

A brief journey through Foursquare user check-ins in Cardiff

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(joint project with Martin Chorley)



FTS

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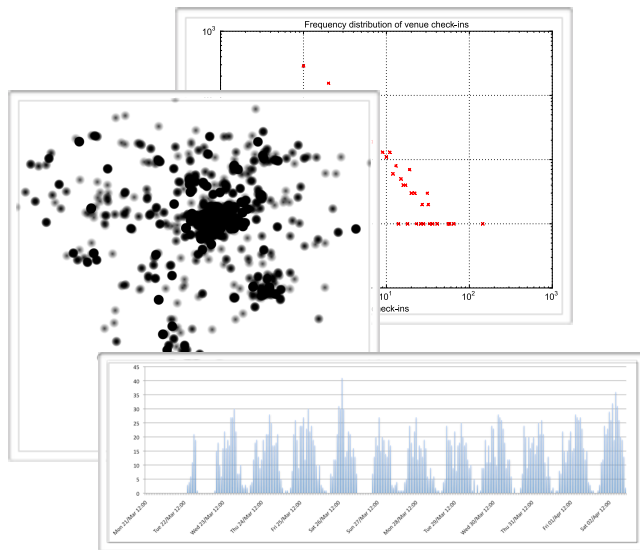
Talk overview



1. Foursquare



2. Data collection



3. Results &
visualisation

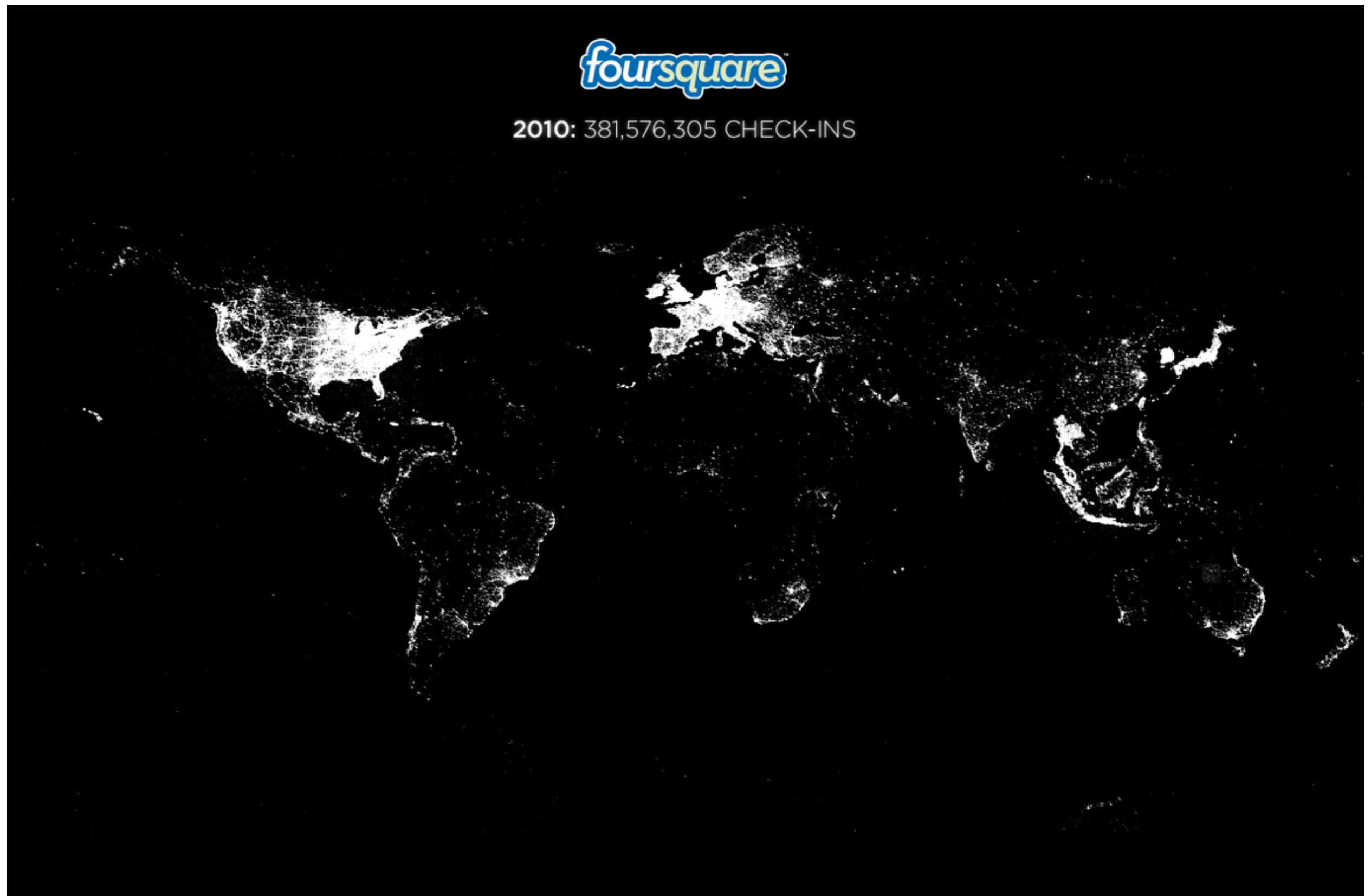


4. Tools

Foursquare

- A “location-based online social network”
- Founded in 2007 in New York
- Users ‘check-in’ to their current venue
- Venues are user-contributed
- ‘Mayorship’ of a venue given to the user who has visited the most in two months
- Points awarded for checking in

World Foursquare usage



Why use Foursquare?

