Quantified Grad Student

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6/24/2014

What I'm going to present

- Intro - why did I do this
- Data collection
- Analysis
- Future directions - other questions?

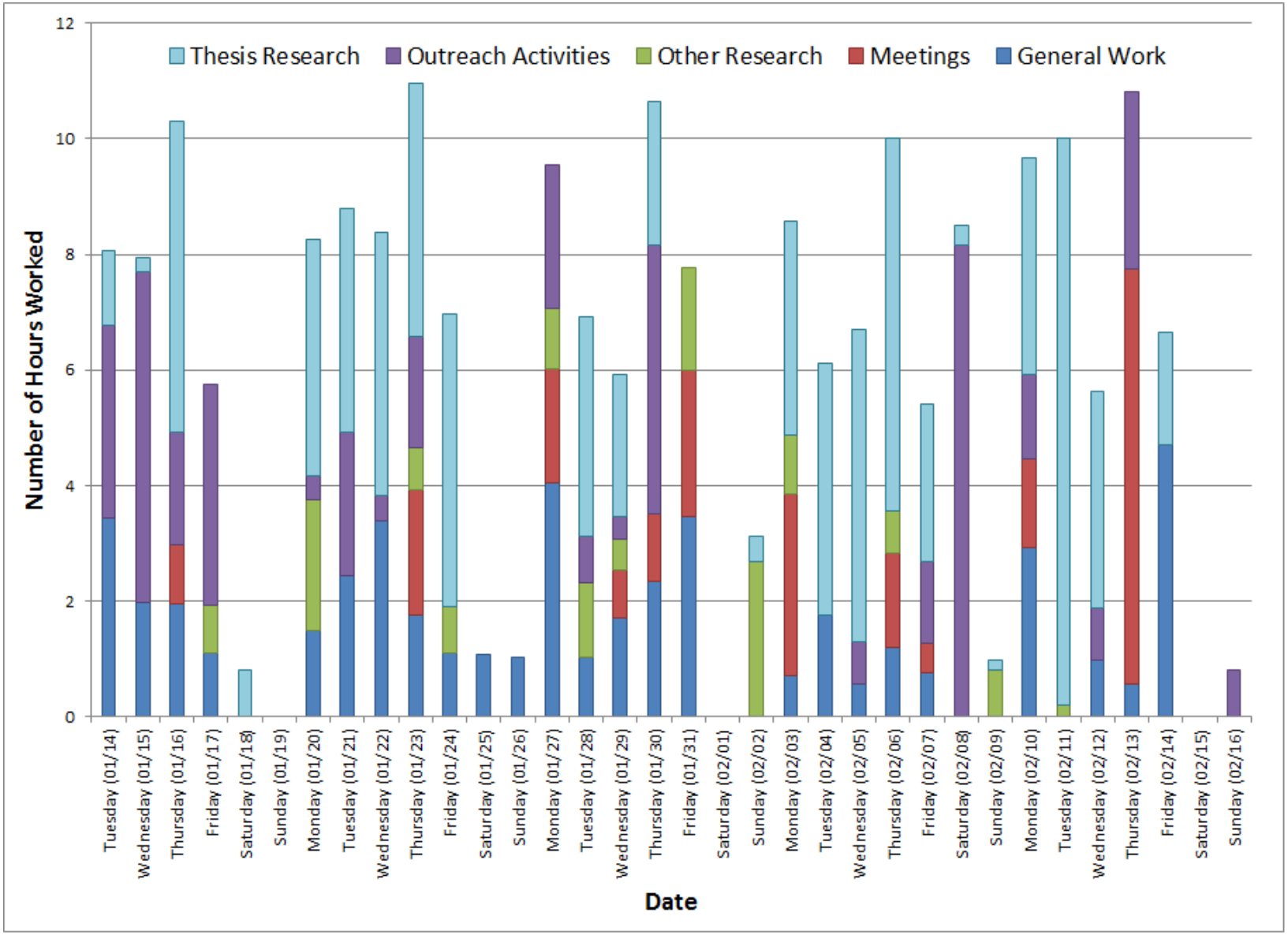
Motivation

- Entering grad school - how much time do I need to invest?
- Anecdotal: it will take all of your time
- Lots of claims, but no data

Questions

- How much time do I invest in Grad School?
  - How much time do I spend on campus?
  - How much time am I working on grad school stuff?
  - What percent of time that I am on campus am I actually getting work done?

One data point



(http://rddenton.blogspot.com/2014/02/who-works-80-hours-week-in-academia.html)

Who am I?

Grad student in Plant Biology

- Genomics (computational work), and local adaptation (field / greenhouse / lab work)
- How do I compare to other Grad students?
- I'm probably not very representative... but then what is a "normal" grad student?
- Advisor says I'm making good progress

How do I categorize my time?

How many categories?

- Tracked everything in a spreadsheet for a week
- Partition the tasks into categories, with the least amount going into a “misc” bin
- Still iterating, implement another scheme starting fall semester

