried sending a cookie to the user as they logged in and using that for authentication, but had problems with the cookie same origin policy and the fact that we were requesting resources from our server on our main site from the reporting site. We ended up issuing a token to a user when they were logged in that was just their user id encrypted under a secret key we held on the server. Whenever a user makes a request to our REST endpoint, they send the token in a request header, and we take it and check our database to make sure they're an admin before sending them any data. We chose this way because it was secure and easy to implement. Credit for this code is due in large part to the discussion.

Dashboard

We chose to do a pie chart on the type of mouse activity by page name because we thought it was important to see which page our users were spending the most activity on. If a page had an unduly high activity relative to its size, it would suggest to us that the page might be difficult or demanding to navigate. We also decided to do a line chart on short idles, long idles, and unique sessions. We wanted to investigate whether or not our users were idling for long periods of time, which might suggest that they're reading our website. We also did a short idle vs long idle vs time to try to figure out whether or not our users were paying attention to our page.

We visualized unique sessions and the idling data over time for the line chart by having a range of most recent to 24 hours ago. This would allow us to determine when the website is the most active and also give us an idea of how many idles there are relative to the amount of unique sessions, which gives us an idea of how captivating our website is and how actively it is being looked at.

Report

We decided to answer the question “How does the mouse activity on the home page differ from the mouse activity on the hellodataviz page?” We chose the metrics of mouse input type, mouse position (x_coord, y_coord), and page names, as we thought those were the relevant metrics. We decided to display the data of 2 unique sessions in 2 heatmap grids because they very clearly visualize the positional portion of the data that is relevant to our question and due to the fact that mouse data is collected every frame, can illustrate the speed of the cursor’s movement which was useful to our discussion and understanding of different mouse data.

We were also interested in the ratios of scrolling to clicking to mouse movements the user performed, so we created 2 pi charts to visualize this data because there are only 3 types (movements, scrolls, clicks) and we wanted to do a comparison of the ratios.