- To meet up with friends?
- For deals at your favourite venues?
- ‘Life-logging’?
- Embedded social gaming?

Why use Foursquare?

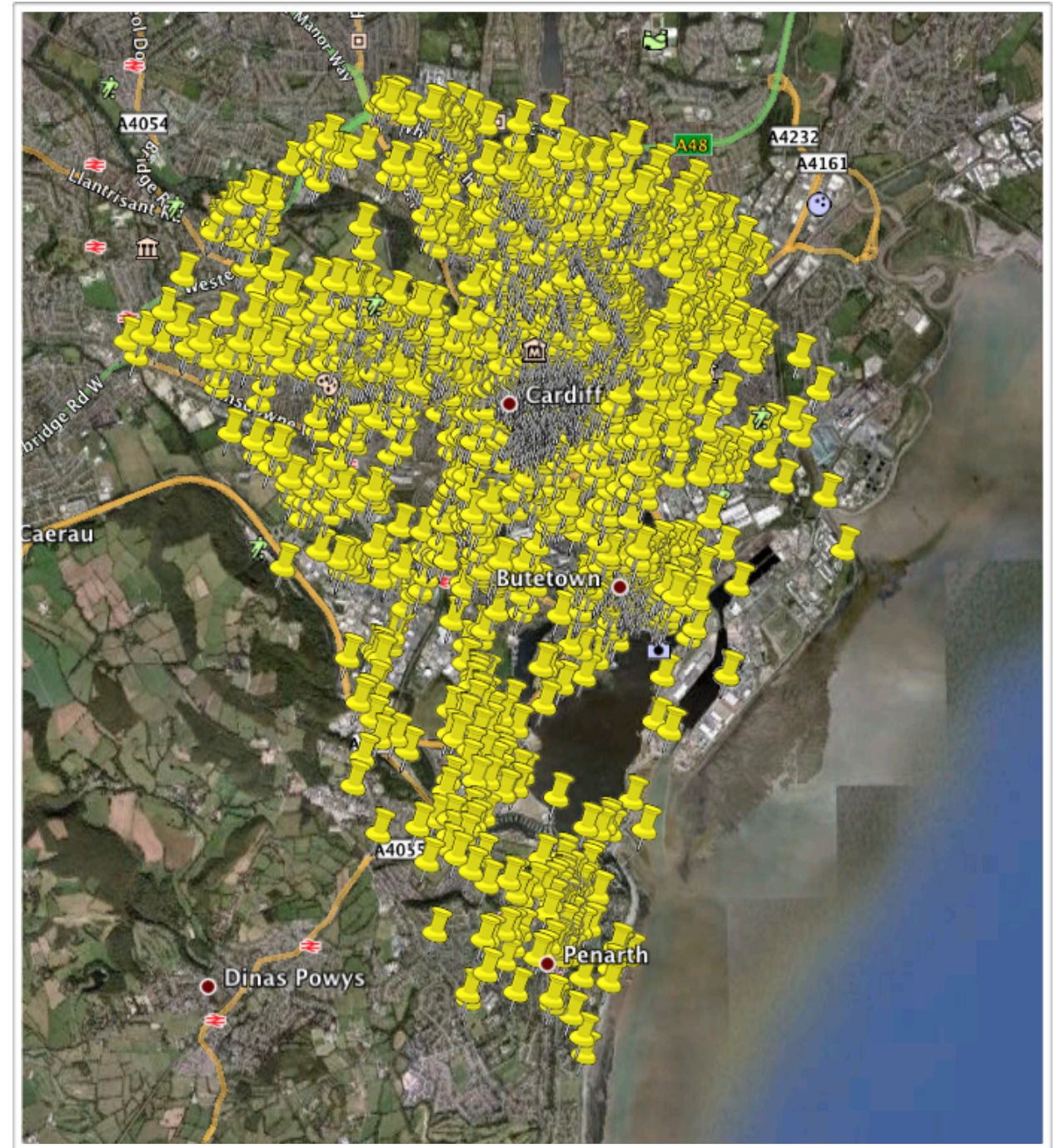
- Answer: Science!
- A rich dataset:
 - Human mobility
 - Geocoded venues
 - Social graph

Collection method

- Problem: user check-in histories are not public (understandably!)
- ...however, venues do have a “currently here” list that users can opt-in to publicly appear on
- Solution:
 1. collect a set of venues
 2. monitor the venues in real time!

Data collection

- Collected 4,314 venues in a 9km x 7km region
- Restricted monitoring to about 2,000 venues
- Began monitoring on Monday 21st March

