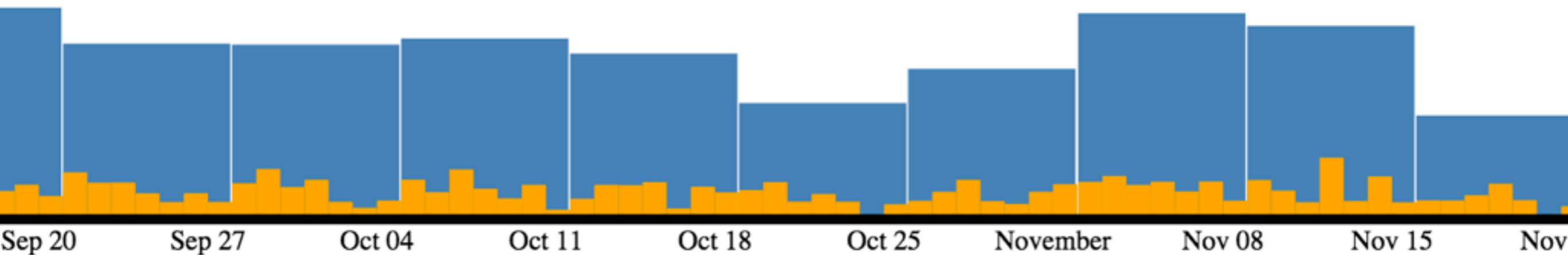


Schedulvis

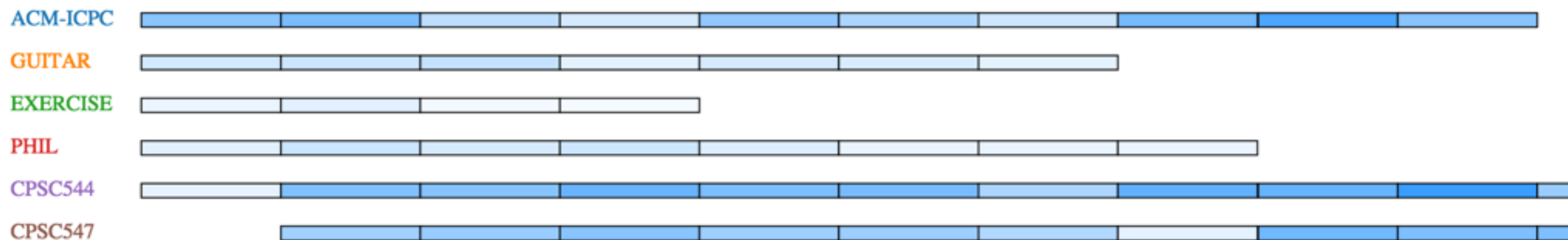
visualizing personal time logs

Hung-li Chen (Henry)



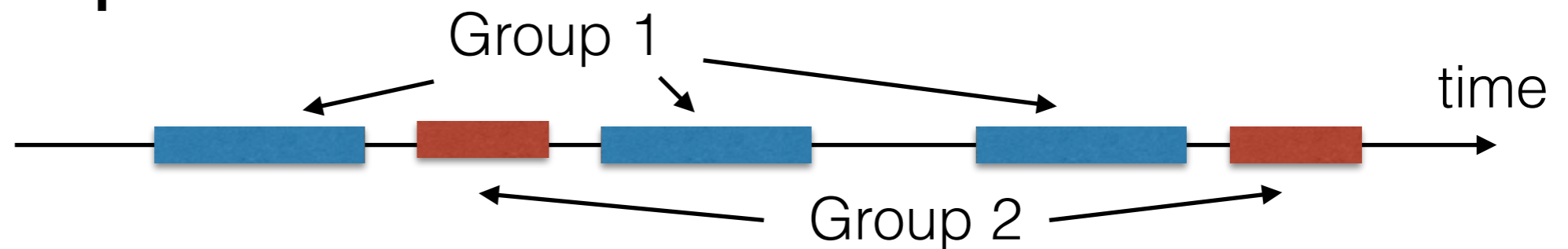
Motivation

- Curiosity about the distribution of my productive time
- Potentially gaining actionable insight through reflection



