Matthew Cocci's Potent Productivity

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1. Introduction
   - Historical productivity
   - Motivation of empirical study
   - Description of data
2. Pretty tables/pictures
   - Summary statistics
   - Graphical trends
3. Model
4. Conclusions

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- How does he do it?
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  - If we could analyze his productivity over time, we could determine on which days new episodes of Serial were released.
- Embarrass him in front of all his loved ones.

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  - 3100 hourly observations over 345 days in total.
  - Don't even worry about how I did this.

Summary statistics

Table 1: Description of hourly data

	panes	absd1panes	sqd1panes
count	2181.00	2180.00	2180.00
mean	23.44	1.06	5.52
std	12.66	2.09	30.54
min	0.00	0.00	0.00
25%	15.00	0.00	0.00
50%	21.00	0.00	0.00
75%	30.00	1.00	1.00
max	73.00	26.00	676.00

Hours excluded from sample are non-workdays or days on which the RAN was reset.

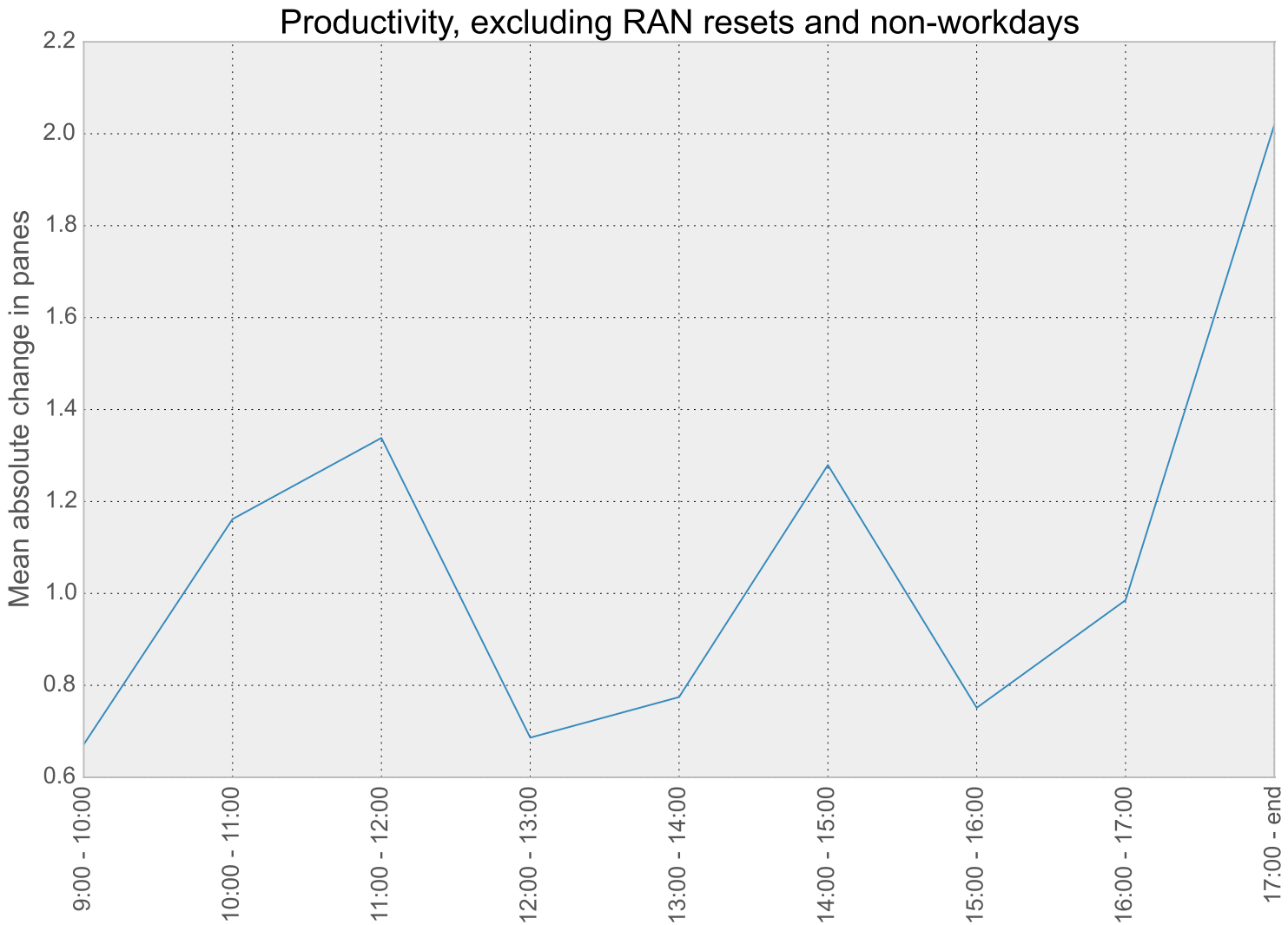
Summary statistics

Table 2: Description of daily (collapsed) data

