Ketchup Clinic Mentor Check-In:11/28

Agenda:

1. Demo of Proof-of-Concept and explaining each view
2. Missed milestones for Proof-of-Concept
    a. Database Integration
    b. CSRF and other security mitigations
3. How to prevent user from logging out after a refresh
4. Clarification on "[Code Quality] Instead of checking if the user is logged in at every route, repeated code can be avoided by setting up an authentication middleware."
5. Go over changes to the system, such as removing occupation (since it wasn't actually a constraint - also explained in the progress report)

Progress Report:

Milestones Completed

1. User Account Creation and Authentication Complete
2. Data Model Created
3. API Layer - Version 1 Created
    a. User can add drugs
    b. User can add activities
    c. User can create schedule
4. Version 1 of algorithm working

Missed Milestones:

1. Database Integration
2. Security Mitigations

Difficulties that were Overcome:

1. Determining the length of a day in the case the user goes to bed after midnight.

We overcame this by only looking at when a user wakes up and setting an upper bound on the day (11 PM). It didn't make sense to set it as midnight because that indicates the following day.

2. Removing Job from Schedule

Since drugs could be taken while at work (and would have to be) the time spent at work didn't constrain the algorithm at all, so we removed it from the application.

3. Algorithm Development: Data structure to hold a user's day

This was very challenging as we went through multiple implementation ideas to figure out how to best store a user day such that we could determine the best possible times to insert a drug time. We overcame this by using an array, with an array size equal to the available number of hours in a user's day. Each slot in the array represented a 30 minute block and the first index was the time when the user woke up. The last slot in the array represents 11 PM, since that's when we set the day to end. Therefore, from this we determine when to insert other activities, such as meals, and use the remaining open slots to determine ideal drug times.