Dataset

- Source: myself using [toggl](#)[1]
- Preparation: manual transcription...
- Description: time logs of activities where entries contain the **start times** and **end times** (accurate to minutes) and the **project** they belong. Semantically, I tracked the activities that belong to my long term goals
- Abstract Description: non-overlapping **intervals** on a **continuous timeline, grouped** into sets.



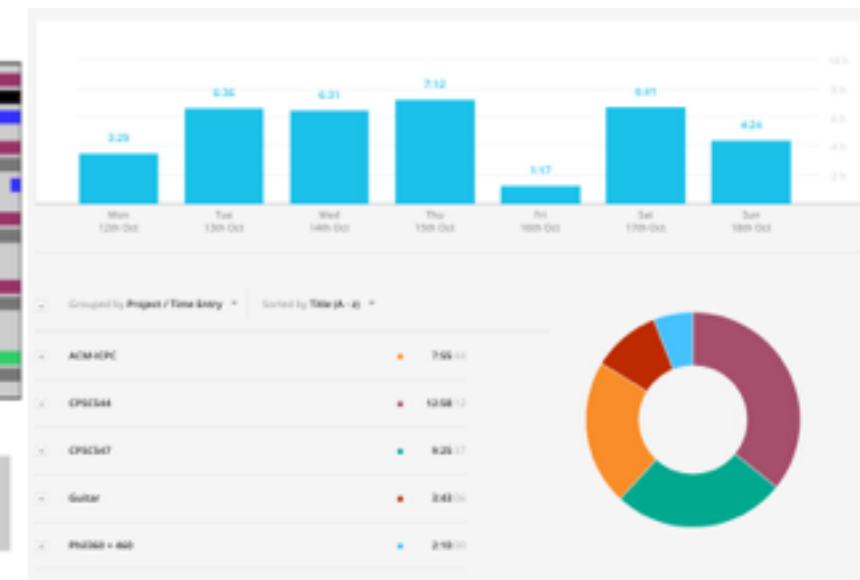
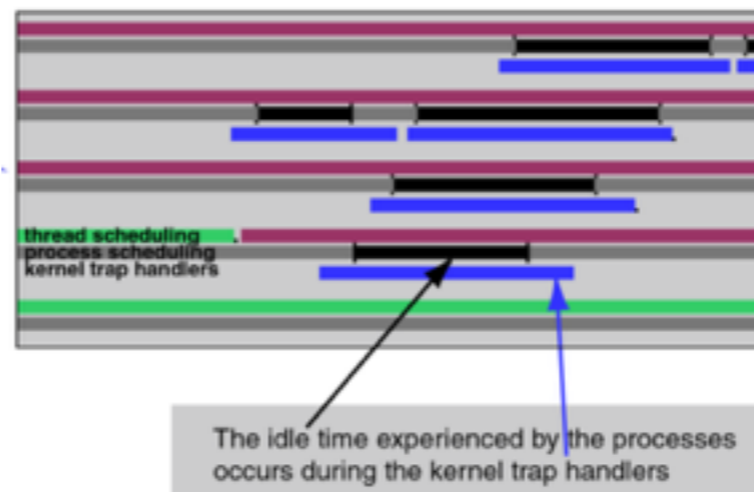
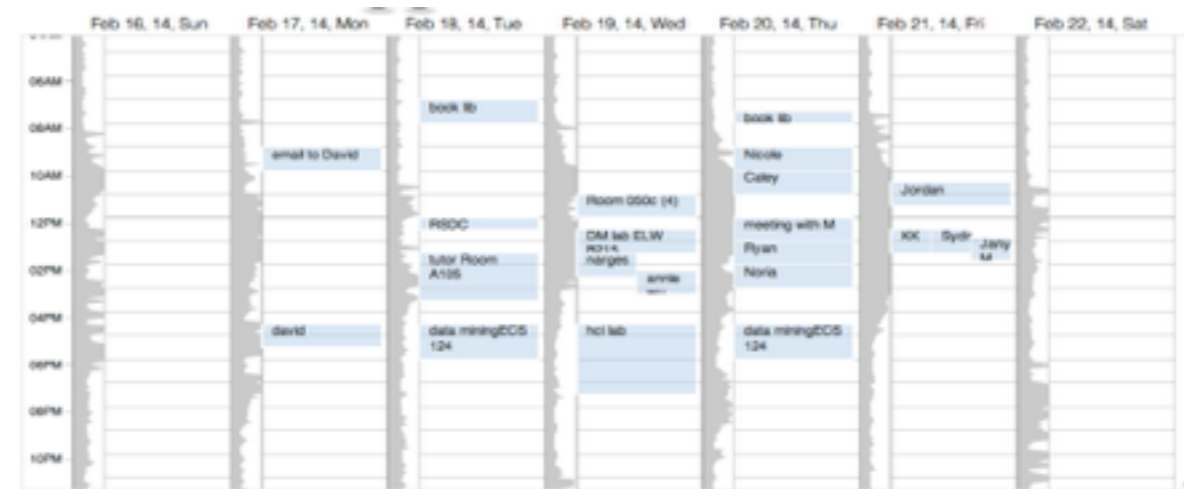
[1] [toggl](#), [toggl.com](#)