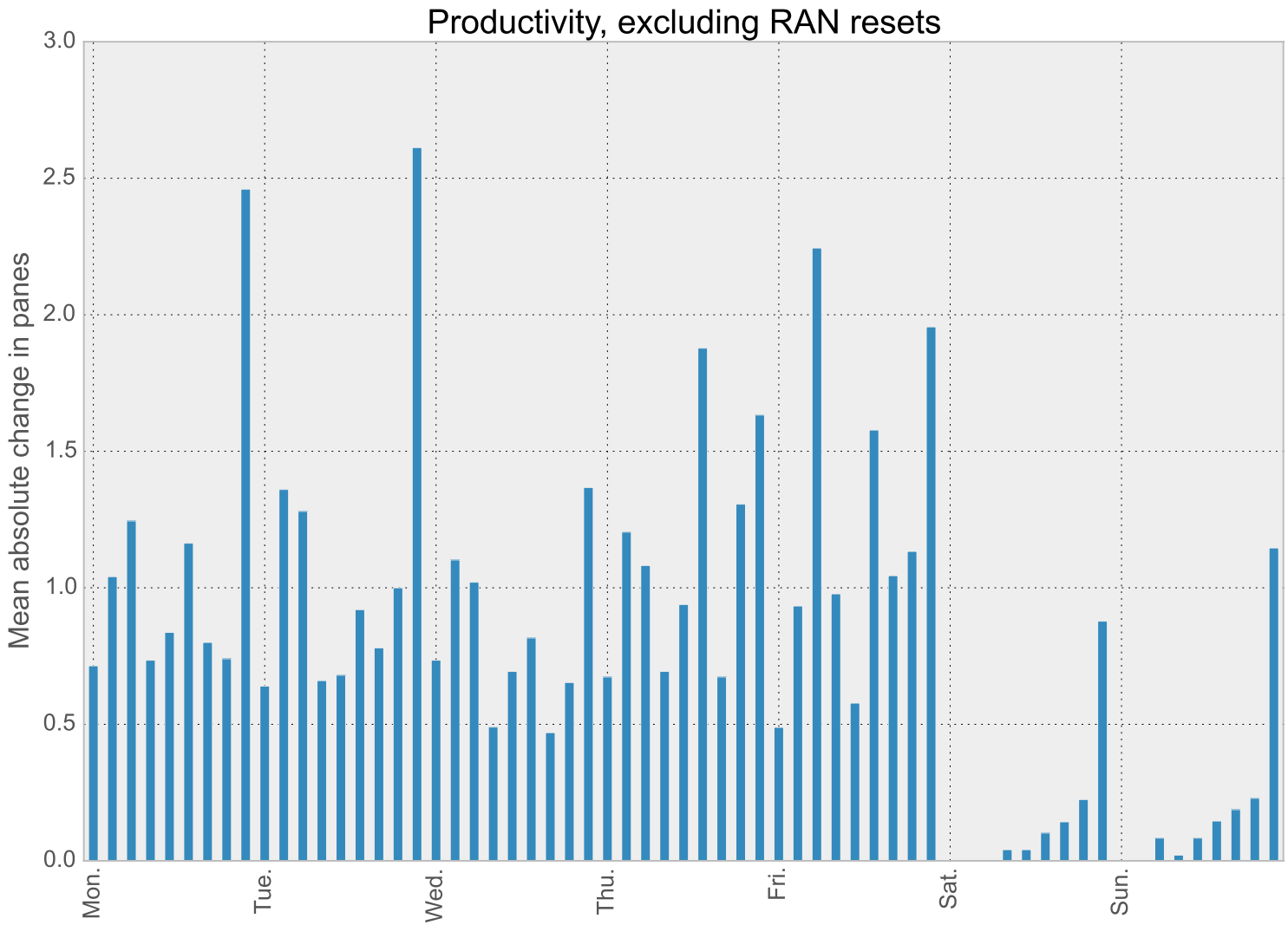
	has_episode_today	absd1panes	sqd1panes
count	243	243.00	243.00
mean	0.04	9.55	49.49
std	0.20	7.94	95.27
min	False	0.00	0.00
25%	0.00	4.00	6.00
50%	0.00	8.00	18.00
75%	0.00	13.00	54.00
max	True	46.00	756.00

Days excluded from sample are non-workdays or days on which the RAN was reset. `has_episode_today` is marked if an episode of Serial was released on that day.

Hourly trend



Weekly trend



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- Include squared term to capture all of the super duper non-linear effects we expect.
- Control for day of the week as well as Brent Crude spot prices.
- Train a boosted decision trees classifier, because why not, and because Cocci deserves only the best.
- Train on data from August 11, 2014 to March 31, 2015; test on data from April 1 to yesterday.

Model: Results

Table 3: Days with potential Serial episode releases

	pred
date	
2015-04-02	0.54
2015-05-12	0.90
2015-06-18	0.62
2015-07-02	0.54
2015-07-16	0.54

Last *known* episode of Serial released on December 18, 2014.

Conclusions

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- Good luck at Princeton!
- Do Something Good Everyday!