

# Predicting Legal Needs

Hee "Peter" Hwang

2020-04-16 Thu

# Outline

- 1 Motivation
- 2 Data
- 3 Classifier
- 4 Prevalence Estimation

# Topic

- 1 Motivation
- 2 Data
- 3 Classifier
- 4 Prevalence Estimation

# Opening Question



Posted by u/DivineJustice 10 months ago

9



## Moving back: Should I worry about old parking tickets?

I have (had?) two unpaid parking tickets from late 2011 and early 2012. (After the LAZ takeover.) I was too poor at the time to pay them, so I just... didn't. I do not have the car/plates that I had back then anymore.

If it matters, at the time I got both the tickets, I would have had out of state plates. (Infact, the first ticket might have been under one state, and the second under another, but same car. Both non-IL plates.)

Both tickets never managed to show up on my credit history. It's been about 7 years, so even if they were on my report, they wouldn't be anymore. In that respect paying them would be a mistake. However I want to make sure this won't turn into a legal issue.

Does anyone know if these old tickets are going to cause any issues, or can they be ignored? Has anyone been though anything similar, and of so what happened?

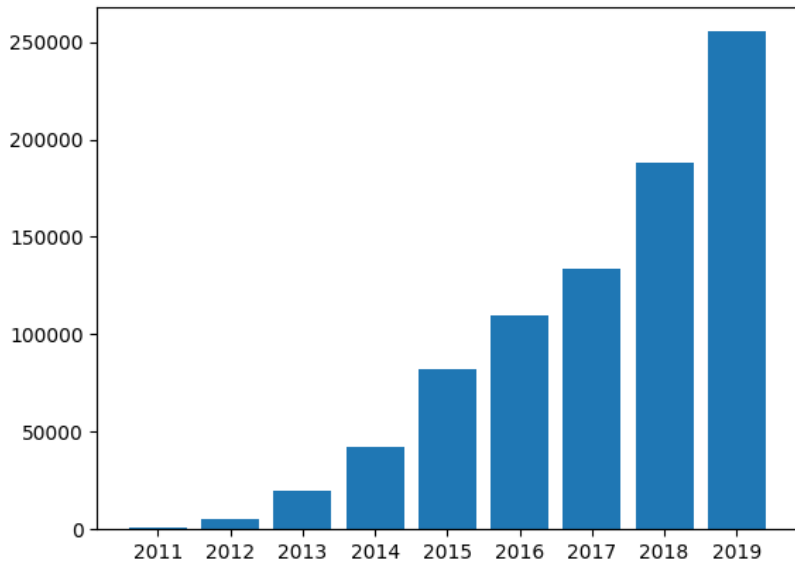
51 Comments Share Save Hide Report

62% Upvoted

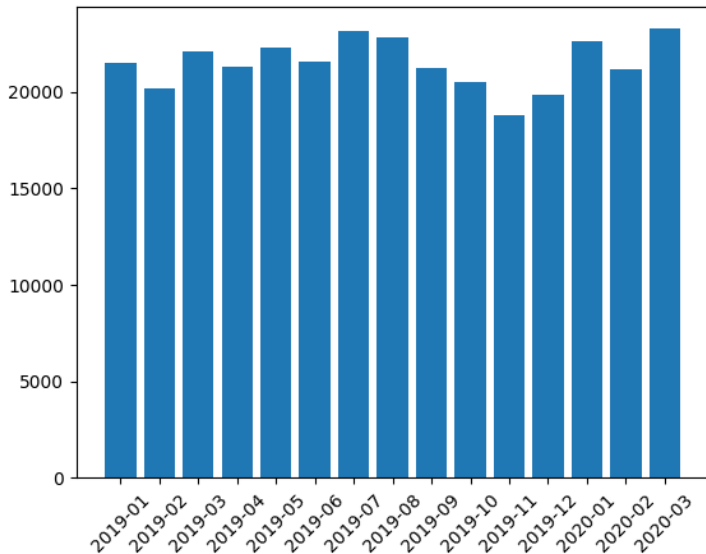
# Questions I

- Is it a legal issue?
- What kind of legal issue is it?
- How to deal with it?

# Annual Submissions(2010 - 2019)



# Monthly Submissions(01/2019 - 03/2020)



# Questions II

- Can Reddit data shed a light to legal trend?
- Are there seasonality effects?
- How does society react to pandemic?