Data Collection

Tools

- Android App: Gleeo
- Google Spreadsheet on my phone

Data collected

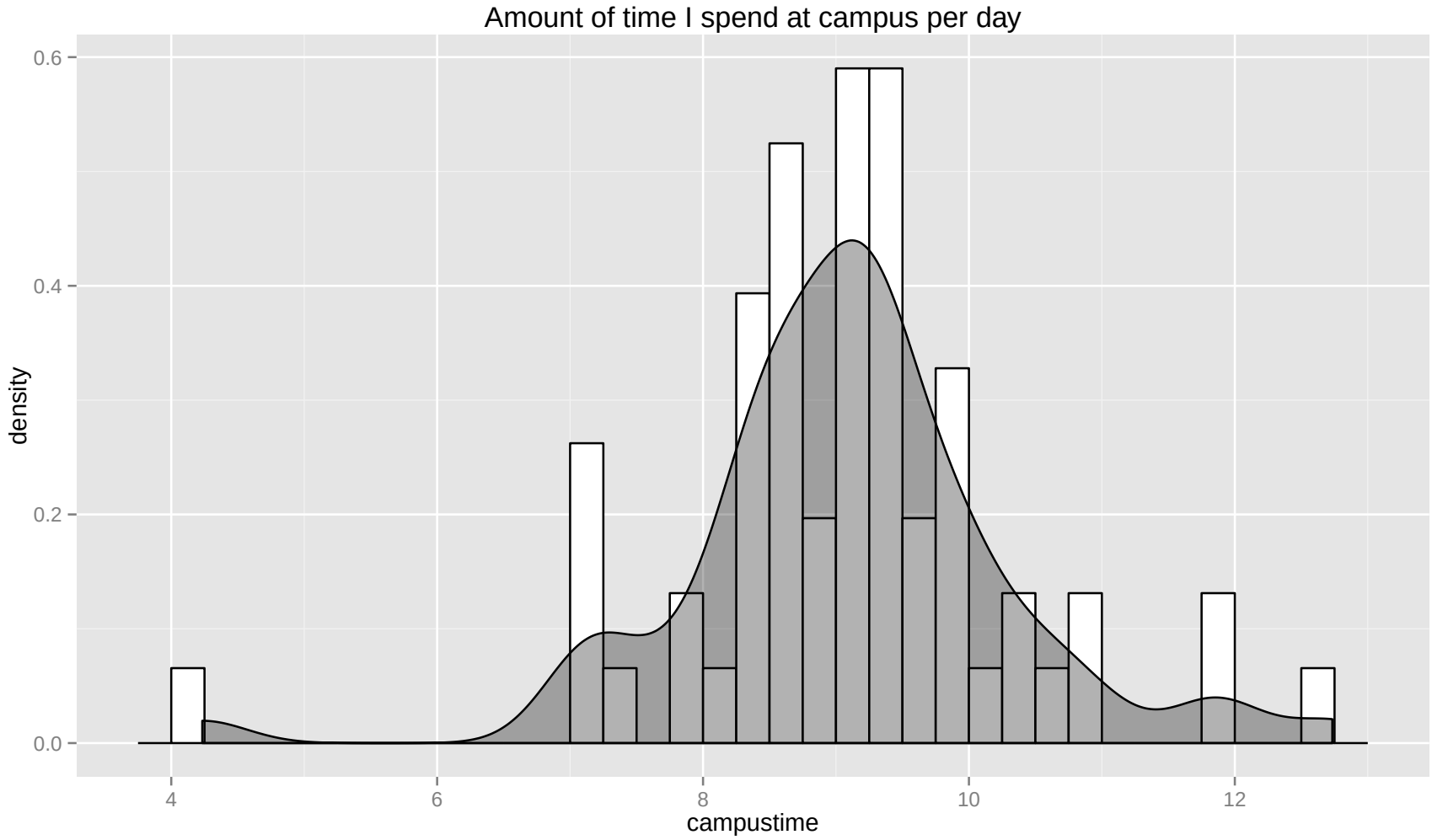
- Time doing work
- Time I'm on campus

Analysis

Campus Time

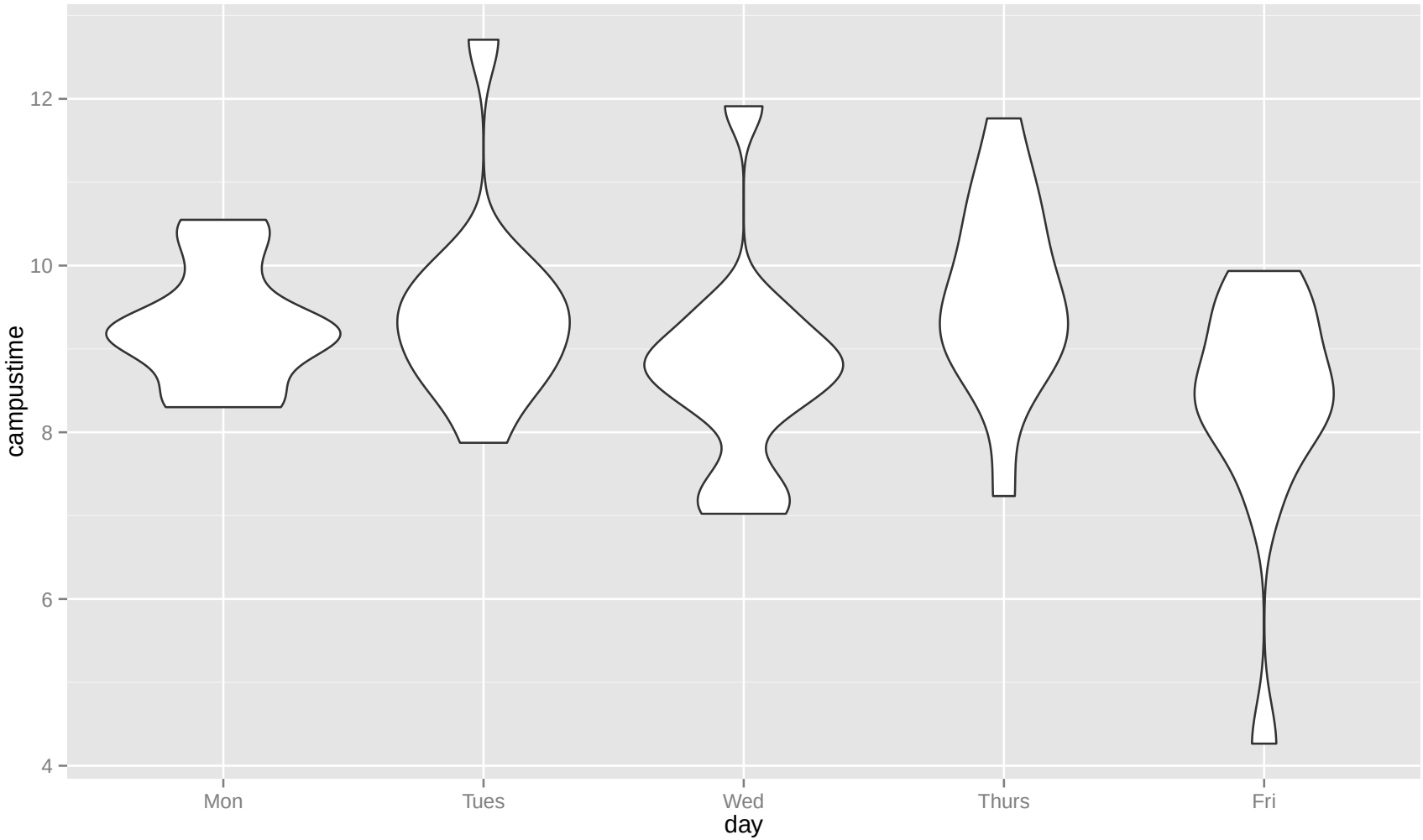
- time that I am at campus each day, Monday - Friday

How long am I at campus?

