Visualizing Categorical Time Series

a hard simple thing in matplotlib

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It's a race!

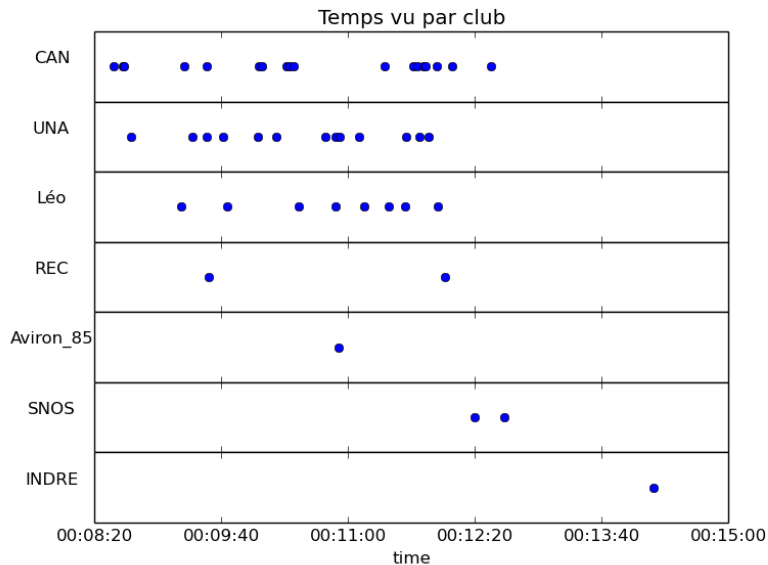It's a race!
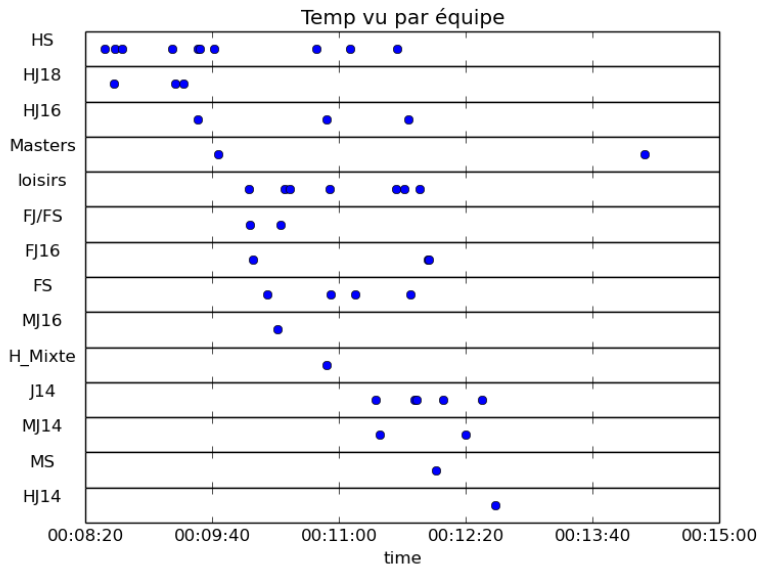
What I want

How did we do?

- by club?
- by category?

What I want

Temps vu par club

What I want

Temp vu par équipe

Code

```
plot(these_times.time.as_matrix(),
     np.ones(len(these_times)),
     'o')
```

Code

```python
import matplotlib.pyplot as plt

these_times = times[times.team == team]
plt.plot(these_times.time.as_matrix(),
         np.ones(len(these_times)), 'o')
plt.set_ylabel(team, rotation='horizontal',
               labelpad=30)
plt.set_ybound(0.5, 1.5)
plt.set_position([0.1, 0.1, 8.0, 1.0])
plt.set_yticks([])
```
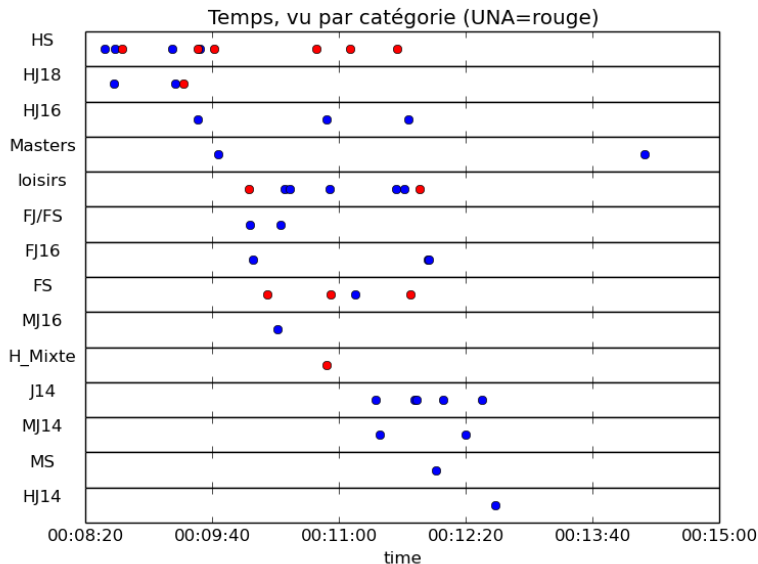
Code

```python
import matplotlib.pyplot as plt

these_times = times[times.team == team]
ax[index].plot(these_times.time.as_matrix(),
               np.ones(len(these_times)), 'o')
ax[index].set_ylabel(team, rotation='horizontal',
                     labelpad=30)
ax[index].set_ybound(0.5, 1.5)
ax[index].set_position([0.1, 0.1, 8.0, 1.0])
ax[index].set_yticks([])
```

Code

```python
teams = times.team.unique()      # ['time', 'team']
fig, ax = plt.subplots(len(teams),
                       sharex=True, sharey=True)
for index, team in enumerate(teams):
    these_times = times[times.team == team]
    # and do what was on the previous slide
ax[0].set_title('Time_by_team')
min_tick = ax[0].get_xticks().min()
max_tick = ax[0].get_xticks().max()
ax[0].set_xticks(np.linspace(min_tick,
                             max_tick, 6))
fig.subplots_adjust(hspace=0)
```

I want more!

Temps, vu par catégorie (UNA=rouge)

I want more!

Remember when we said this?

```
these_times = times[times.team == team]
ax[index].plot(these_times.time.as_matrix(),
          np.ones(len(these_times)), 'o')
```

I want more!

So instead say this:

```
others_times = times[(times.category == category)
                     & (times.club != 'UNA')]
our_times = times[(times.category == category)
                  & (times.club == 'UNA')]
ax[index].plot(others_times.time.as_matrix(),
               np.ones(len(others_times)), 'bo')
ax[index].plot(our_times.time.as_matrix(),
               np.ones(len(our_times)), 'ro')
```

And everyone is happy!

Questions ?

github.com/JeffAbrahamson/talks/