Tasks

- Provide **overview** of the time logs such as the sum of interval length (activity duration), distribution of the intervals.
- Allow **exploration** of raw data

Inspirations

- Calendar metaphor and layout [1]
- Using under bars to show occurrence and duration [2]
- Common reporting for example [3]
- Personal interest



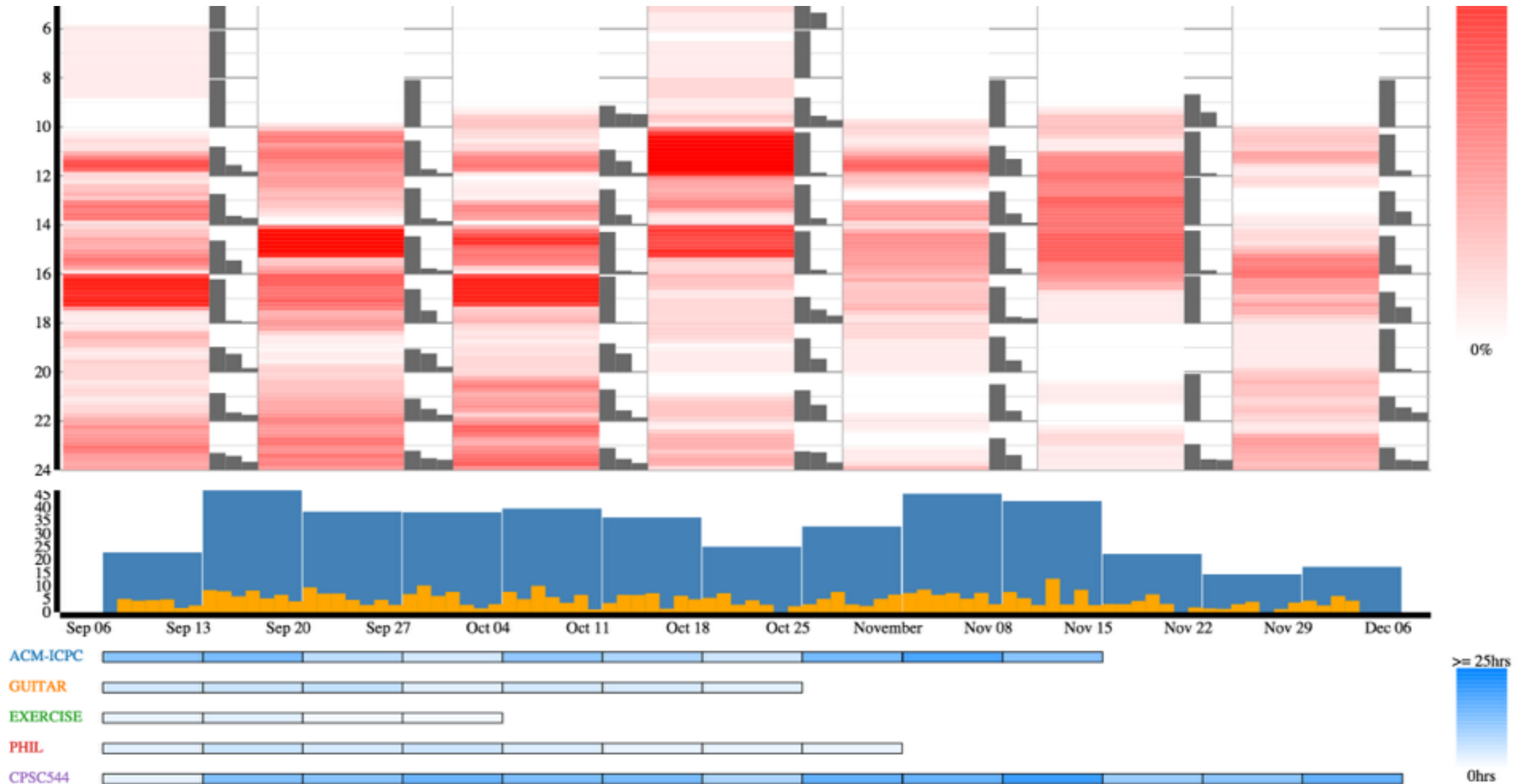
[1] Huang, D et al, Data in Everyday Life: Visualizing Time-Varying Data on a Calendar, Poster in VIS 14