# Topic

- 1 Motivation
- 2 Data
- 3 Classifier
- 4 Prevalence Estimation

# Reddit Legal Advice

- [http://reddit.com/r/legal\\_advice](http://reddit.com/r/legal_advice)
- First submission: April 20, 2010
- 906,693 submissions(04/2010 - 03/2020)
- 21,490 / month (01/2019 - 03/2020)
- 5,005 / week (01/2020 - 03/2020)
- 740 / day (02/2020 - 03/2020)

# Pushshift API

*github.com/heeh/subreddit\_downloader/sample.py*

```
import requests


# Retrieve 1000 submissions with specified fields
url = "https://api.pushshift.io/reddit/search/
      submission/?subreddit=legaladvice&
      fields=id,created_utc,title,selftext&
      size=1000&after=2020-01-01&before=2020-01-31"
subs = requests.get(url)
```

# National Subject Matter Index(NSMI v2)

## The NSMI Database

[Browse](#)[Download](#)[Request Addition](#)[Search](#)[Home](#) » [Browse NSMI V2](#)

The full NSMI V2 listing is below, click the  button to see the subterms of the category. The number of subterms  can be found next to the NSMI V2 code.

[+ Accidents and Torts](#) TO-00-00-00-00  5[+ Civil and Human Rights](#) RI-00-00-00-00  20[+ Crime and Prisons](#) CR-00-00-00-00  16[+ Education](#) ED-00-00-00-00  10[+ Estates and Wills](#) ES-00-00-00-00  7[+ Government Services](#) GO-00-00-00-00  3[+ Housing](#) HO-00-00-00-00  8[+ Money, Debt, and Consumer Issues](#) MO-00-00-00-00  16[+ Small Business and IP](#) BU-00-00-00-00  7[+ Veterans and Military](#) VE-00-00-00-00  10[+ Benefits](#) BE-00-00-00-00  8[+ Courts and Lawyers](#) CO-00-00-00-00  9[+ Disaster Relief](#) DI-00-00-00-00  8[+ Environmental Justice](#) EN-00-00-00-00  7[+ Family](#) FA-00-00-00-00  18[+ Health](#) HE-00-00-00-00  10[+ Immigration](#) IM-00-00-00-00  12[+ Native American Issues and Tribal Law](#) NA-00-00-00-00  9[+ Traffic and Cars](#) TR-00-00-00-00  5[+ Work and Employment Law](#) WO-00-00-00-00  8

# Learned Hands



Foo Bar



1 Join team LIT Lab, and have your points count towards their online service challenge. [Click here to join event](#)

Don't show this banner again X

0/10



[Michigan] "Intent to Vacate"

Hoping someone could help me out.

I made it clear when I signed by lease as well as multiple times orally throughout the year that I was looking for a house and my intention to stay at this apartment was only till the end of my lease, if not sooner (at which point I would notify them).

It was made clear to me that if I wanted to leave early I would have to give notice. That's fine. But my intention was to leave when my lease was up. It was not made clear that there was a 60 day intent to vacate clause under all circumstances.

Is there anyway I can fight this? My lease is up Aug 6th and they expect 60 days. I do not wish to spend two months rent somewhere that I will not be living. They will assuredly be able to rent this unit almost immediately.

any help would be appreciated.



Do you see a legal issue around Family in this post? Check all that apply, if any.



# Topic

- 1 Motivation
- 2 Data
- 3 Classifier**
- 4 Prevalence Estimation

# Model

- Input representation: TF-IDF
- Logistic regression with L1 regularization
- Grid search over powers of 2



Posted by u/DivineJustice 10 months ago

9



## Moving back: Should I worry about old parking tickets?

I have (had?) two unpaid parking tickets from late 2011 and early 2012. (After the LAZ takeover.) I was too poor at the time to pay them, so I just... didn't. I do not have the car/plates that I had back then anymore.

If it matters, at the time I got both the tickets, I would have had out of state plates. (Infact, the first ticket might have been under one state, and the second under another, but same car. Both non-IL plates.)

Both tickets never managed to show up on my credit history. It's been about 7 years, so even if they were on my report, they wouldn't be anymore. In that respect paying them would be a mistake. However I want to make sure this won't turn into a legal issue.

Does anyone know if these old tickets are going to cause any issues, or can they be ignored? Has anyone been though anything similar, and of so what happened?