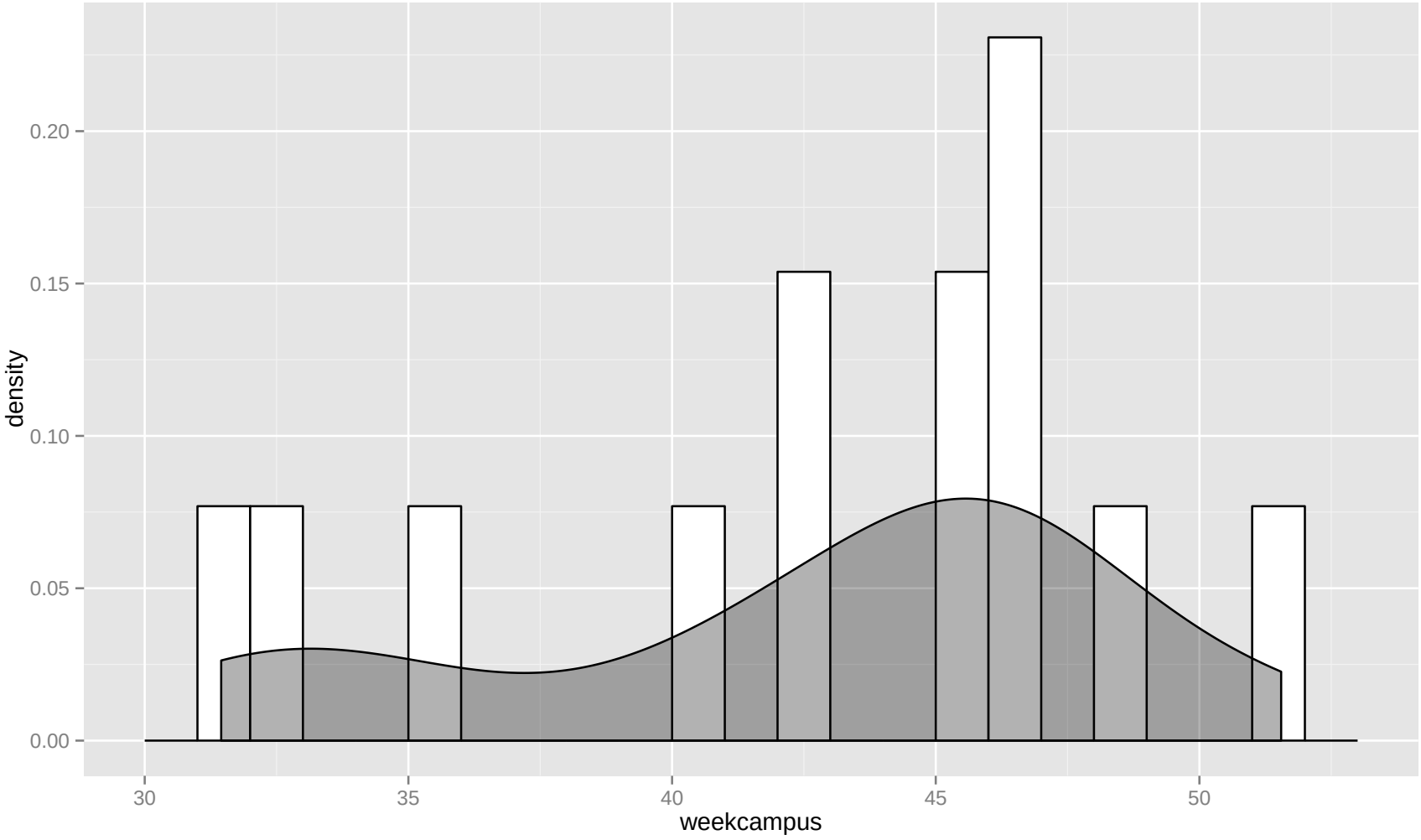



```
##   Min.   Mean   Max.
##   4.23   9.08 12.70
```

Grouped by weekday?



Time per week?

