Final Project Proposal

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Problem / Question

The Guilford County Department of Child Protective Services serves the communities of Guilford County, NC. Since August 2017, the department has employed 87 social workers and received up to 4,000 reports of potential child abuse annually. When a case is received, one social worker is assigned; that one social worker, based on state mandates, has 45 days to conduct and complete a report. The work involved in making these reports is significant and varied. As social workers conduct their work, they are overseen by managers, with 7 to10 social workers on each team.

Imagine you are a manager of 7 to 10 social workers. How would you keep track of the work of your individual team members? Presumably, you would want options that give you a sense of their workload without having to request constant updates, as those updates would take away from their time in the field with children and clients. My app offers social worker managers a way to gain quick insight into key metrics of team member workloads: the number of cases on a caseload, the number of days left to close a case, the types of allegations in cases, and the change in caseload overtime. Making this information readily available allows managers to reallocate inequitable workloads, benefitting social workers, and help social workers meet crucial deadlines, benefitting potentially at-risk children.

The data

The data I'll be using comes from the Guilford County Department of Child Protective Services, as part of the course Smart Cities Practicum (MUSA801). The data is not geospatial, but does focus on the needs of a particular urban area. The data includes 40,000 records that describe more than 6,000 unique child welfare cases. The information, including time periods and allegation types, is from the 45-day "assessment period" of the social worker process. There are at least five key variables:

- Case assignment date
- Case closure date
- Child date of birth (to determine age)
- Allegation type
- Years of employment (within study period)

Data does not include information that identifies children or clients. The names of social workers and managers will be anonymized.

Technologies used

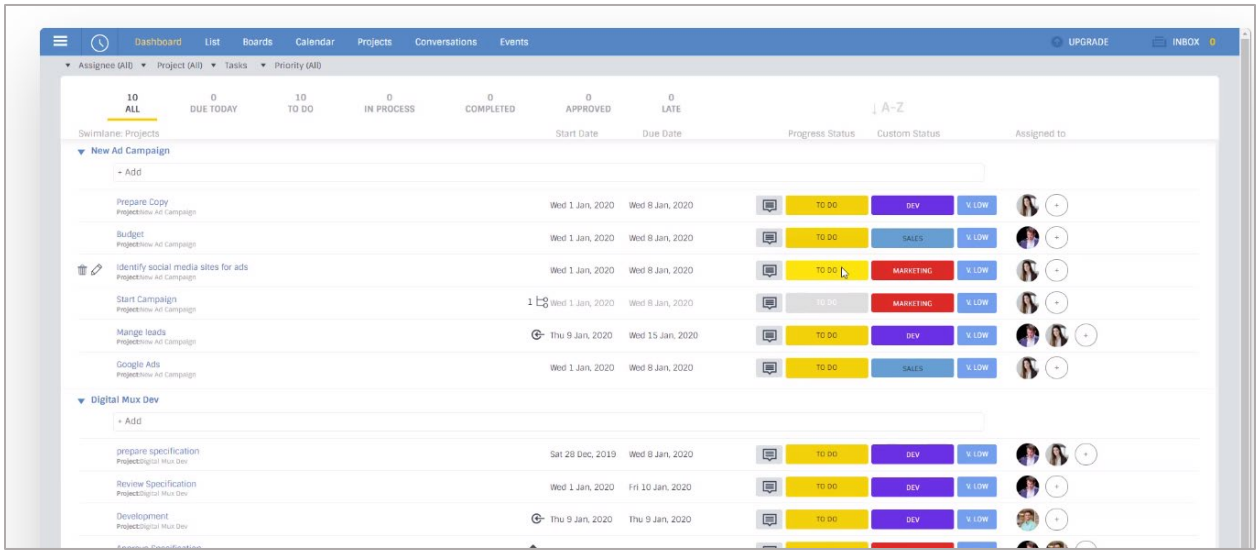
I plan to use Chart.js to develop a series of interactive visuals as part of a dashboard.