51 Comments Share Save Hide Report

62% Upvoted

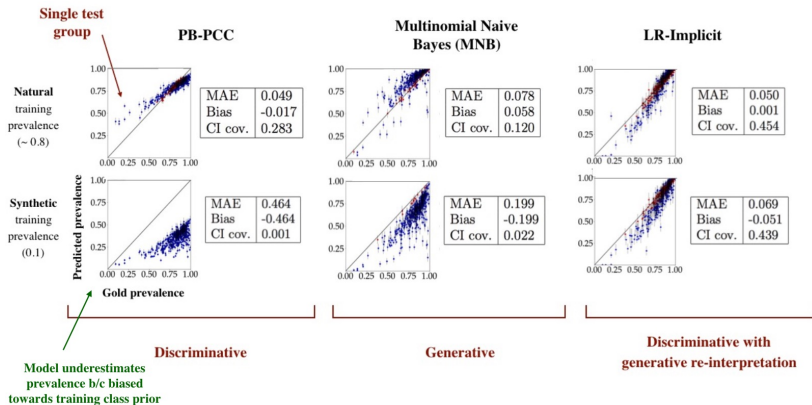


# Output

Class	Prediction(%)
TR-00-00-00-00	0.9561
CO-00-00-00-00	0.6452
MO-00-00-00-00	0.3711
BU-00-00-00-00	0.0486
TO-00-00-00-00	0.0211
FA-00-00-00-00	0.0131
CR-00-00-00-00	0.0129
TR-01-00-00-00	0.0087
HO-06-00-00-00	0.0061
ED-00-00-00-00	0.0043

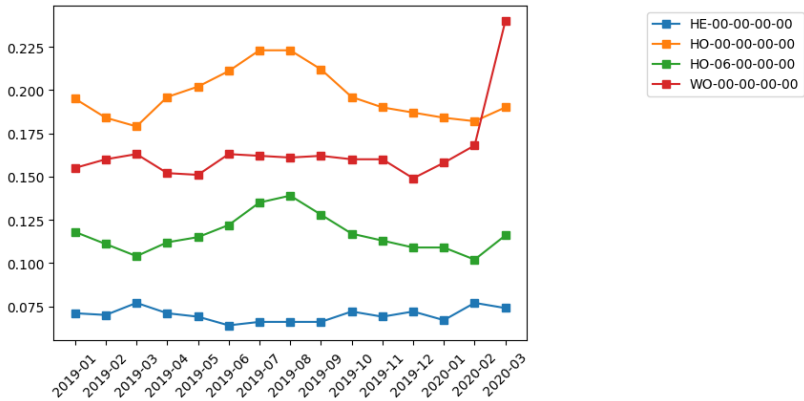
# Topic

- 1 Motivation
- 2 Data
- 3 Classifier
- 4 Prevalence Estimation



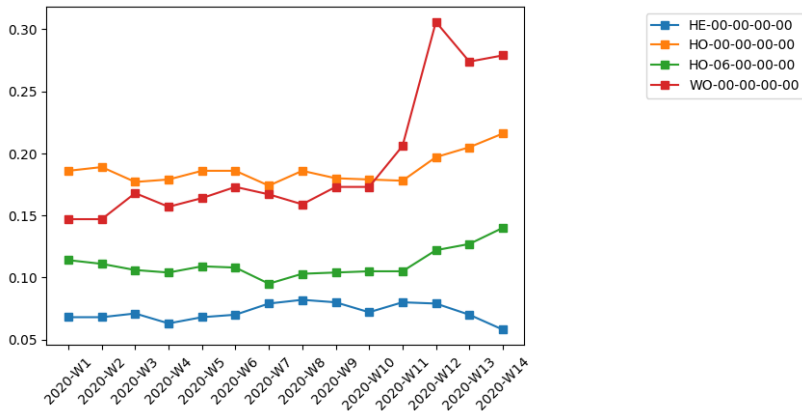
(Katherine and O'Connor, 2018)

# Monthly Prevalence



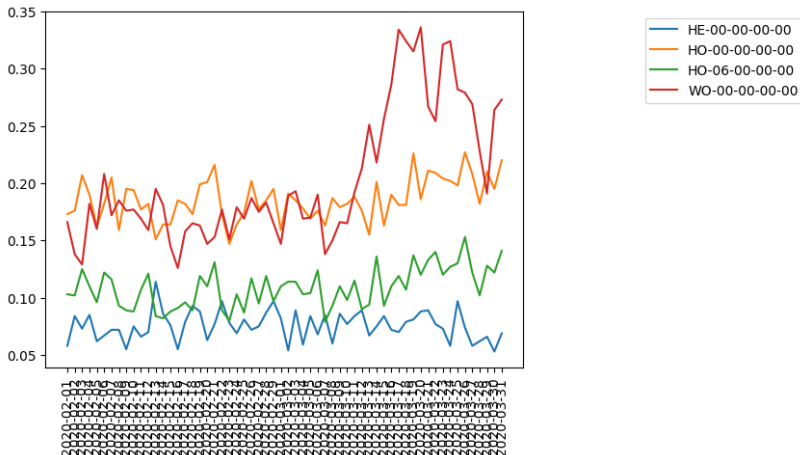
- WO-00: Work and Employment Law
- HO-00: Housing
- HO-06: Renting or leasing a home
- HE-00: Health

