

# Yelp Review Frequency

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## When do people post Yelp reviews?

The number of reviews posted to Yelp per day is a proxy to a number of interesting questions. Is Yelp usage still growing? What days of the week do people visit restaurants? Do people go out on holidays (or: are restaurants open on holidays)?

## Input Data

Input data is a subset of Yelp data. Data was provided for 11 metropolitan areas. Dates range from July 22, 2004 to December 11, 2017. We examine trends at the state and province level (from here-on just “states”). Input data contains reviews from 68 states, but not all states saw enough Yelp activity to say interesting things about; just 22 had more than 100 reviews all-time. If this seems low, note that the publicly-available data is only a small subset of Yelp’s data, and than some very small “states” are likely just incorrectly marked (e.g. state “01”)

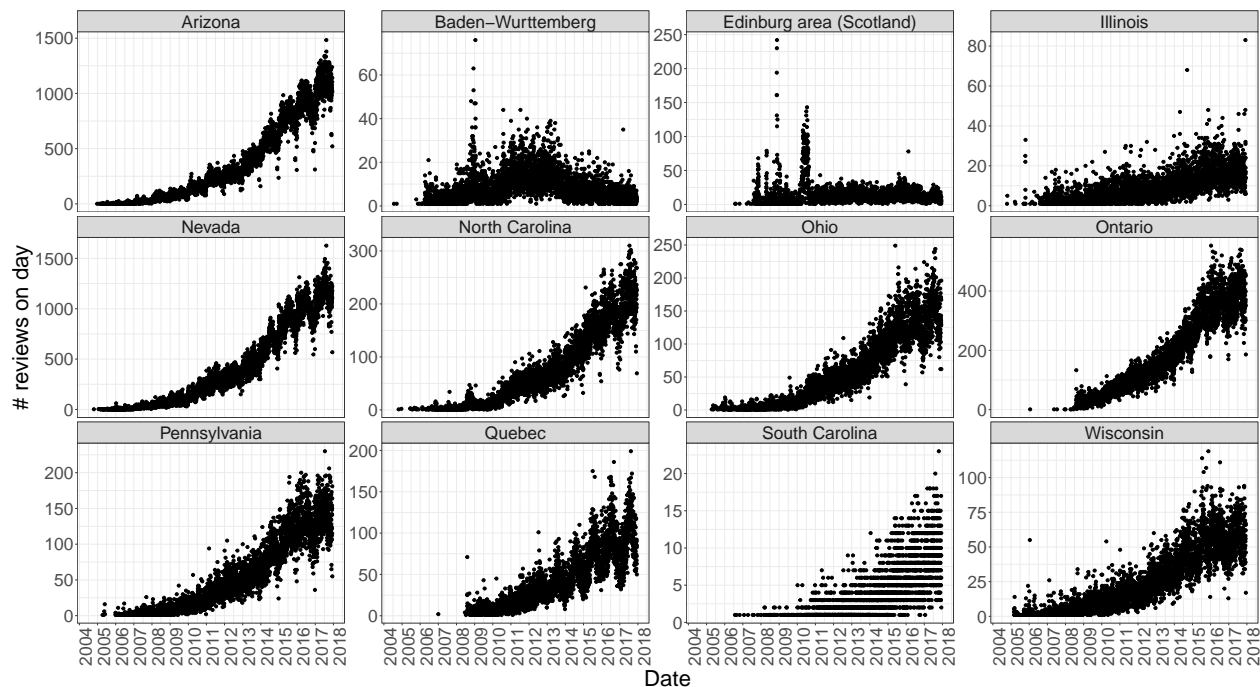
Part of our objective will be to forecast future review counts. So we’ll keep only those states that have a decent amount of activity in the recent past. Specifically, we only analyze states with 300 or more reviews in the year 2017. These are:

State	Reviews in 2017
Nevada	392,307
Arizona	368,147
Ontario	131,353
North Carolina	72,092
Ohio	50,071
Pennsylvania	48,060
Quebec	31,733
Wisconsin	20,043
Illinois	6,286
Edinburg area (Scotland)	3,338
South Carolina	3,088
Baden-Wurttemberg	1,384

Going forward, we only use these states.

## Reviews Per Day

Reviews per day per state all-time activity. Note that each y axis is different.



Observe:

- There is an upward trend in most states.

This makes sense – Yelp was founded in 2004. More people learned of the site over time and so reviews grew over time. What’s interesting is the states that *didn’t* trend upward over the past 12 years: Baden-Wurttemberg in Germany, and the Edinburg region in Scotland. A few possible explanations:

- Competition

Yelp did have a serious European competitor: Qype. Qype may have even been more popular than Yelp: Qype announced traffic numbers in May 2012 that suggest it had 5 times Yelp’s traffic (Lunden, Ingrid 2012a). Yelp bought Qype 5 months later (Lunden, Ingrid 2012b), and the movement up in Baden-Wurttemberg happens around 2012! But for whatever reason, that doesn’t continue.

- Large, infrequent spikes downward in reviews posted

This is most obvious in Arizona, but is the case in many states, including the two Canadian provinces. These are probably the big winter holidays.

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Lunden, Ingrid. 2012a. “Qype, the Yelp of Europe, Claims Top Dog Status with 860,000 Places Reviewed, Expands Daily Deals.” Tech Crunch. May. <https://techcrunch.com/2012/05/11/qype-the-yelp-of-europe-reaches-860000-places-reviewed-and-expands-its-daily-deals-service>.

———. 2012b. “Yelp Pays \$50M to Acquire Its Big European Rival, Qype, to Beef up Its Recommendations and Listings Business.” Tech Crunch. October. <https://techcrunch.com/2012/10/24/yelp-pays-50m-to-acquire-its-big-european-rival-qype/>.