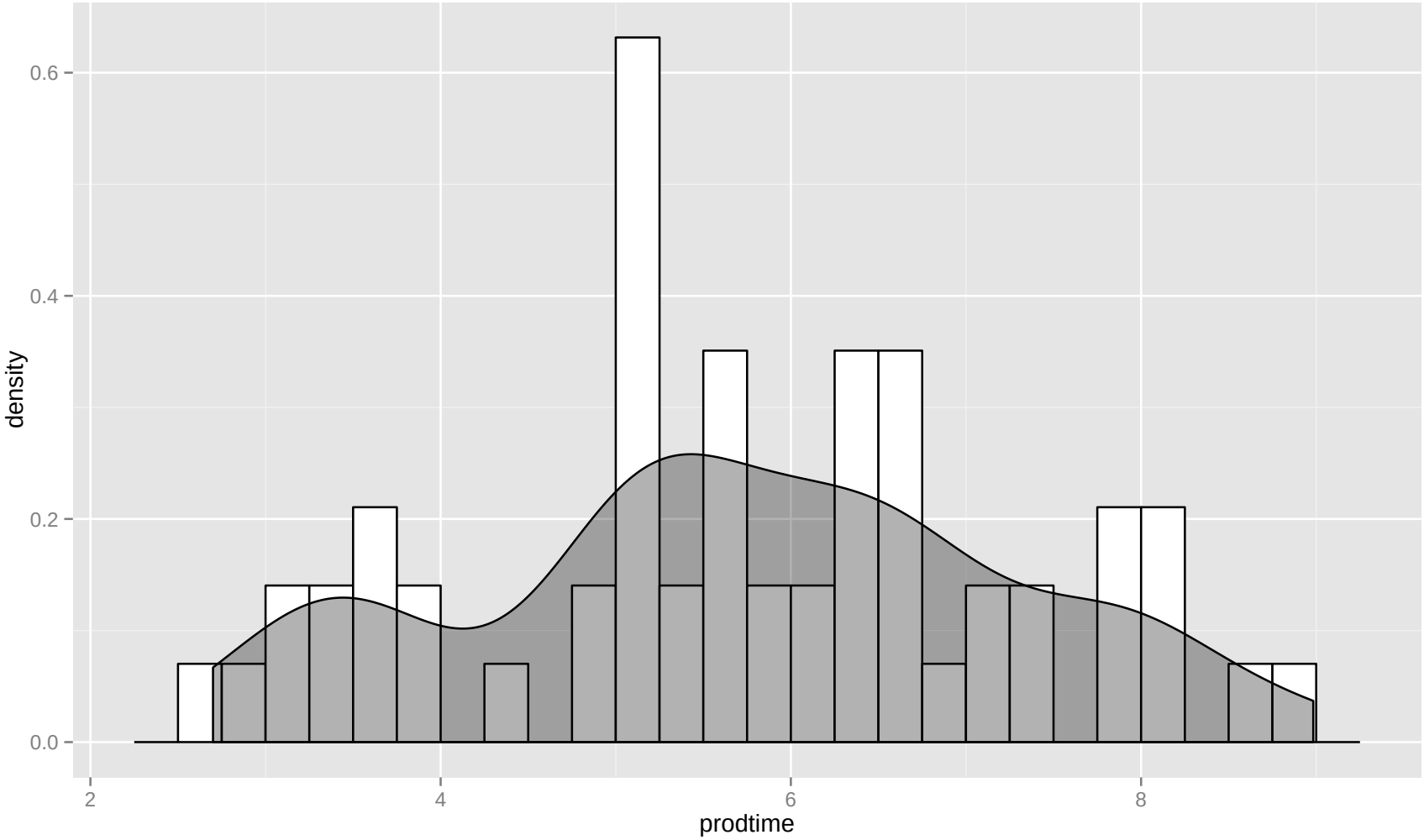



```
## Min. Mean Max.
## 31.4 42.6 51.6
```

Productive Time per day

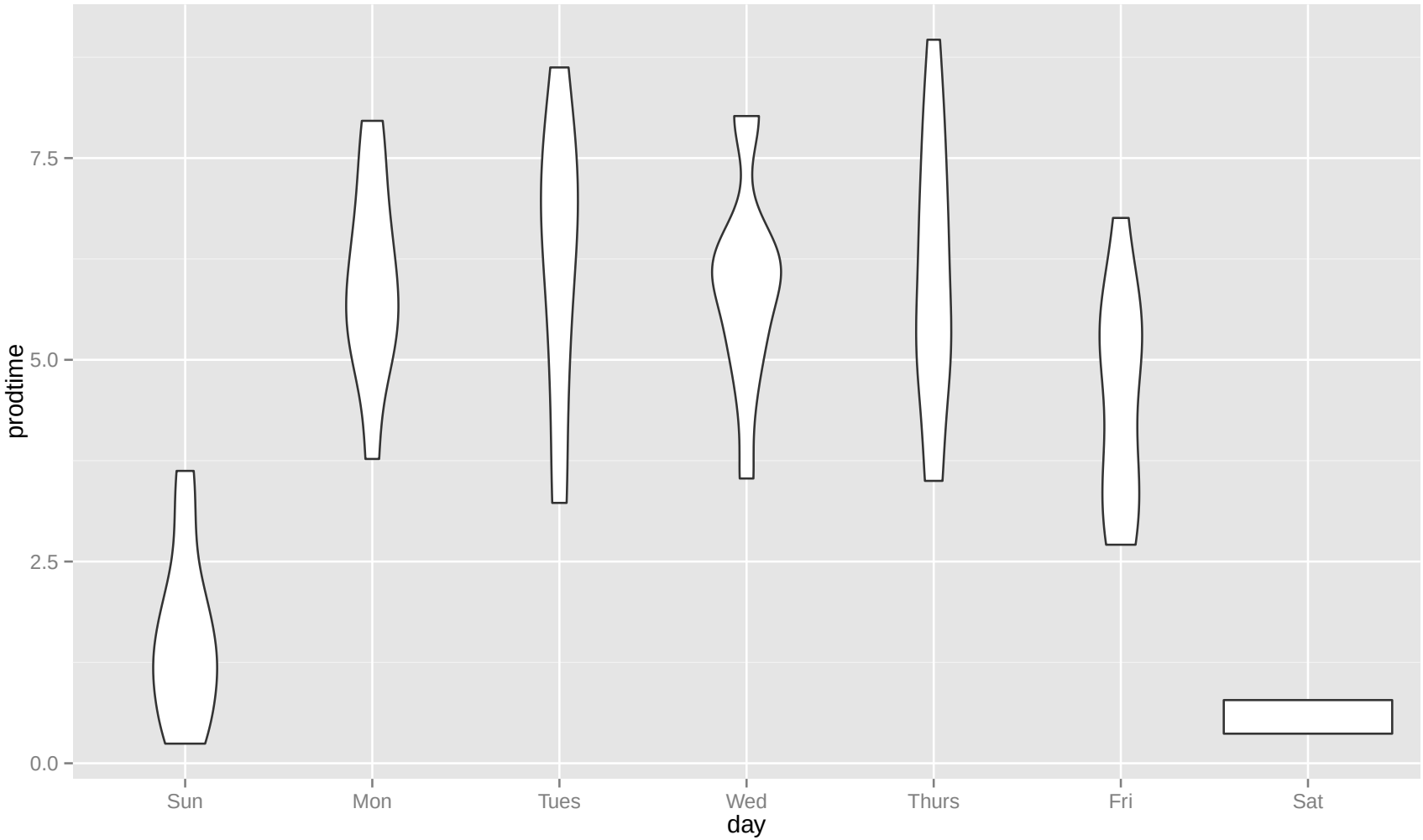
$$ProductiveTime = TotalTrackedTime - PersonalTrackedTime$$