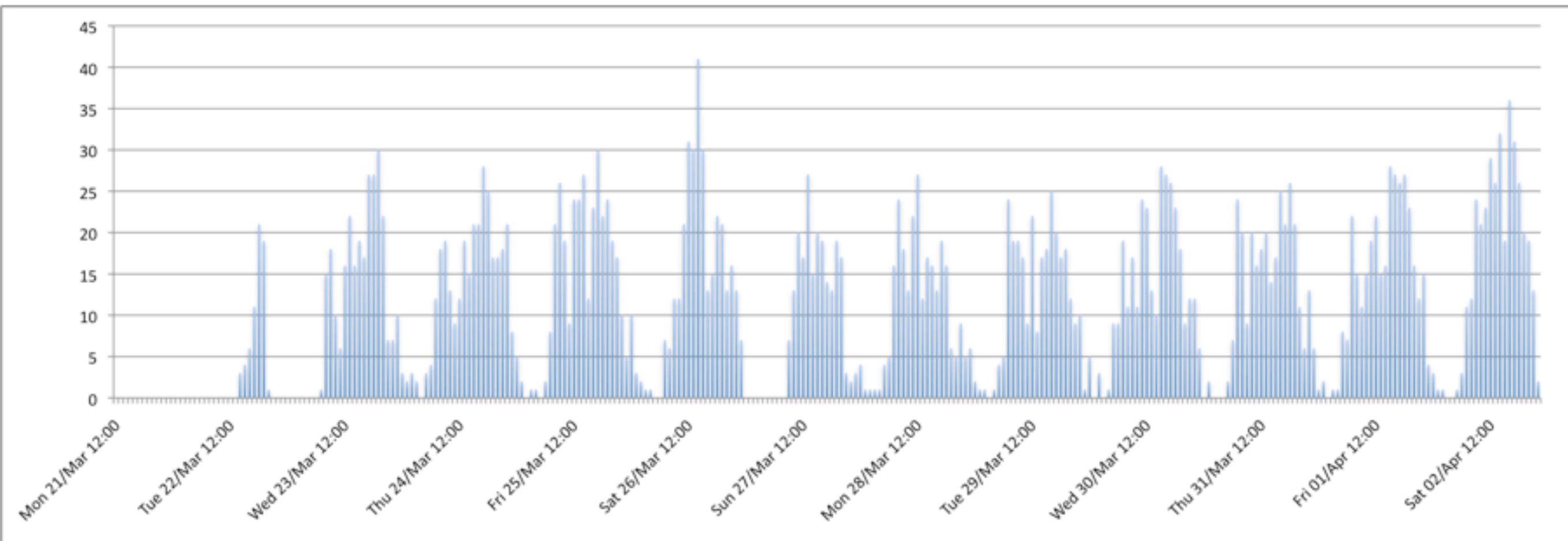


Dataset summary

- Collected Mon 21st March - Sat 2nd April (13 days)
- 3,394 check-ins
- 767 venues visited
- 4.4 check-ins per venue
- 716 users with check-ins
- Friends per user: average 126, median 19

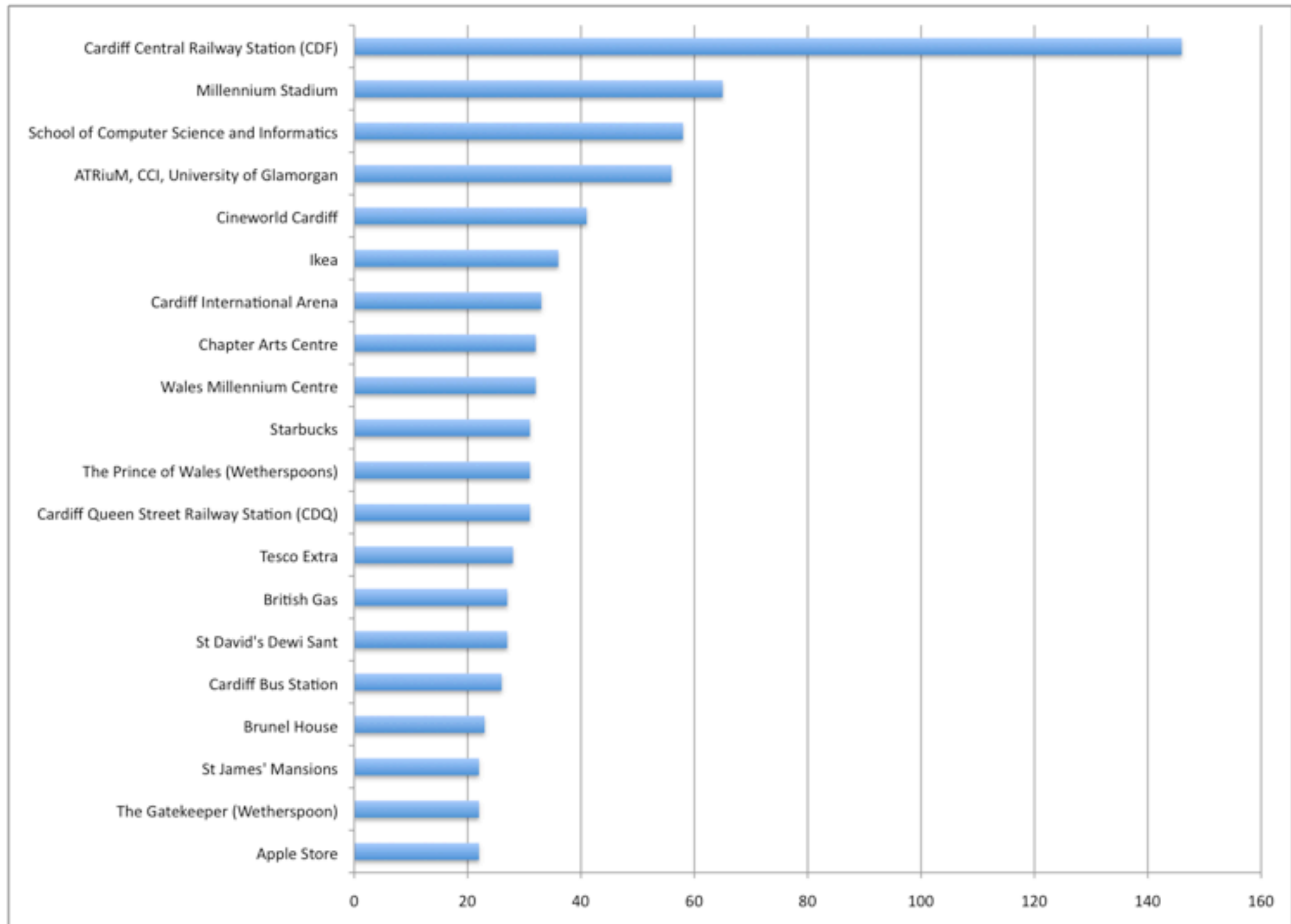
When do people check in?