Design spec

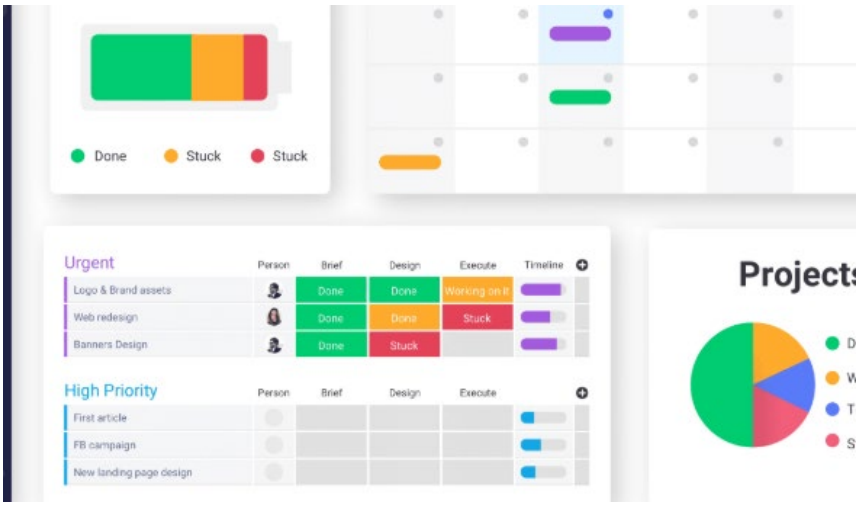
User experience

At a high level, I expect individuals to use my application to get a sense of the caseloads of social workers at the team and individual level. Users will be managers of social workers. By using the app, they will gain an understanding of the caseload the full team, and each individual, is managing. My app will resemble apps devoted to general project management, but be focused specifically on social worker case management and the manager view.

As an example, the project management app, BinFire, offers users a way to view the progress of specific team members on deliverables.



Another app, Monday, offers information at a glance using chart visualizations.



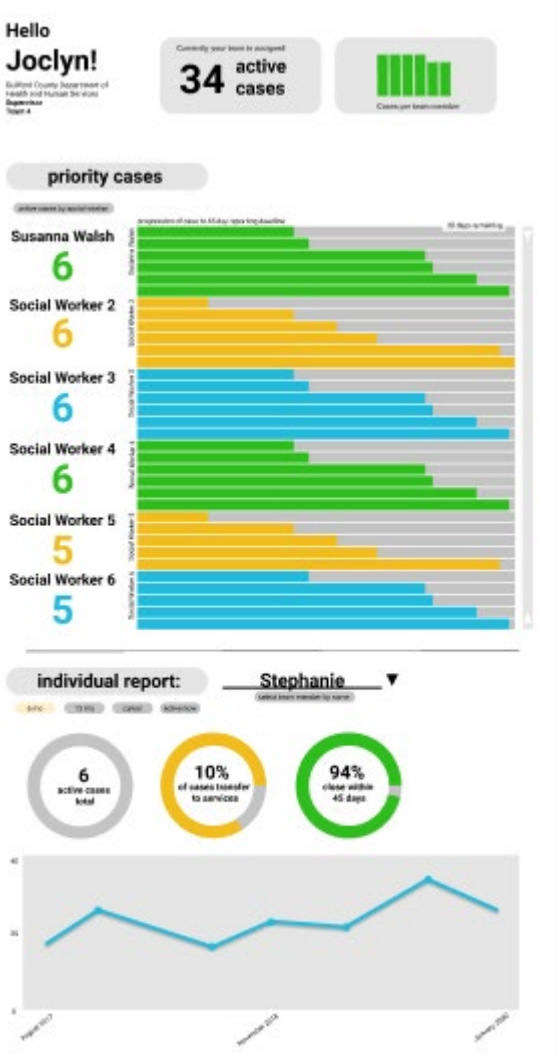
Layouts and visual design

The app will be divided into three sections: (1) a header with “at-a-glance” statistics, (2) a “team report” that outlines a key metric of all cases, and (3) a dynamic area for “individual reports” of social workers selected from a drop-down.

The header will contain three elements: the name of the manager, the total number of cases currently assigned to the team, and a bar chart displaying the number of cases assigned to each individual team member (to help assess caseload equity).

The team report will include horizontal bar charts, with one bar for every case that represents the progression of the case to the 45-day reporting deadline.

The individual reports will allow a manager to focus on one social worker at a time, with details like total number of cases, cases overtime, and types of cases.



Anticipated difficulties

Time is a very important element to this app- the time period a case lasted, the time period a social worker was employed, the time period being shown in the app. I have found dates challenging to work with in other programming languages, so I anticipate encountering some challenges with dates in this app.

This app will also potentially include a lot of filtering- with a view of multiple people on one team and also a view of information about a single person. I anticipate it being challenging to manage those filtered views at once.

Missing pieces

Oh man, JavaScript is so new to me, I can’t begin to list what I don’t know that I don’t know!