

Team Number: 19

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Project Name: Calendar+

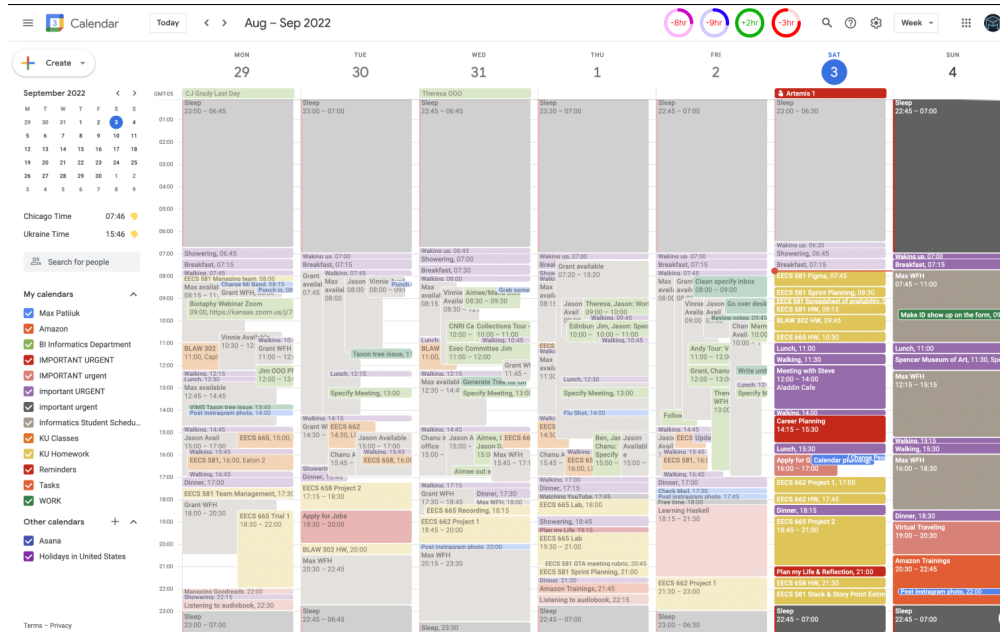
Project Synopsis:

Calendar+ is a Chrome extension that will help users achieve their goals by analyzing their calendar items and presenting them statistics within a dashboard.

Architecture:

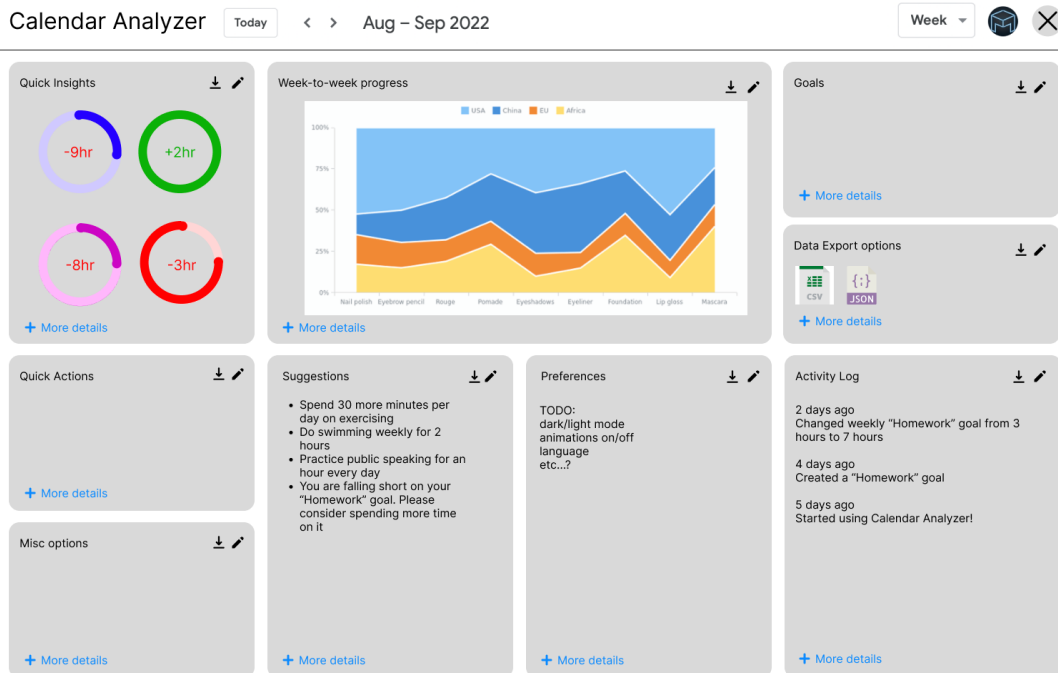
Heavy calendar users have dozens of events scheduled every day, with several overlapping things and many repeated events. For those who want to continuously optimize their schedule to use the time most productively, it becomes necessary to look back and reflect on what your time ended up being spent on. While you can look at your calendar a day at a time and try to see what's going on, it becomes harder as you look at a week by week basis or month by month basis as the number of events becomes astronomical. For example, for some of the heavy calendar users on our team, there are 830 calendar events in the last 30 days alone.

Manually trying to find trends and opportunities for optimization among the thousands of events becomes impossible without some higher-level tool that can convert all that raw data into pretty and easily readable charts. That is where our Calendar+ extension comes in. Installing it for as a Chrome Extension for Google Calendar would optimally look something like this:



The badges would be blank initially, but once you set them up, they will keep track of your goals. For example, you can make it track how much time you spent on homework this week so far, how long you slept on average or how much running practice you did this week in comparison to your total goal.