Check-ins over time

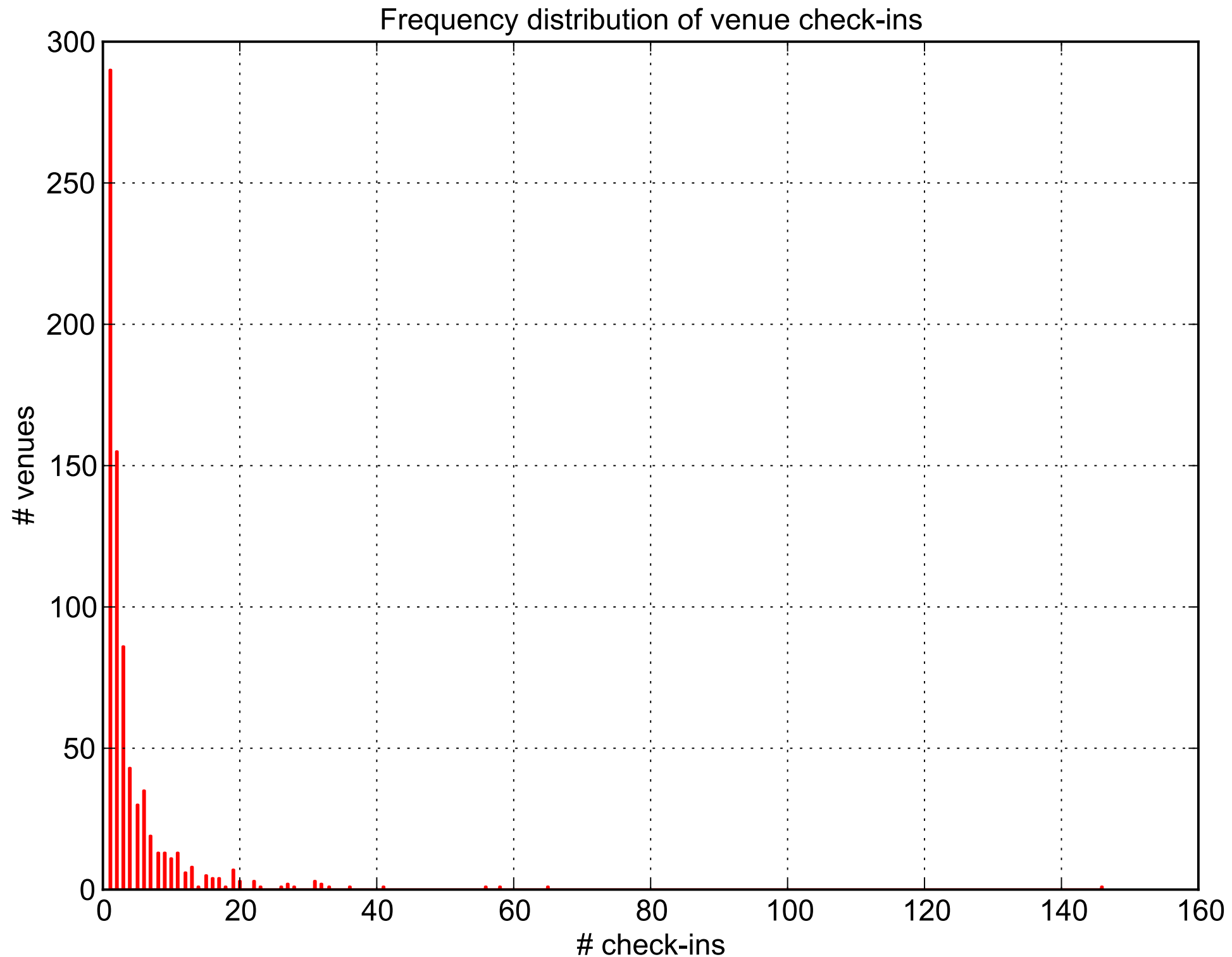


How does the popularity of venues vary?