Distribution of Productive Time per day

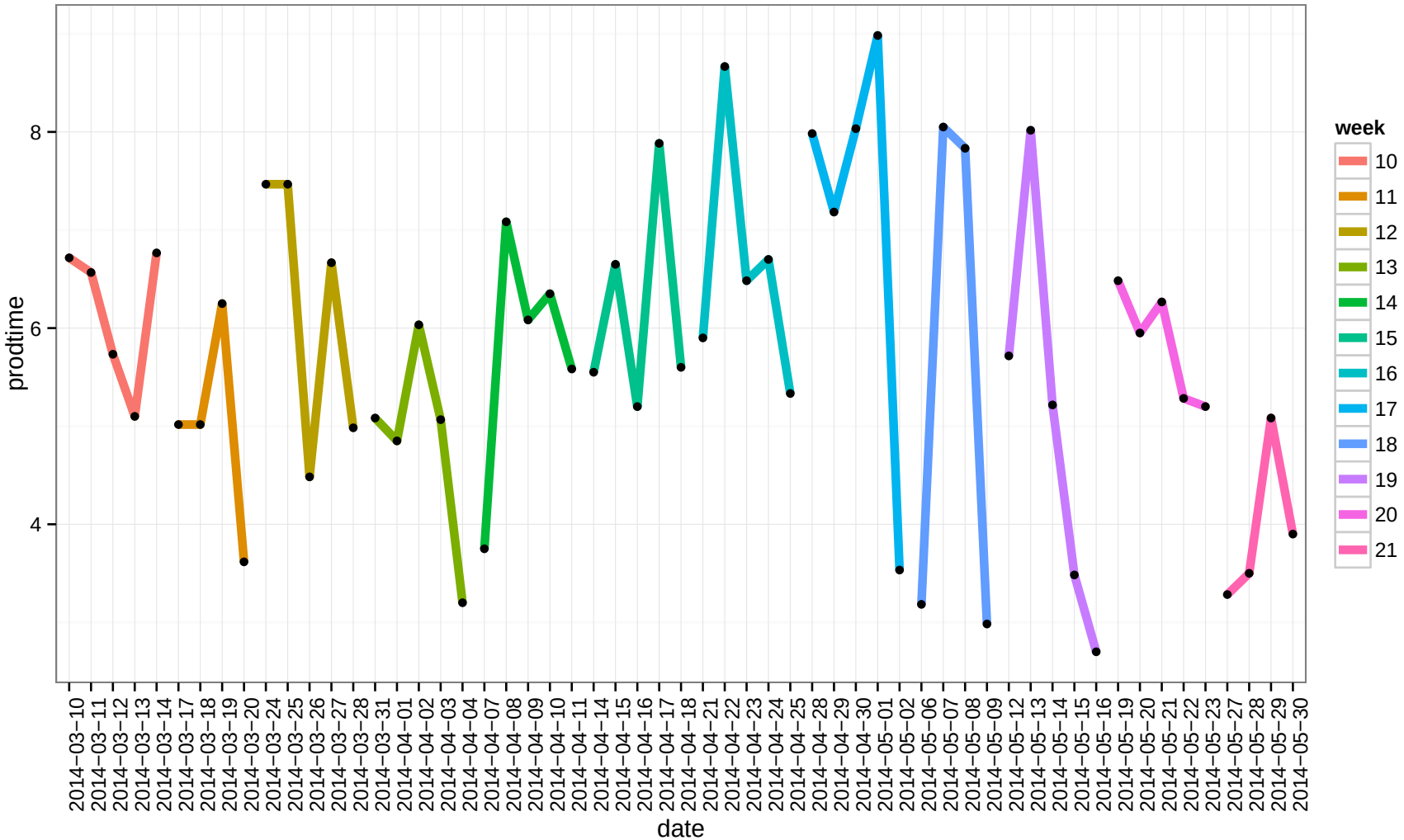



```
## Min. Mean Max.
## 2.70 5.73 8.98
```

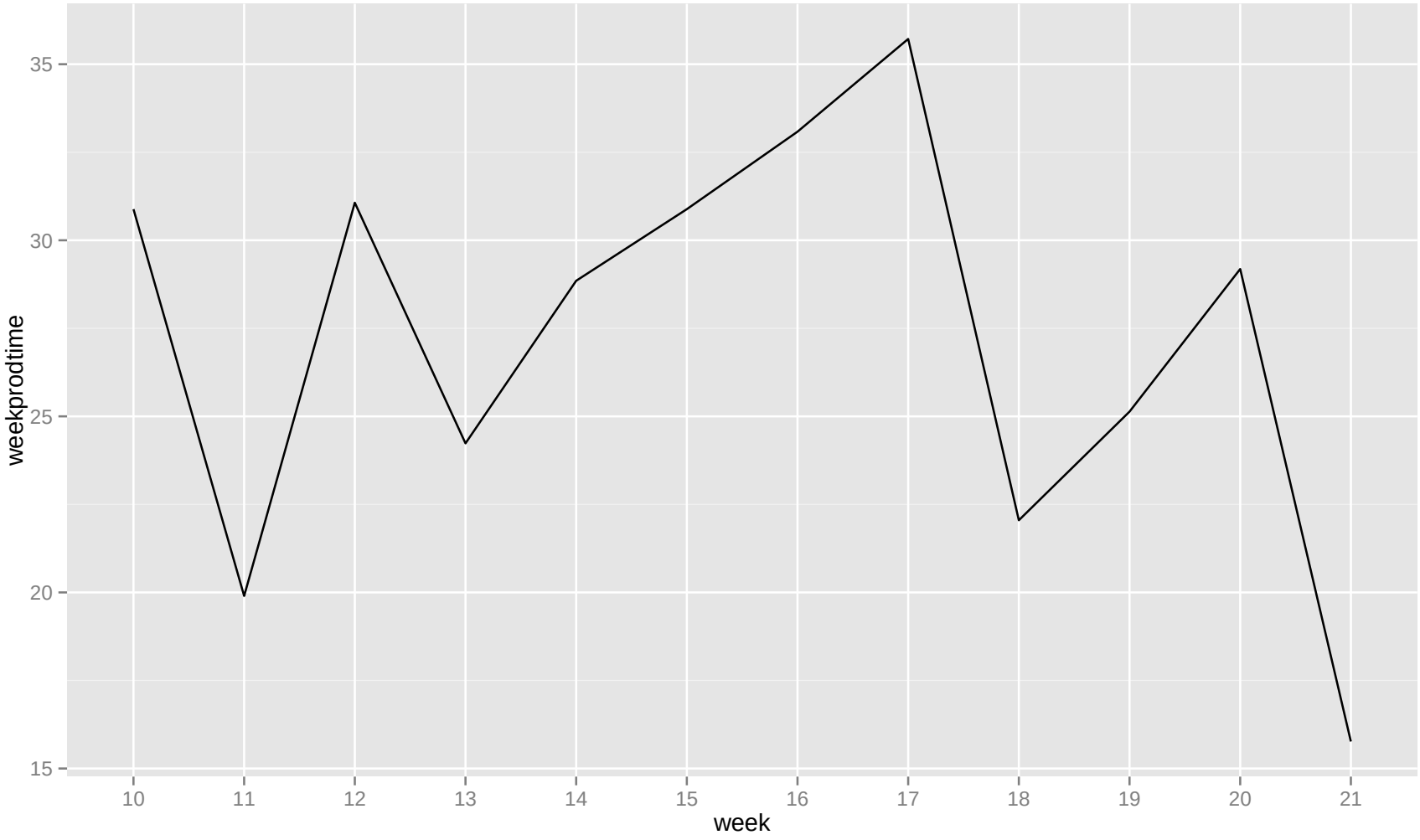
Distribution of Productive Time Each Day



