

Applying the MBTI to Scheduling Programs

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ABSTRACT

There are many scheduling programs available, but very few with context. If the program could know just a little bit about the user's personality, it could help a great deal to optimize and improve the user's habits. We added a Myers Briggs personality type indicator module to a scheduling program to help the program learn more about the user. With more contextual information about the user, the program is able to schedule more effectively by helping two diverse personalities, the judger and the perceiver, become more like each other. Thus, by adding just a tiny bit of context to a normal, simple scheduling program, a user can adjust his/ her habits to become more successful in life.

1. INTRODUCTION (RELATED WORK)

Since the people who work on researching the Myers Briggs personality type indicator (MBTI) and the people who work on scheduling programs are generally in mutually exclusive circles, this is not something that has been attempted before.

Adding a MBTI module to a program will let the program potentially know a lot about the user's motivations and working style. Knowing more about the user's motivations and working style can help the program to schedule better.

Over the last decade, the field of context computing has blossomed. We are not, by any means, the first people to use this flowering to come with ideas to create a better personal scheduling program. It is a logical extension of context. Most people use scheduling programs (or some just scheduling pads) to plan, organize, and examine their lives. Yet programs with even a little bit of context are not widespread. Since our program is web based, it can be viewed throughout the world. This is a positive aspect because it has great accessibility. Also, we can update it regularly by adding new or fixing old features, and no one ever has to download the changes. It is not just in some laboratory; it is out there in the real world.

At Carnegie Mellon University in 1991, a program called CAP was created as a prototype for a new kind of scheduling system. It attempted to become as close to a personal secretary to its user as computerly possible. It watched the way a user schedules, and then adjusts its scheduling method depending on how the user incorporates it. It watched the types of things scheduled and when an event was

scheduled it reiterated the way it was last time (ie the length, the room, etc). In this way, CAP learns from the past to help the user plan events more efficiently in the future. CAP, thus, does an amazingly good job of cutting back on mundane, routine tasks like looking up how long a meeting took last time or figuring out which room it was held in. It is attractive to users because of the fact that it helps them do things they would normally have to do by themselves.

Another program that dealt with scheduling is INCA, made in 1996 at the Institute for the Study of Learning and Expertise in Palo Alto, California. It was concerned primarily with urgency- “an agent is compelled to act to avert an undesirable situation in a limited amount of time.” Thus, INCA scheduled actions to be taken after natural disasters such as oil spills. It determined which disaster was the most important to take care of first and then deployed resources to ameliorate the situation. Furthermore, it learned from previous, evaluated decisions to be better prepared for its future decisions. INCA was concerned with taking a myriad of tasks to fulfill and then ranking them in order, fixing the most important one first. It also dealt with user models. There were different priorities for different users.

A final program created that dealt with scheduling was GTCN (General Temporal Constraint Network) from the Robotics Institute again at CMU in 1993. This program dealt

primarily with conflicts. It attempted to resolve them as efficiently and heuristically as possible. This was done with intense constraint satisfaction problems. Deadlines and priorities were decided upon and a schedule for accomplishing all of the tasks in the given time was developed.

2. METHOD (APPROACH)

Basically to start with a program that is personality based, thus, it is best to find to diabolically different personalities. Once the extremes are taken care of, it is easier to deal with intermediaries. The two personalities that differ the most are judgers and perceivers. According to psychological research judgers are more likely to live according to planned schedule while perceivers are more likely to be spur-of-the-moment types.

Judgers are happiest after decisions have been made. They set goals and work toward achieving them on time. Furthermore, they are product oriented. Thus they emphasize completing the current task as quickly as possible. They derive satisfaction from finishing projects and see time as a finite resource. They take deadlines very seriously and would, therefore, probably schedule their every free minute.

On the other hand, perceivers are happiest leaving their options open. They will change goals as new information becomes available, and are thus more capable of adapting to new

situations. They are process oriented and emphasize how the task is completed, not when. Additionally, they derive satisfaction from starting projects and see time as a renewable resource and deadlines as elastic. Therefore, perceivers are more likely to schedule how they will do their projects instead of when.

I interviewed a bunch of friends until I found a definite perceiver and judger. They fit the stereotypes fairly well (as well as any stereotype can be expected to be fit). I shall call the perceiver, P, and the judger, J. (In actuality, neither of those letters matches their true first or last names.)

P is an avid procrastinator. He will wait until the absolute last minute before starting to do his work. He waits until the week before a test to start studying. He looks at what he should be studying, instead of setting a definite when. That definite when tends to end up being the night before, even hours before. Furthermore, when doing problem sets, P tends to wait until his friends are free and are doing them. Thus, again, he is concerned with how he is going to do work, not when. P's daily routine consists of writing down what needs to be done, not when he is going to do it. He keeps rough times open for studying, but does not keep track of what he is studying when. When he gets a syllabus, he glances at it and never refers to it again. Thus, unless the professor mentions an upcoming test, P will not notice it.

Thus, a scheduling program can realize what P can do to optimize his studying habits. When an assignment is entered without a committed time to do it, it can pester him to commit actual time to the assignment. When he enters his syllabus, it should remind him a few weeks in advance about any tests coming up. It should also encourage him to not rely as heavily on his friends to do his work. When the program sees P is saving blocks for studying, it should tell him to try and commit to scheduling more than that. In these ways, the program can help P become more like a judger without disturbing him too much and also without forcing him to do anything if P ignores its comments.