Top 20 venues

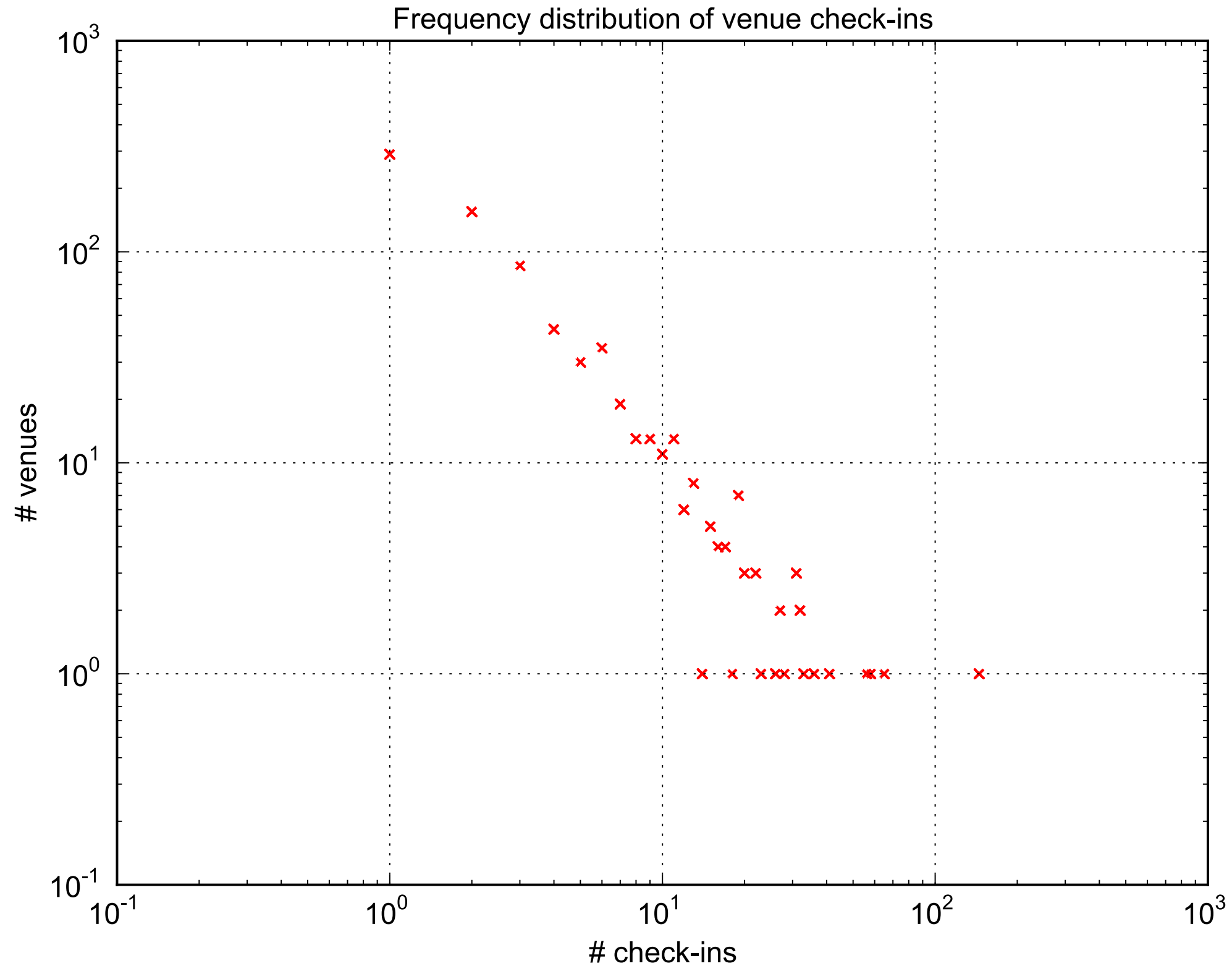


Venue popularity



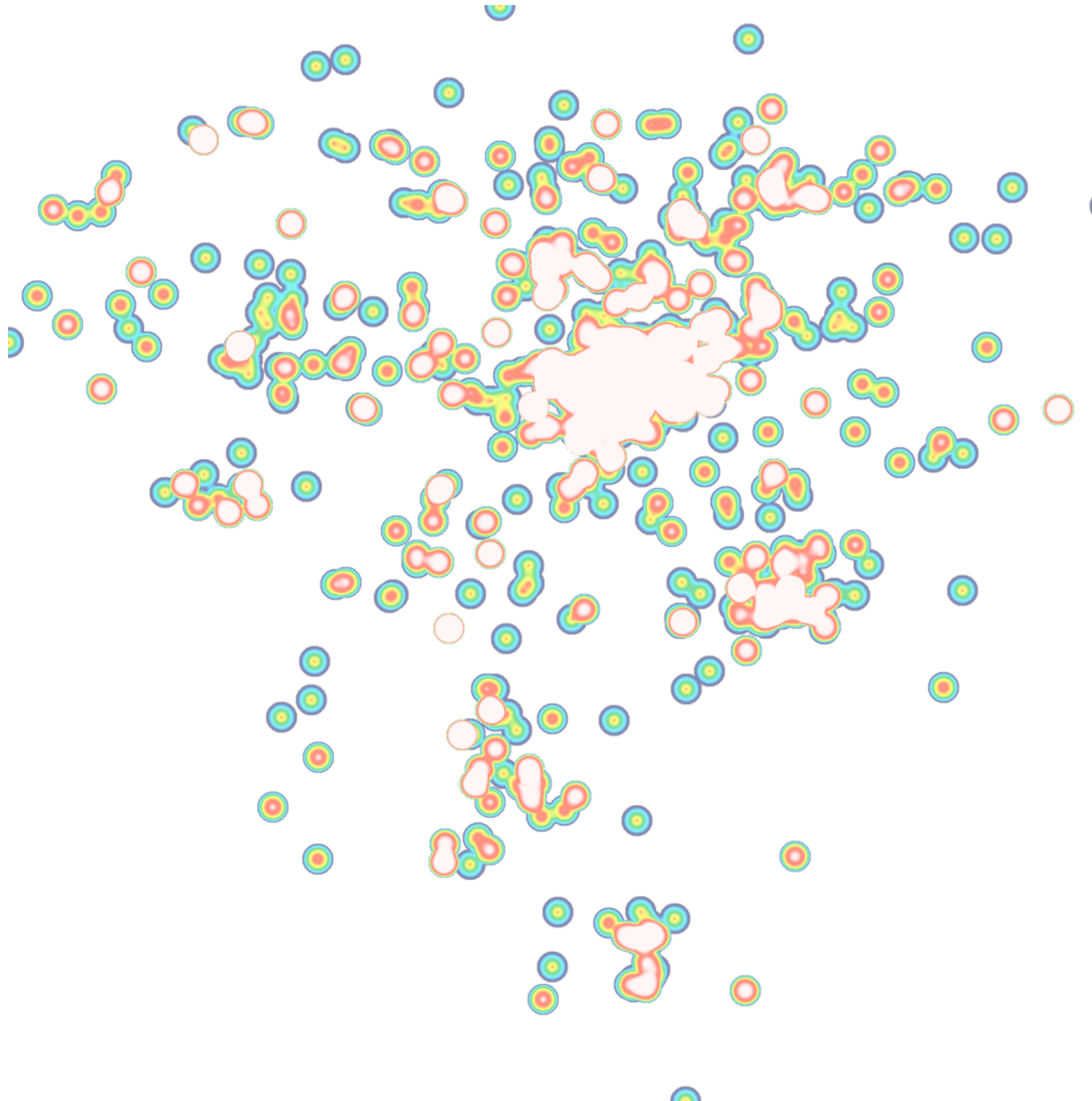
