

Situated Personal Time Management

Details

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Internship location: ISIR, Sorbonne Université, Campus Pierre et Marie Curie, Paris

Topic description

Goal: Design and implement a situated analytics system to address common problems related to personal time and resource management for individuals working alone or in small teams by increasing self- and mutual awareness, coordination, and feedback.

Managing time and resources is a basic need in individuals' private and professional lives. From planning when to meet up with friends or colleagues to keeping one's promises or depending on other people to finish a task, much of these needs involve both planning on a personal basis and coordination with others. These are challenging tasks that, if performed poorly, can negatively affect personal well-being, trust, and group cohesion.

Many different approaches exist to track or visualize one's activity data using a wide variety of different tools such as post-its on a Kaban board, a customize Lego board (used at General Motors) or task management software running on smart watches.



Kaban board. ([Link](#))



General Motors uses Lego to track problem resolution status. ([Link](#))



Task tracking using smart watches ([Link](#))

An extensive body of work on the planning fallacy [Buehler et al., 2010, 2002] has shown that people frequently have problems meeting deadlines and specifically estimating how long a task will take them. **Remarkably, the fallacy resists most interventions.** Past



experiences of “running late” rarely lead to better estimates in the future, as people seem to focus more on the aspects in which a new task differs from previous experiences [Buehler et al., 2002].

This project aims to address this issue through data-driven, situated personal information management [Dragicevic and Jansen, 2014]. While the tools shown above enable the tracking or visualization of activities, these tools ignore how time spent relates to how one expected or planned to spend one's time. The goal of this project is to (1) be able to give data-driven responses to questions such as “how long will it take me to get somewhere”, “how long will it take me to finish this task”, or “how realistic is my (or my colleague’s) estimate for accomplishing a task?” and (2) to be able to surface data relevant to these questions in the relevant context, that is, when and where it is required [Willett et al. 2016].

This is a broad topic that may eventually become a full PhD topic, so the goal of this internship will be to explore a well-defined subset of the problem space. It will involve a survey of the literature, laying out of an initial design space of situated visualizations for time management, a prototype of a system, and an evaluation if time allows.

The student for this topic should have

- excellent analytical and conceptual thinking skills,
- excellent programming skills,
- very good English skills (both spoken and written), and
- a deep curiosity for science and for topics related to this internship.

For more about the context of this internship, see the page on the Ember project: <https://ember.inria.fr>.

References

- R. Buehler, D. Griffin, and M. Ross. Inside the planning fallacy: The causes and consequences of optimistic time predictions. In T. Gilovich, D. Griffin, and D. Kahneman, editors, *Heuristics and Biases: The Psychology of Intuitive Judgment*. Cambridge University Press, Cambridge, 2002. <http://dx.doi.org/10.1017/CBO9780511808098.016>.
- R. Buehler, D. Griffin, and J. Peetz. The Planning Fallacy, volume 43 of *Advances in Experimental Social Psychology*, pages 1–62. Elsevier, 2010. [http://dx.doi.org/10.1016/S0065-2601\(10\)43001-4](http://dx.doi.org/10.1016/S0065-2601(10)43001-4).
- P. Dragicevic and Y. Jansen. Visualization-Mediated Alleviation of the Planning Fallacy. In *DECISIVE : Workshop on Dealing with Cognitive Biases in Visualisations*, IEEE VIS, 2014.
- W. Willett, Y. Jansen, P. Dragicevic. Embedded Data Representations. *IEEE Transactions on Visualization and Computer Graphics* 2016. <http://dx.doi.org/10.1109/TVCG.2016.2598608>