Clicking on any of the badges, opens a dashboard with a wealth of diverse of information:



The dashboard gives a detailed preview of your current goals, allows you to edit them, and/or add additional goals as suggested by the “AI Assistant”. It also displays a Stacked Area Chart that breaks down what you spent your time on every day and what are the trends in comparison to the last week.

The real magic happens when you find out you can easily navigate to the previous week and see the charts update in real time allowing you to see insights at a glance. It becomes even more valuable when you switch to looking at an entire month at once or even an entire year. Imagine being able to track how much time you spend on reading books years to year!

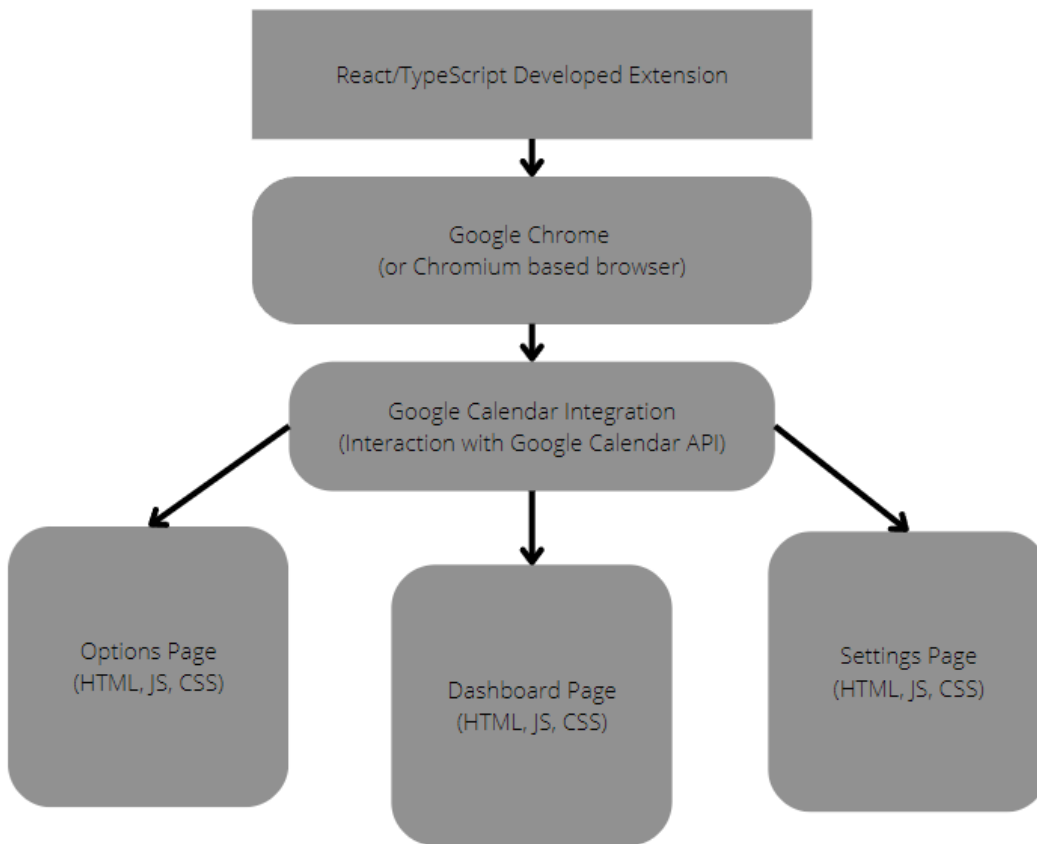
Another use case of the calendar analyzer comes into play when you navigate to a future week. Power users of calendars are likely to have a lot of repeated events that carry over from week to week. Looking at next week can give you an idea of whether you are going to reach the goals you set and allow you to make necessary adjustments to your schedule ahead of time.

For power hungry users, the dashboard offers a wealth of customization options, allowing you to change the layout of the widgets, add more information or get rid of unnecessary noise.

Finally, if you would like a deeper analysis of the data, there is an option to export to JSON or TSV, which can then be easily run through your hand-crafted Node.js scripts or imported into Google Sheets for additional plotting.

Tech Stack:

The Chrome extension will be built using JavaScript, TypeScript, Tailwind CSS and React. These are some of the most popular technologies at the market right now, they are a great fit for the job and most of the team already has good experience with them. An example of the main components of our extension and the technologies going into each part is shown below:



Additional features:

While it is not a primary goal, if we would find ourselves in a position to increase the scope of the project, the plugin can be made to bring quality of life improvements. A sample of possibilities:

- Provide autocomplete for calendar event names based on previous events or predefined rules
- Automatically newly created event to a correct calendar (all school classes go into one calendar, all work events go into another one)
- Add dark mode to Google Calendar
- Add more User Interface customization options
 - Add a compact mode that reduces whitespace
 - Add ability to disable certain User Interface components to reduce noise

- Google Calendar does not allow to visually differentiate events based on whether they have a description or not. Events might have a description that provides additional details, but it is easy to forget to read the description. Adding special styling for events with descriptions would reduce this type of mistakes
- Allow to tune down certain repeated events. For example, your coworkers might put their working hours on the calendar, which, while being useful, is not something you need to see all the time. You can mark these events as tuned down, which decreases their opacity and makes them non-interactive, preventing accidental clicks and fat finger errors.