linear-linear plot

Venue popularity



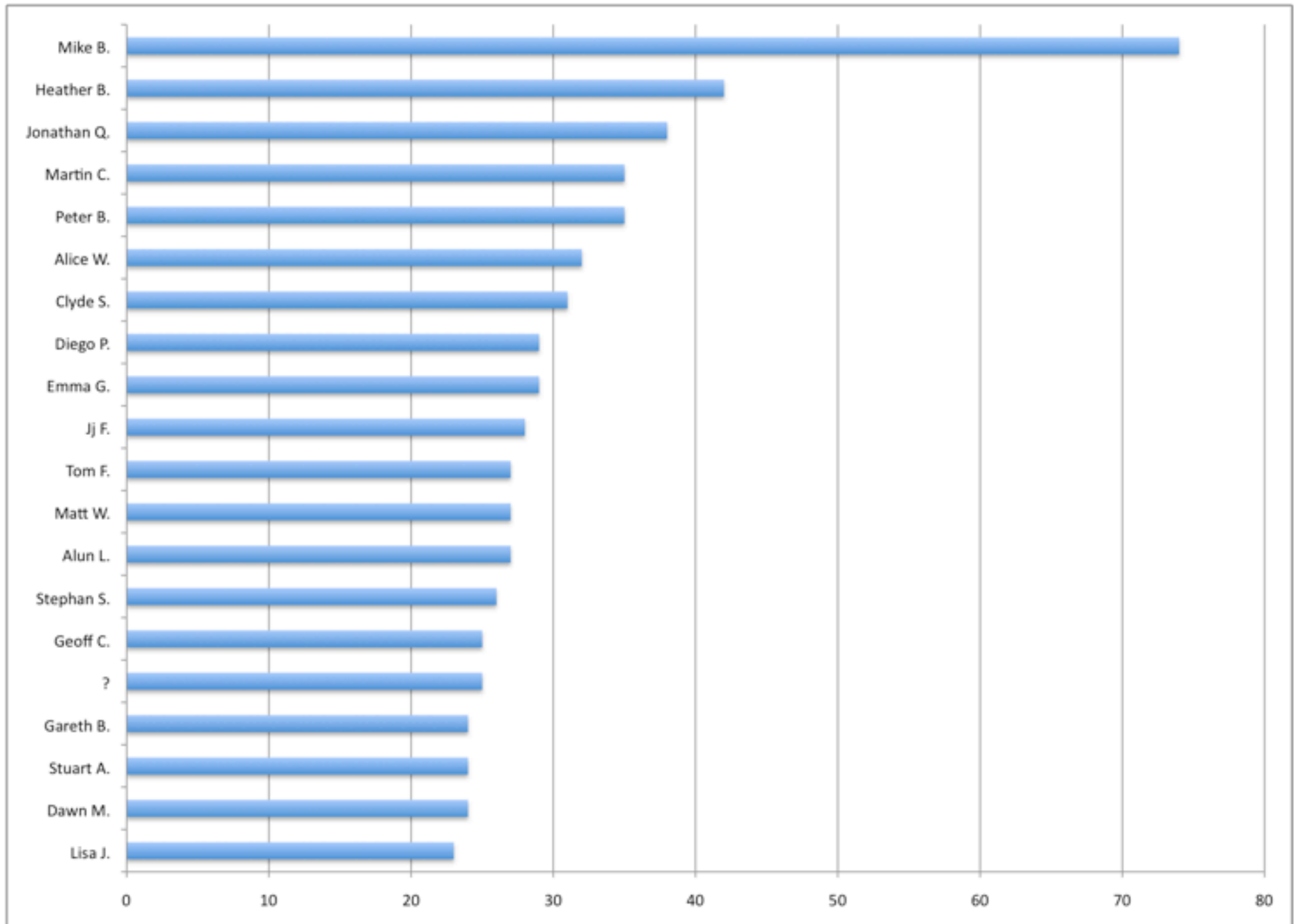
Where in Cardiff do check-ins occur?