How does Productive Time vary by week?



Weekly Productive Time



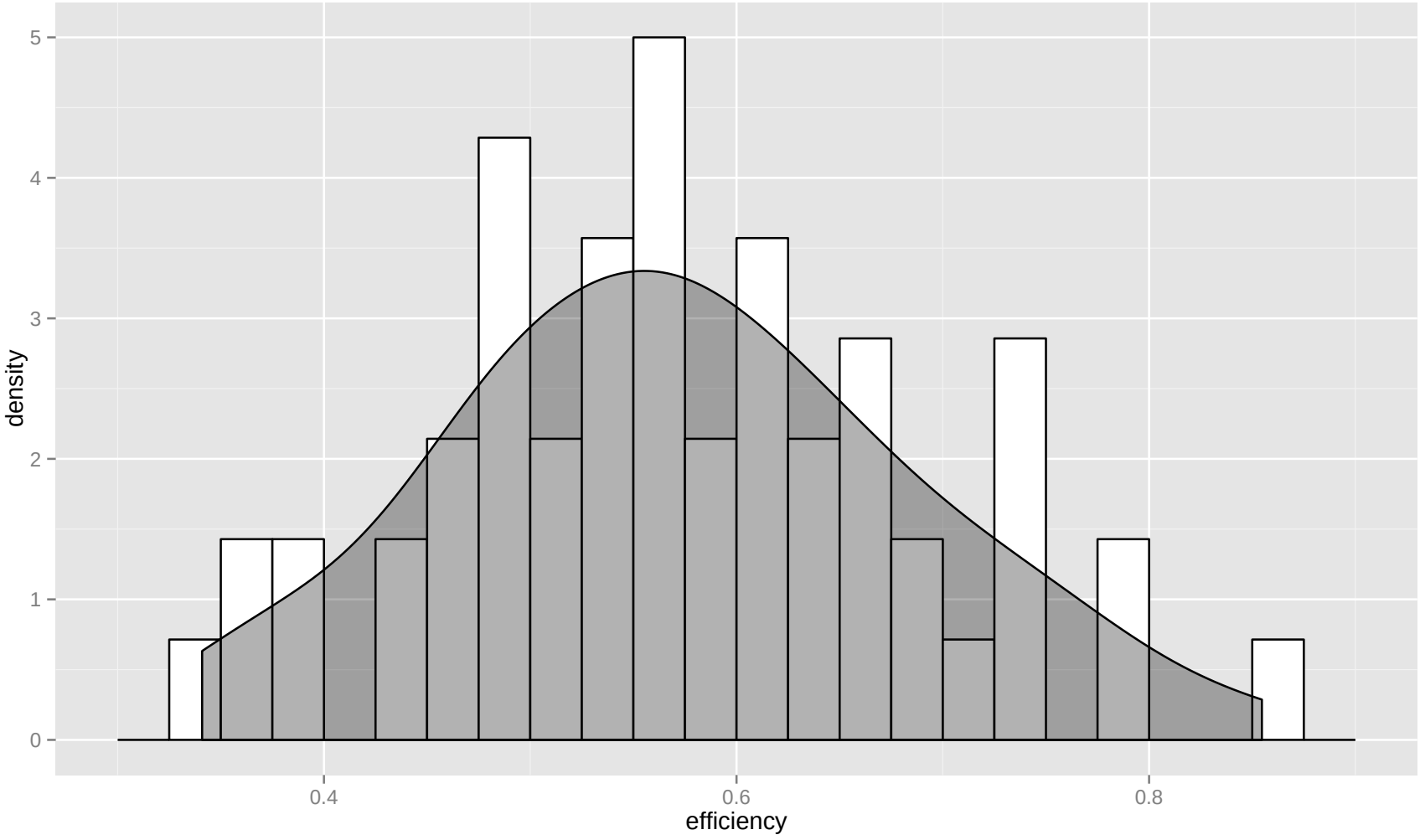

```
## Min. Mean Max.
## 15.8 27.2 35.7
```

Efficiency

- When I am at campus, how much time of that am I actually working?

