Milestone 7
Group 18 - AgiLife - SortMe Software
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List of Software Methods and Tools used in this project:

Slack
By far the more useful to us alongside GitHub - Slack provided a perfect communication tool, something that isn't easy to make. By using its link-sharing feature, we were easily able to share collaboration docs on Google so that we could work on Milestones together, link each other to different resources on the web, share images (like the infographic) and more. We utilized the pin feature to make those easily accessible, and the channels feature to categorize and divide the chats so that we could organize our thoughts easier. Towards the end we tended to keep all chat in one channel (general) but did we successfully utilize the channel feature many times. Slack was also a very successful platform for splitting off into groups. When two people were working on a presentation together or were working on the website it would be possible to be keeping all of the reference material and google slides linked in that specific sub-chat.

Trello
Wow, we could have used this more. We all agreed that that it's a very useful tool, but we found that with a project this size with such a small team, it was easy to know who was working on what and what we needed to do still. Perhaps we could have used it to keep deadlines better, but with busy schedules we all found it wasn't worth the time to keep updated. We used it a good amount in the beginning for Milestone planning, and updated it a couple times during meetings throughout the semester to see how far we've come. GitHub fulfilled the role just fine also because the log would show who pushed what.

GitHub
Also incredibly valuable - GitHub almost needs no explanation. We used it, with it's GUI applications and command line utilities, to facilitate development and to ensure we always had a backup. Seeing the progress of our repo since it's inception is awesome, as the growth is so gradual but continuous. We definitely used it well, and with a project like this we ran into almost no problems with it's use. Communication is still necessary however, as no matter how detailed the commit comments are it's always easier to see a chat log (or Trello board, if we had done that). It was also incredibly helpful to have a log of frequent commits with the algorithm so it was possible to dial process back if there were any errors or to keep track of when different aspects of the algorithm were implemented.

Google Docs
Another fantastic tool that allowed us to collaborate on non-coding/development stuff, like Milestones and presentations. Being able to work on something at the same time or see live development that someone else is doing so easily is amazing.We utilized this one a good amount. Another very helpful feature with google docs was to be able to add comments and thoughts to pieces of text that we could work on so we could tag things for others to give input to or to later reference.

Agile Development in General
We can absolutely see why this is becoming far more standard - it's so easy to fall behind with a big task, but Agile forces small updates, and in doing so forces realistic expectations. We had some trouble staying realistic, but by meeting every week and by reflecting on who needed help with what, we were able to motivate and remind each other of what we needed to get done and when. In particular, it was very useful early on, when we were constantly changing our minds about what our project was going to be. We used Agile to narrow it down throughout the whole thing into something reasonable, given our availabilities and expertise... and loss of group member. One issue that we experienced with agile was setting hard deadlines, we would generally have goals for what we would all have done by the next week, but then sometimes when things didn't get done it would be difficult to see what the barriers were for implementation. This was especially significant with trying to figure out how to properly integrate the Django API because there were so many features it was hard to figure out which specific ones we needed to focus on.

Status of Project
We didn't necessarily get our goals met, but we did get a lot of objectives met such as getting the website to display a calendar, and most importantly the algorithm was working very well.

We did run into a lot of issues, including but not limited to:
-Karl left in October, but always showed interest in continuing to attend and contribute before completely ceasing contact. This was an enormous pain to us, as he was assigned to our group as the *person with HTML and Django experience*. As we had already decided on and planned around using those, we decided to learn them ourselves and keep going.
-Matt ran into a lot of issues implementing a working Django calendar on the website and with attaching it to the database.
-Ethan ran into issues with being able to integrate the algorithm with any type of outer input. It was difficult to design proper functionality without having a reliable runtime environment to run test cases against and so the struggle of integrating with Django certainly caused us to stall in certain processes. This was also my first time trying to develop an algorithm from scratch, and I think I went into it a bit blind. I have done reading since which has suggested creating a sketch

of classes and subprocesses and creating an entire pseudo-code design before actually typing anything out. I feel like if I had gone into it with this structure I would have been able to create a lot cleaner of a product, and I will absolutely be employing this process in my future projects as I see the shortfalls that arise when not implementing this strategy correctly.

Some outstanding issues include getting multi-view to work, getting Google Calendar to sync, etc.

As another company released a beta version (unannounced) in November that does everything our project wanted to, we may not progress much more towards our goals in the future, but we did make some progress and we believe we used (most of) our methods and tools well.