Check-in heatmap

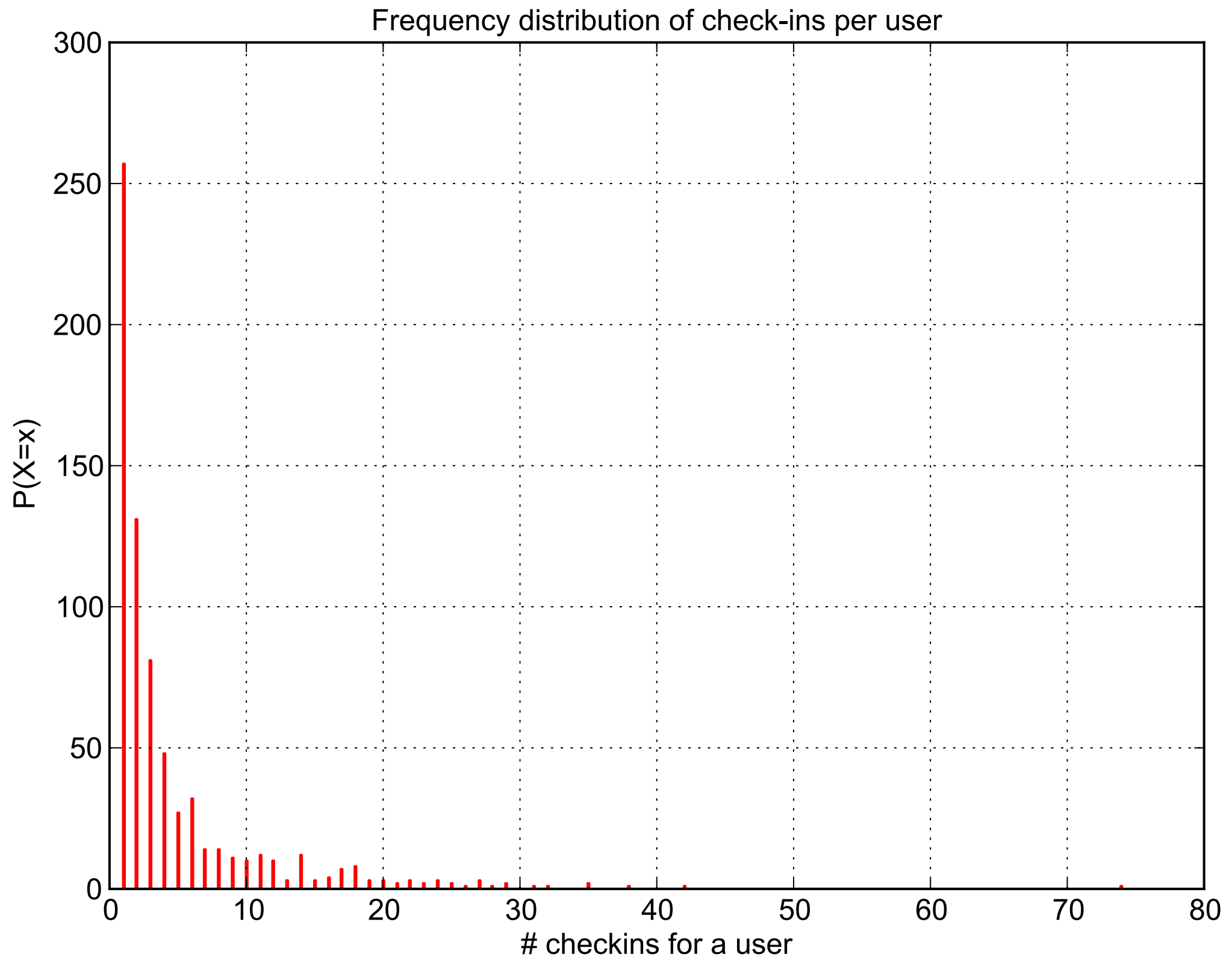


How does check-in activity vary between users?