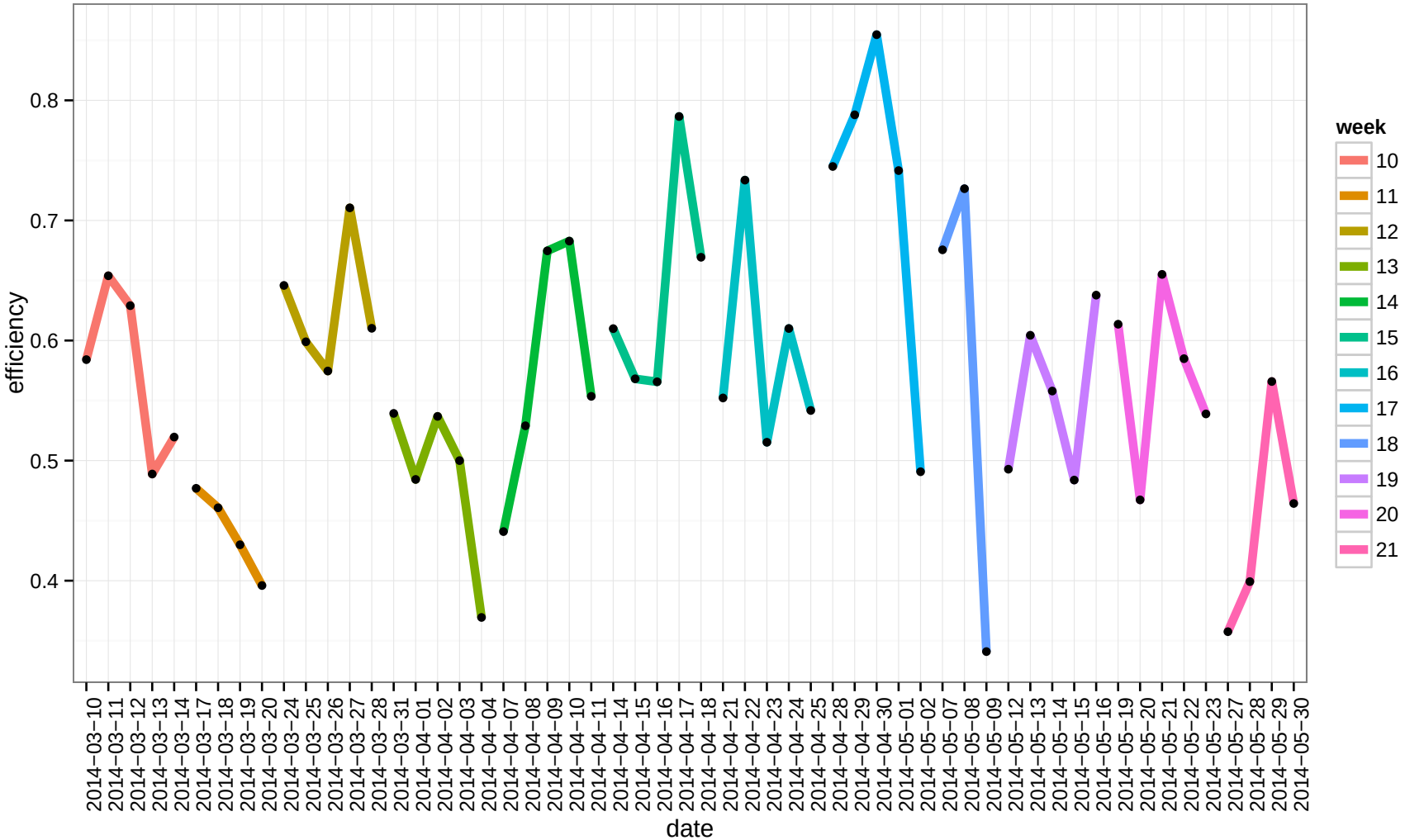
$$Efficiency = \frac{TotalTrackedTime - PersonalTrackedTime}{TimeAtCampus}$$

What is the distribution of my efficiency?

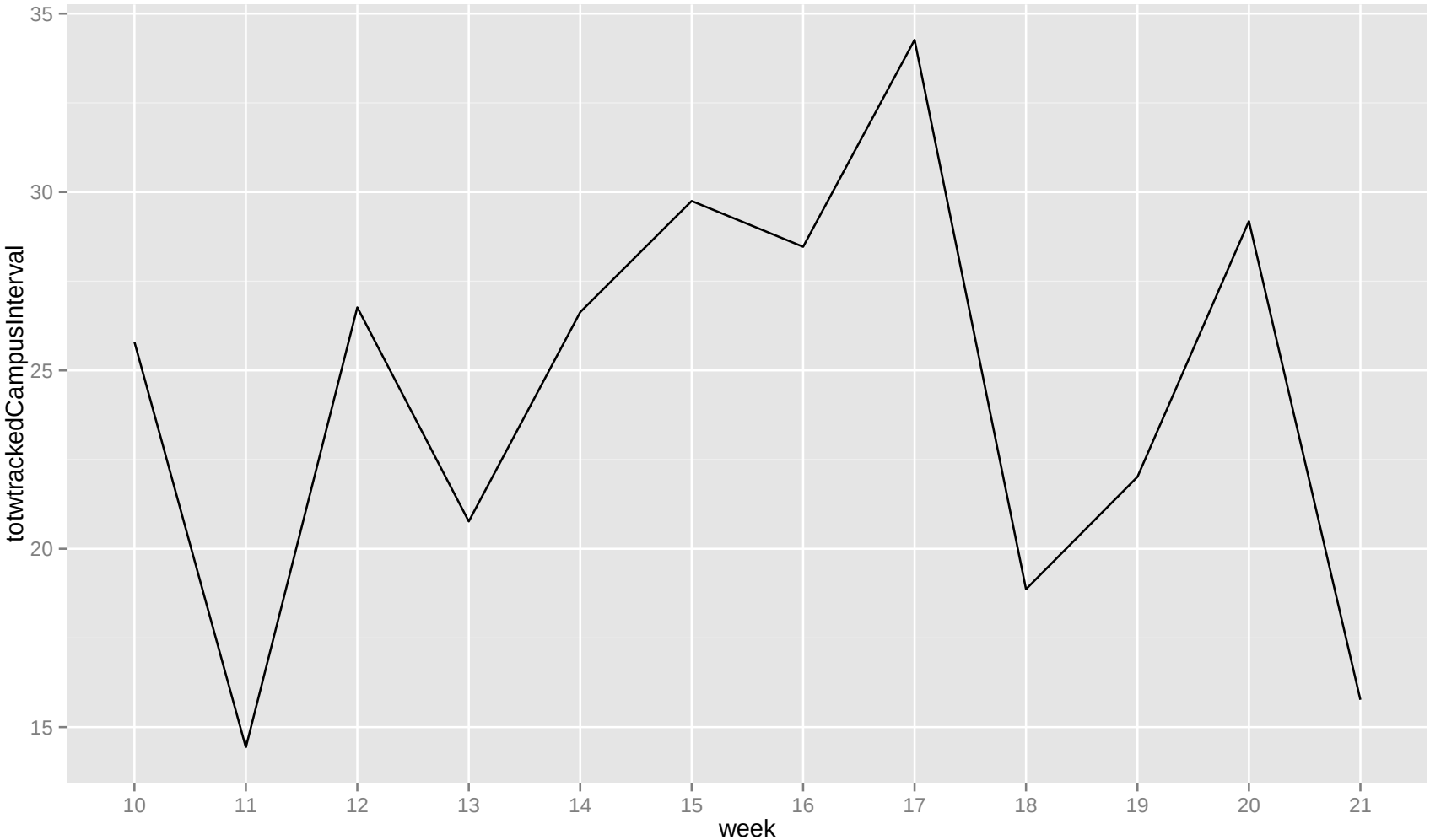



```
##  Min.  Mean  Max.
## 0.341 0.572 0.855
```

How does my efficiency vary over time?