[2] Bosch, R. et al, Performance Analysis and Visualization of Parallel Systems Using SimOS and Rivet: A Case Study

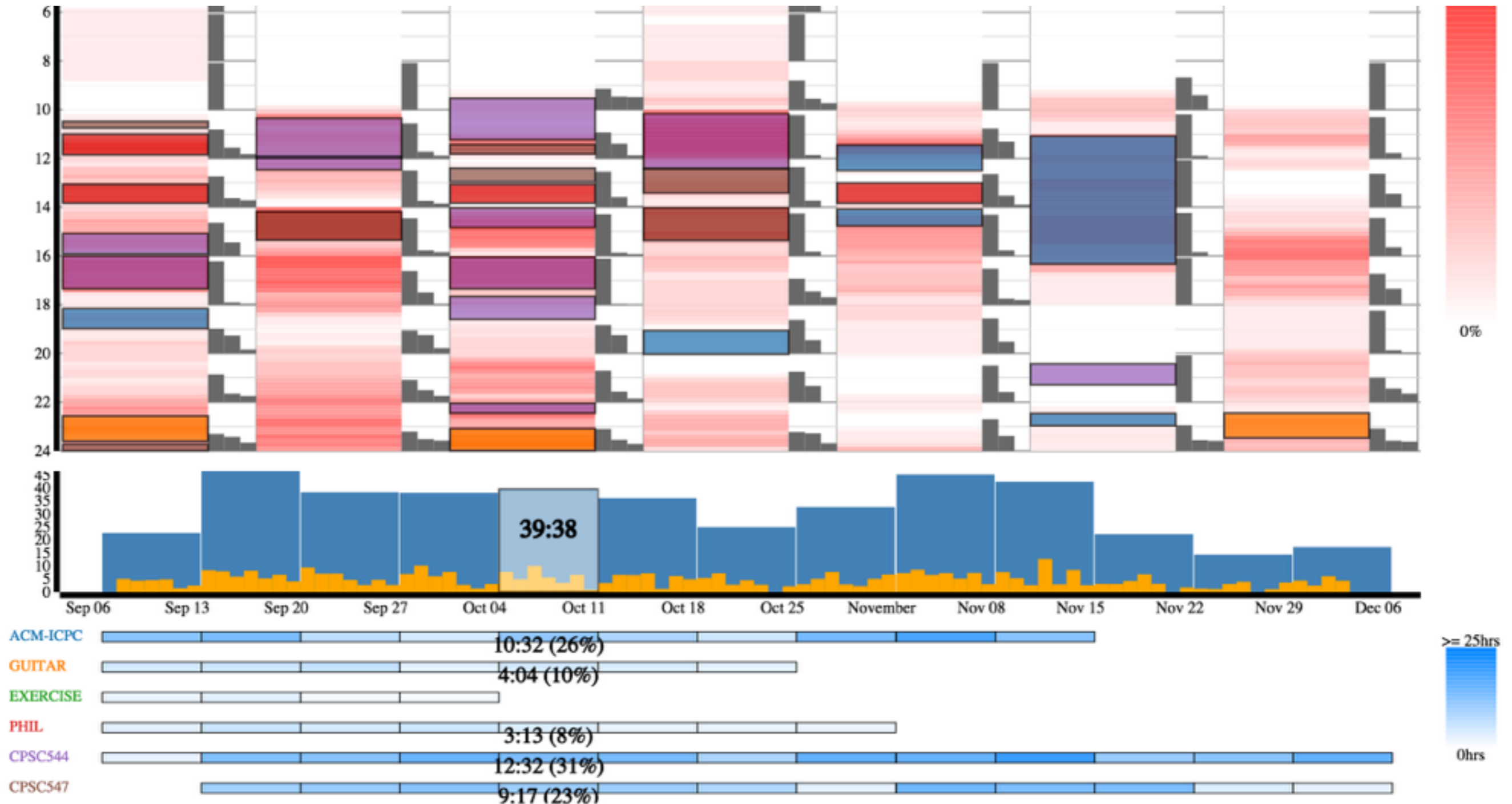
[3] toggl, toggl.com

Demo

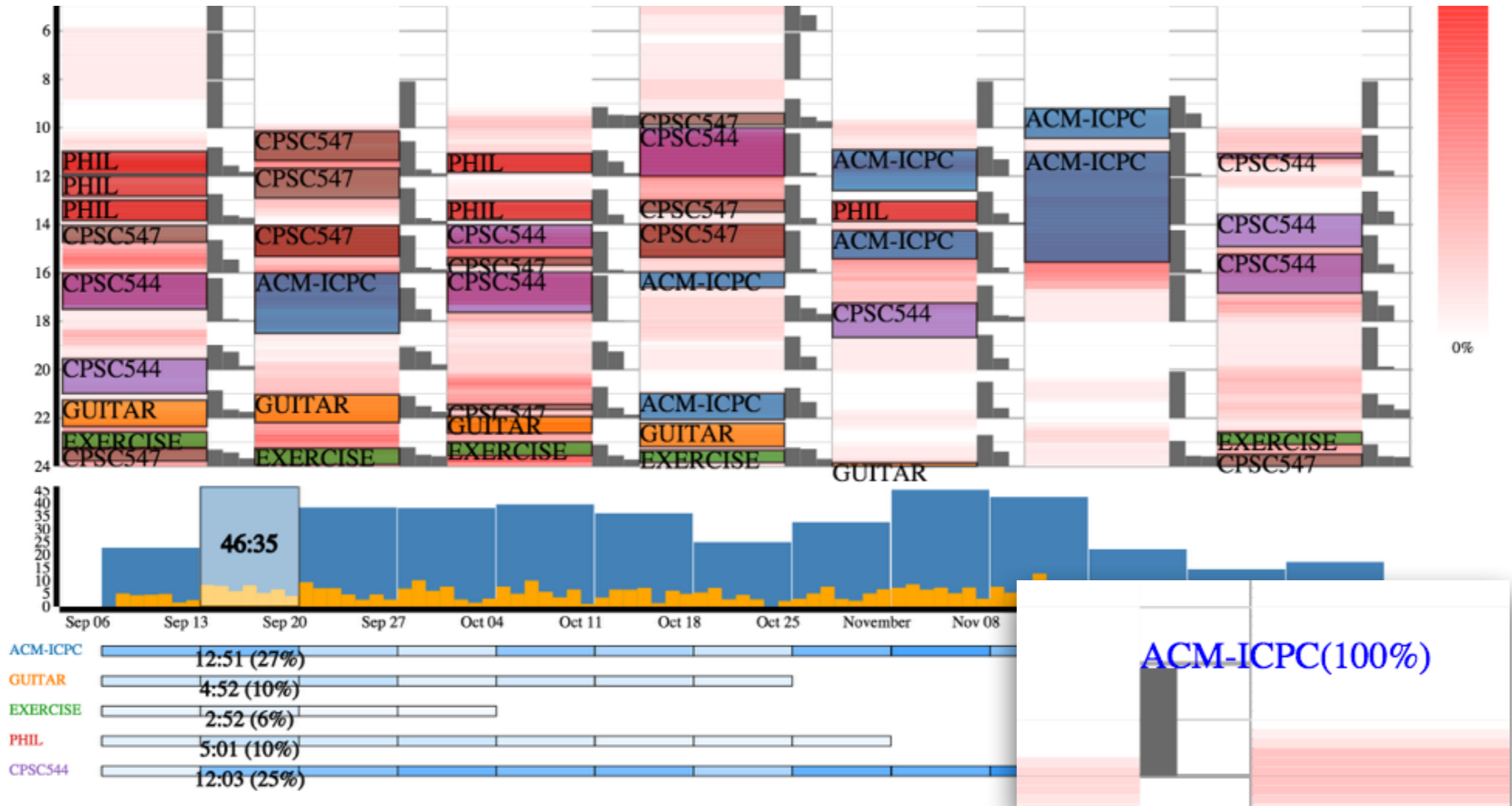
Screenshots: Initial View



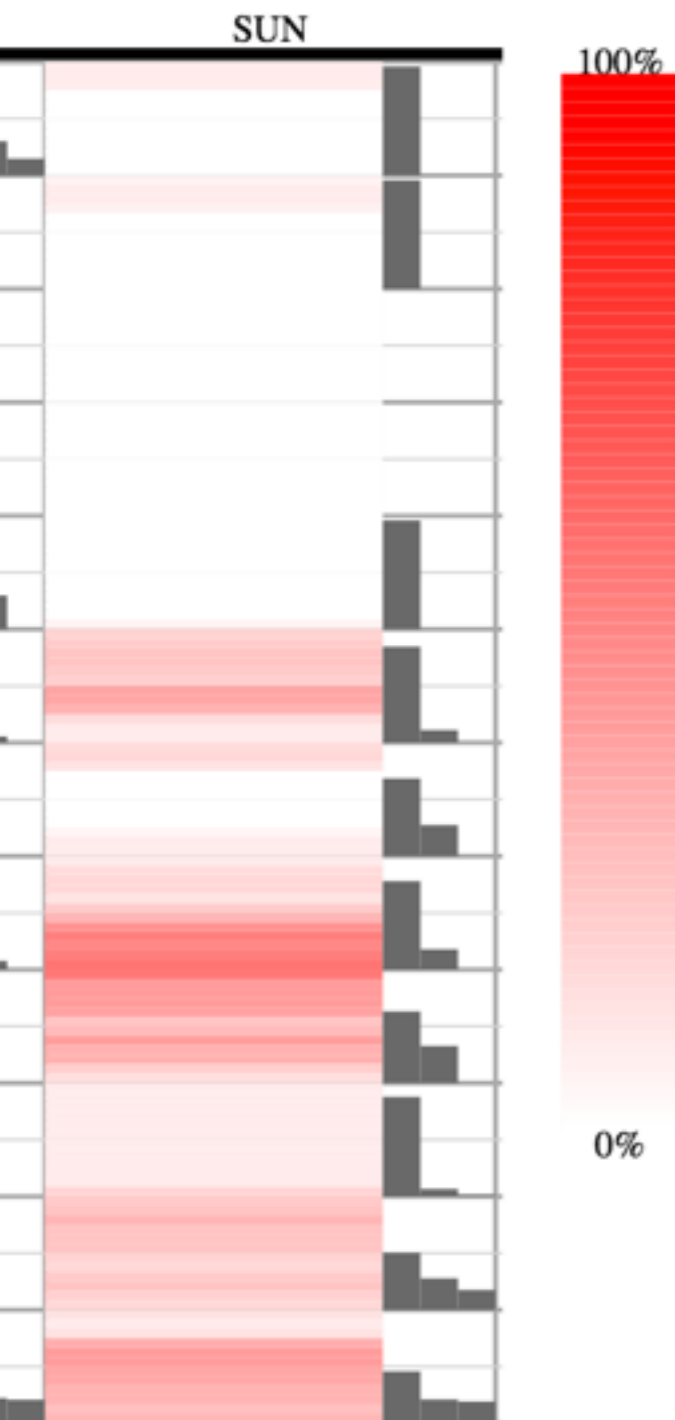
Screenshots: Hover over Weekly Bar



Screenshots: Detail on Hover



Calendar Heatmap

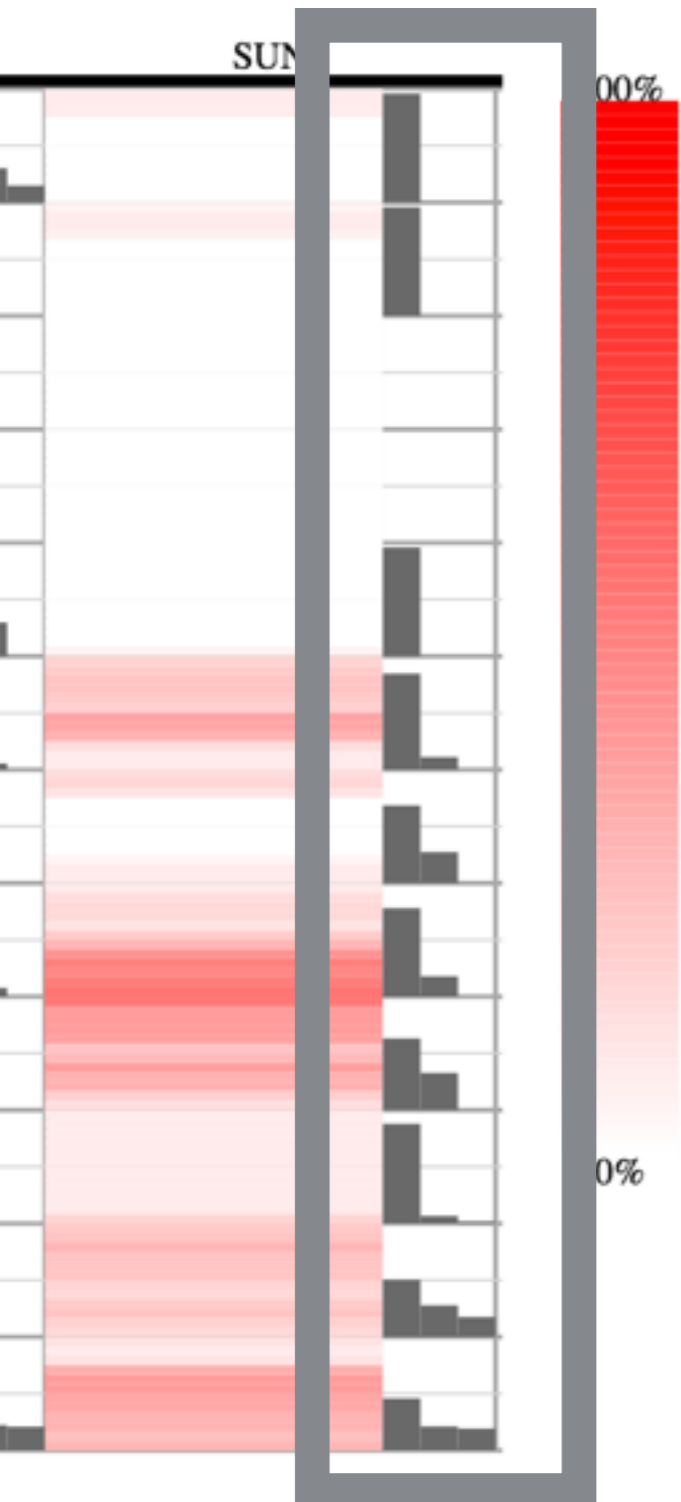