Top 20 users

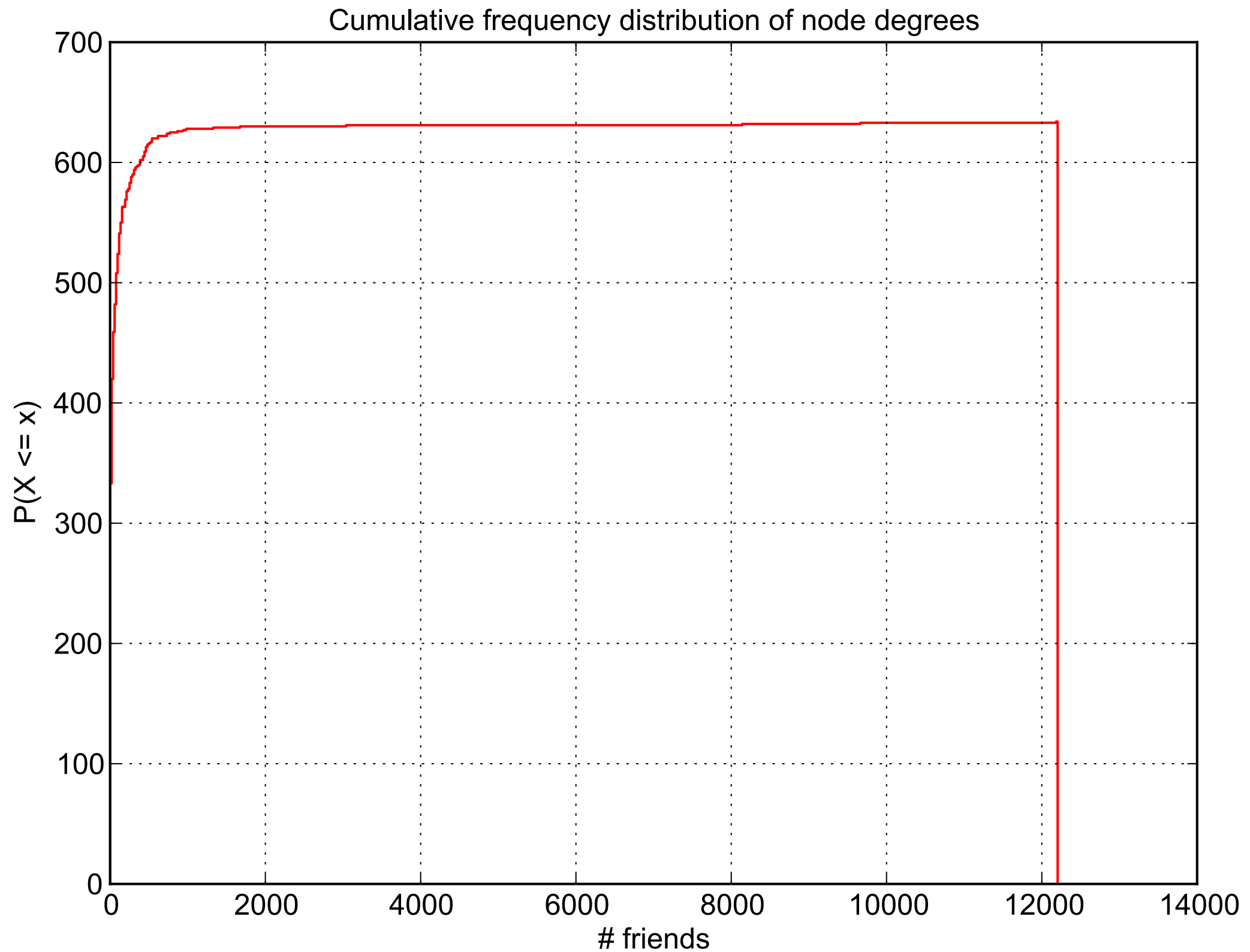


User check-ins

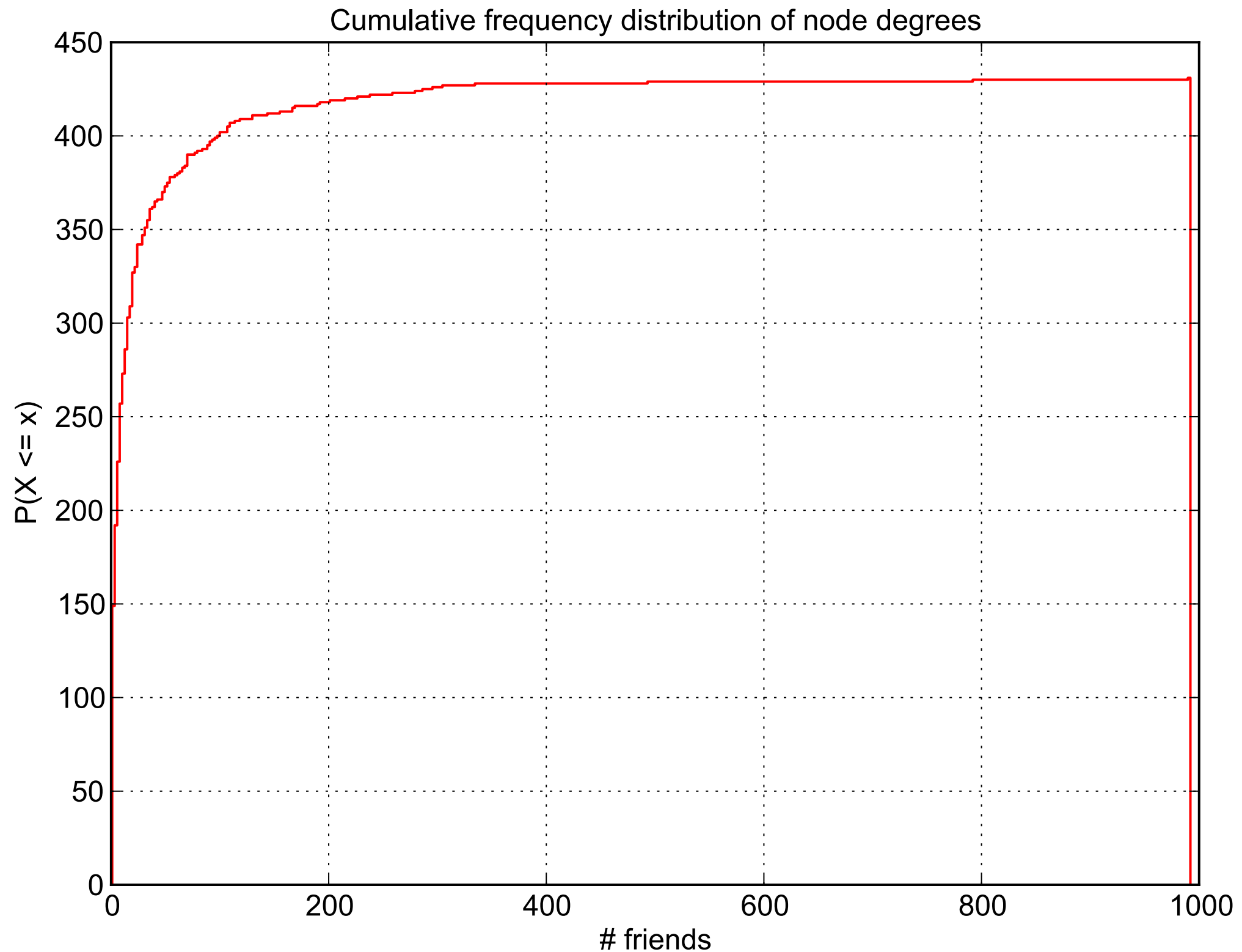


How many friends does a user have?

Friendships



Friendships among Cardiff visitors



[An animation of checkins!]

Tools

- Python (important! :))
- matplotlib
- Microsoft Excel
- Processing
- Google Earth
- ffmpeg
- heatmap.py (by jjguy)
- www.getlatlon.com

Thanks!



Any questions?

Twitter & 4sq: @voxmjw