How does my efficiency vary by week?



In Summary

How much time do I invest in Grad School?

- I spend a mean of **9.08 hrs per day**, and **42.6 hrs per week** at campus
- I work a mean of **5.73 hours per day**, and **27.2 hours per week**

How productive am I?

- My mean productivity is **0.572** hrs worked / hr at campus

Project Data

- I haven't used this yet
- next goal: make a graph of time invested in projects as a function of date

Self Improvement?

- I've answered the questions I started with, but how can I use this to improve my studies?
- Act of tracking improving my focus?
- Guilt of bad data?

Advisor says:

> *"...issues of Brownian Motion in accomplishing your projects..."*

Future work

- Cal Newport and Deep Thought – is there a way to track this?
- How much do grad students read?
  - I can kind of answer this already
- Using Rescuetime to track computer usage

This is on GitHub

`https://github.com/dnedveck/qgs`

- `./qgs/QS`
  - This presentation
- `./*_GleeoExport.csv`
  - Time tracking data
- `./*_clocktime.csv`
  - Campus time data

Want more R?

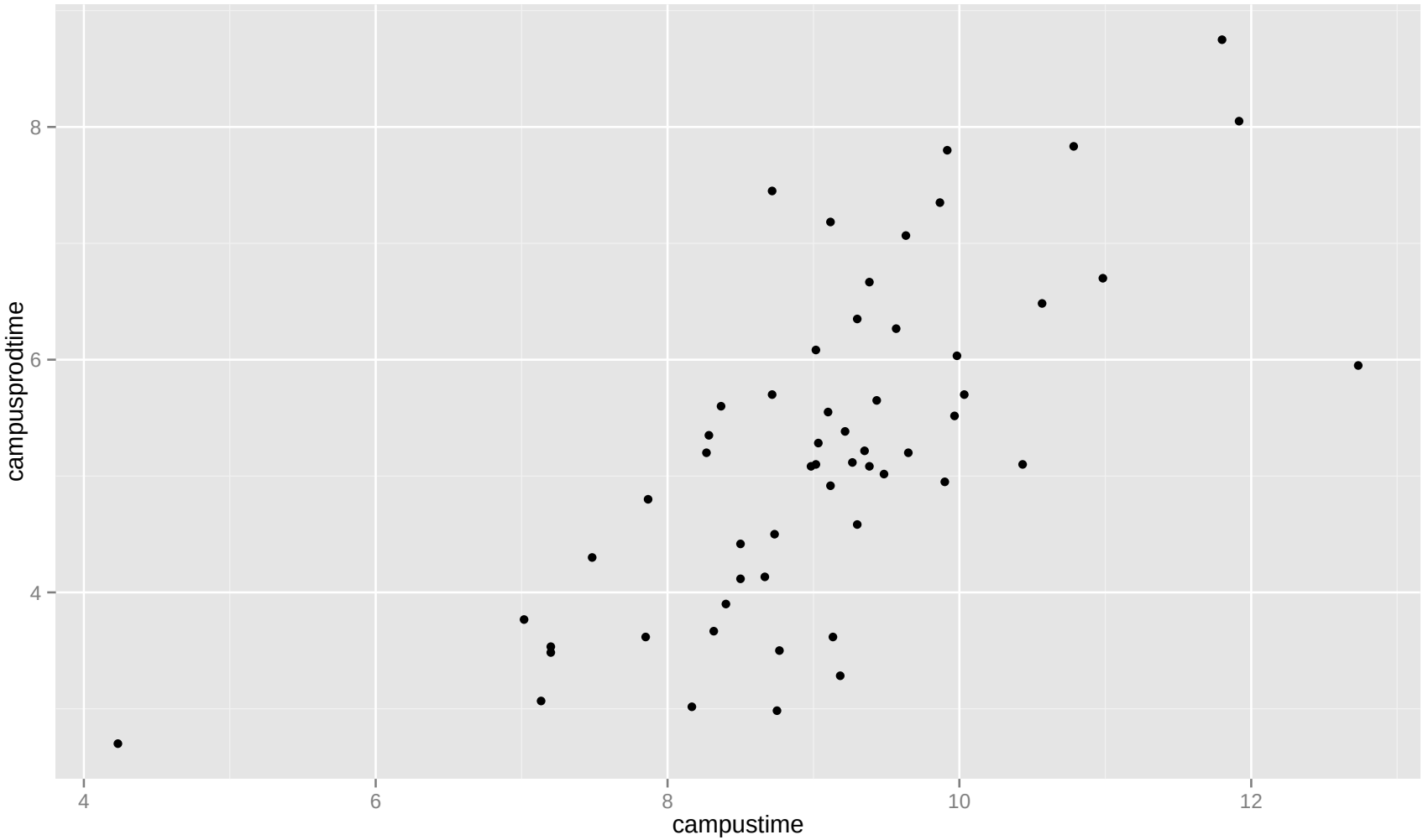
TCRUG - Twin Cities R User Group

- Thursday 6:30 PM, June 26, 2014
- University of Minnesota, Molecular and Cellular Biology Building room MCB 2-122
- 420 Washington Avenue SE , Minneapolis, MN

Any Questions?

- nedveck@gmail.com
- `dnedveck.com`
- `https://github.com/dnedveck/qgs`

Productive time at campus given time at campus



Efficiency given campus time