What: time segment utilization rate, e.g. If 30 minutes of work are done on Monday 1:00pm - 1:05pm over 10 weeks, the utilization rate would be $30 / (5 * 10) = 60\%$.

Why: provide overview of the aggregate weekly distribution of the intervals.

How: approx. continuous heatmap on the grid (calendar), utilization rate mapped to linear lightness (HSL) scale.

Composition Glyph



What: top contribution of sets (projects) in weekly 2-hour time segments.

e.g. If 800 minutes of work are done on Monday 1:00pm - 3:00pm over 10 weeks, and 200 minutes of those are on infoVis, then the contribution would be 25%.

Why: overview the distribution of intervals over different sets (projects) in a time segment.

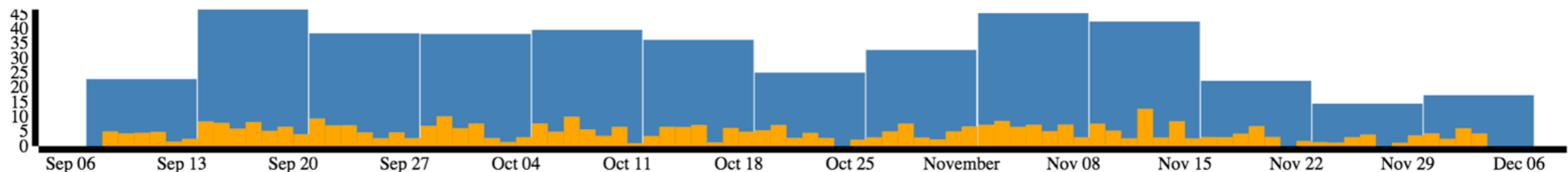
(help see if different projects are independent in time usage)

How: bar chart of three projects with the highest contribution to a segment sorted in descending order of contribution.

Use: One dominating bar indicates the time segment are dominated by some set (project), flat pattern indicates that the time segments are shared by different sets.

Aggregate Hours Bar Chart

- What: sum of interval length over fixed-step time intervals (e.g. total hours in a week or day)
- Why: show temporal aggregate overview.
- How: overlaid bar chart with daily or weekly total hours as the length, on a time x-axis.
- Also used for navigating through raw data.



Future Work

- Visualize complete personal log (less holes)
- Visualize long term personal log (more projects, more weeks)
- Streamline preparation, data collection, actions in addition to reflection [1]
- Make the visualization more accessible and useful in personal context [2]
- Much more...

[1] Li, I. et al, A Stage-Based Model of Personal Informatics Systems, CHI10

[2] Huang, D. et al. Personal Visualization and Personal Visual Analytics, Vis 2015

Questions?

- Project Location: <https://github.com/toNine/visproject>