J differs vastly from P. He is against procrastination as much as humanly possible. As soon as an assignment is assigned, he will do it. This presents problems when assignments are changed, corrected or cancelled. The positive is of course, his work is done early, and then he can start the next assignment and have more time available in case a hard one is given unexpectedly. When J has a test, he plans out exactly when he is studying for it. In fact, any assignment he receives is not only entered in his agenda, he spells out exactly when he is going to tackle it. Other problems J encounters are when he cannot do a problem on a set. Since J's friends are more like P, he is forced to wait until they can answer his questions. J generally gets

his work done efficiently, however, he wishes he could relax more in general.

Our program can help J become a little more like P. When J schedules with such minute detail, it can remind him that it is hard to predict how long each problem will take, and he should switch to using more blocks for general work. When J schedules to work on a project or problem set that is due more than a week away, it can remind him that most problem sets get corrected. Thus, J should wait until it is a little closer to the deadline to start it (although not at the very last minute like P might be inclined to do). The program can also remind J on certain subjects that since he will probably end up waiting for his friends, he should save those for later, too, and relax now.

The program, thus, helps P be more like J and J be more like P without making them lose their distinct personalities. It is an effective tool for optimizing study habits.

3. IMPLEMENTATION (DATA)

We incorporated all of the aforementioned research to create a system that not only helps the user schedule, it helps him/ her schedule more productively. The program is web based for easier accessibility. Thus, it has been written with a combination of html and Perl. The first thing we did was to look at various non-contextual based scheduling programs that were widely available. We then used these as

templates to create a similar, simple scheduling program. Instead of optimizing this to have as many cool, exciting features as the usual program out there, we decided to focus on the contextual aspects. After all, after those are done, it is much easier to add cooler and more exciting functions later. These functions could include adding hours to the calendar itself, letting the user schedule weekly events, or adding different colors for different types of events or assignments.

After we had a basic scheduling program up and running, we began considering what kind of context we should add. We decided to focus first on the aforementioned difference between two of the most diverse personalities, the perceiver and the judger. We decided to implement some of the above examples to help users have better study habits. We looked for ways to improve our program giving it the knowledge of whether the user was a perceiver or a judger. Thus, the program would help them become more like each other in the ways entailed above.

4. DISCUSSION

Our program is quite different than the three we discussed above. It is by no means “better” than them, but it does combine them in a unique way.

Our program does not deal with the same type of context as CAP. Instead of matching the user’s habits, our program attempts to change those habits, especially those with extreme

personalities, which has never been done before. Not only do we help the user, we try to optimize and better their study habits.

Our program uses similar models to INCA to separate the calendars of different users. It learns from each user separately to determine how to help them improve their study habits. Our program may at some point deal with urgencies in assignments, although it does not concurrently at this moment. It is more concerned with frequency of telling the user when there are assignments due rather than ranking them for the user, although it would not be too hard to give more priority to papers and tests than weekly problem sets. The biggest difference is in the fact that our program does not have to deal with natural disasters or life changing decisions. It just tries to help the user have better study habits.

Our program deals with conflicts in a simpler way than GTCN. It merely looks at conflicts when a user schedules two events at the same time. It tells the user this and looks at his/her decision. Perhaps a user goes to an event, but there is a television show he/she wishes to view. The program can remind the user to tape this program when he logs out. It can remind people who are less anal and regimented (perceivers) of this conflict earlier while more anal and regimented people (judgers) later.

Therefore, these three studies are quite relevant to our program. However, our program

combines these three aspects (user planning, user models, and resolving conflicts) in a new and innovative way. Our program uses personality types to build upon the planning system by creating personal user models and having the ability to give an alert to conflicts. It builds upon prior research and takes it to new levels using a different kind of context.

5. CONCLUSION

Context has made an enormous impact in the types of software available today. However, it has yet to reach its potential. There are many different scheduling programs available today, yet only a few of these has even a little bit of context. If the program knew more about the user's personality, it could help a great deal to optimize and improve the user's habits. We added a Myers Briggs personality type indicator module to a basic scheduling program to help the program learn more.

By combining the work of three studies involving different types of context in a scheduling program, we have created a brand new amalgam. Our program, therefore, uses personality types to build upon the planning system by creating personal user models and having the ability to give an alert to conflicts. With more contextual information about the user, the program is able to schedule more effectively.

We also discussed two vastly diverse personalities, the judger and the perceiver.

Judgers are happiest after decisions have been made. They set product oriented goals and work toward achieving them on time. They take deadlines very seriously and schedule their every free minute. On the contrary, perceivers are happiest leaving their options open. They will change goals as new information becomes available, and are thus more capable of adapting to new situations. They are process oriented and emphasize how the task is completed, not when. Therefore, perceivers are more likely to schedule how they will do their projects instead of when.

Thus, our new scheduling program helps judgers and perceivers become a little like each other. It suggests to judgers that they should relax more and to perceivers that they should crack down on their assignments as soon as possible. Thus, by adding just a tiny bit of context to a normal, simple scheduling program,

a user can adjust his/ her habits to become more successful in school, work, and thus, in life itself.

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