# Weekly Prevalence



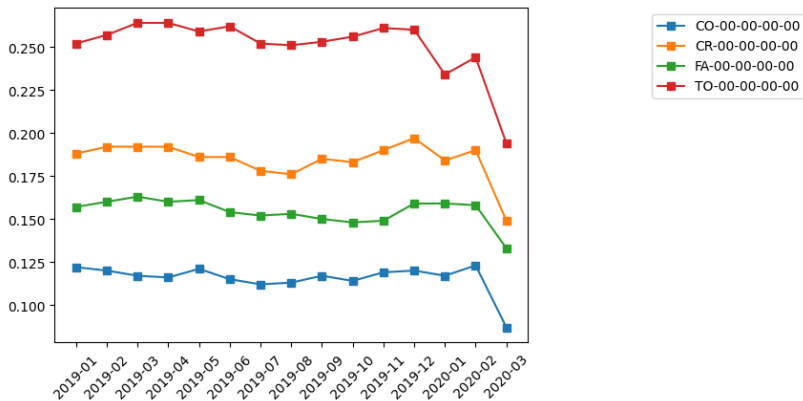
- WO-00: Work and Employment Law
- HO-00: Housing
- HO-06: Renting or leasing a home
- HE-00: Health

# Daily Prevalence



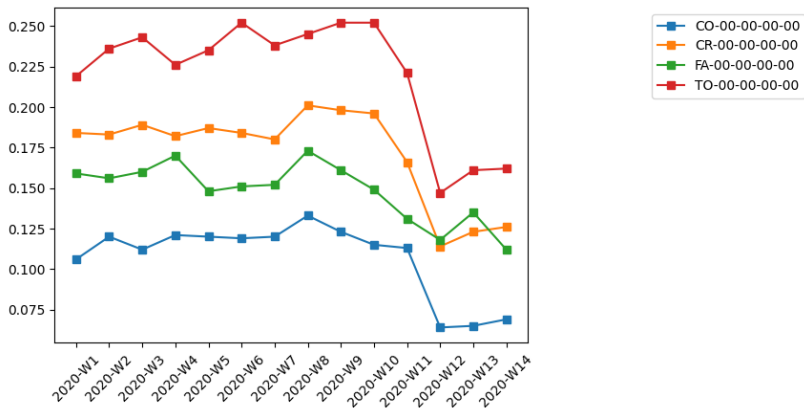
- WO-00: Work and Employment Law
- HO-00: Housing
- HO-06: Renting or leasing a home

# Weekly Prevalence



- TO-00: Accidents and Torts
- CR-00: Crime and Prisons
- FA-00: Family
- CO-00: Courts and Lawyers

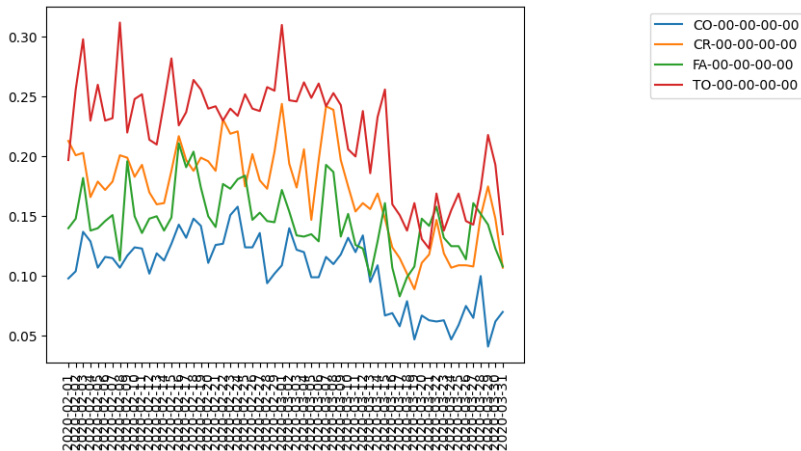
# Weekly Prevalence



- TO-00: Accidents and Torts
- CR-00: Crime and Prisons
- FA-00: Family
- CO-00: Courts and Lawyers



# Daily Prevalence



- TO-00: Accidents and Torts
- CR-00: Crime and Prisons
- FA-00: Family

# Todo

- More labeled data to predict other classes - currently 16
- Dataset from other communities
- California statewide legal help portal (<https://lawhelpca.org/>)

- Keith, K., & O'Connor, B. (2018). Uncertainty-aware generative models for inferring document class prevalence. In Proceedings of EMNLP.