

Community Detection on Meetup.Com

WHERE DID THE DATA COME FROM?

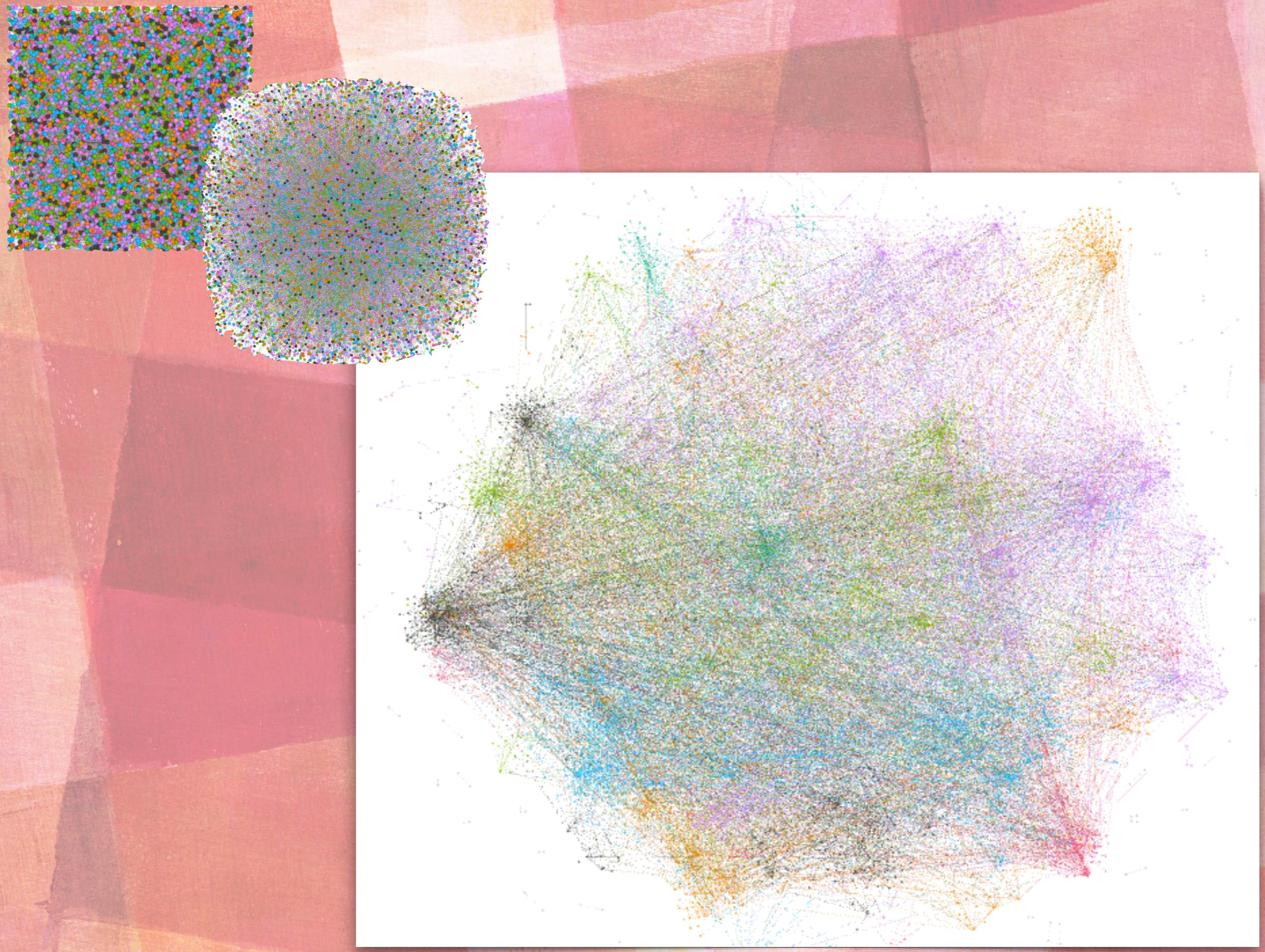
- *meetup.com API*
- *Python & bash*
- *5+ GB of JSON*
- *8200+ Groups*



WHAT HAPPENED TO THE DATA?

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- Build a big graph
- Nodes are Meetup groups
- Edges between groups mean groups have common members
- Look for dense areas in graph (Louvain community detection algorithm)
- A picture is worth ...





A SAMPLE COMMUNITY

- 13752232 [Girl Gone International San Francisco](#)
- 14709952 [SF Bocce](#)
- 1569779 [20 and 30 somethings in San Francisco - AWESOME Stuff](#)
- 1654112 [San Francisco Women's Picnic Book Club--20s/30s](#)
- 1724725 [San Francisco Newbies in their 20s](#)
- 1779069 [Just Graduated College and Moved to Silicon Valley](#)
- 1811226 [The Antisocialites: Unique people in their 20-30s](#)
- 18230756 [New in town Girlfriends San Francisco](#)
- 18575035 [Great Girlfriends SF \(30-40\)](#)
- 18860444 [San Francisco Ladies' Brunch Meetup](#)
- 18955438 [SF Girlfriends in 20's and 30s](#)
- 19119977 [Just A Couple Couples In The City](#)
- 19506096 [San Francisco 20-Somethings Women's Cookie Club](#)
- 19646457 [Double Date!](#)
- 19924434 [San Francisco Young Professional Travelers](#)
- 3167582 [San Francisco Random Adventurers 20s-30s](#)
- 4202882 [HUMANRACE](#)
- 5379582 [Good times w/ Wine & Girlfriends 20s & 30s](#)
- 6453932 [Going Out Girls in San Francisco! 20s-30s](#)
- 6978792 [New In The City](#)
- 7647082 [Marina Young Women's Cooking Club](#)
- 7739722 [San Francisco DINKs: Fun Childfree Couples in 30s and 40s](#)
- 8644732 [SF Movies, Happy Hours and Fun!](#)
- 9845002 [Happy Hour & Networking San Fran](#)
- 9996132 [Good Times w/International Girlfriends](#)

Challenges

- Downloading 5+ GB of JSON data
- Transforming JSON into formats used by community detection algorithms (NCOL, GDF, CSV)
- Building AWS instance
- Installing software (networkx, graph, Gephi, python-louvain, python-community), on Mac & AWS
- Graph is too big!!!
- Trying multiple algorithms (Girvan-Newman, Louvain, modularity algorithm in Gephi)
- Visualization (Graph is too big again!!!)

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- 10185432 Marin County Euchre group (card game)
 - 10316592 Never Too Late To Have a Happy Childhood even for grown ones
 - 10620852 Tech in Marin
 - 1066931 Marin Moonshiners Hike & Picnic
 - 13051522 Sausalito 20-40's Sail Ski Social Meetup
 - 13120312 Novato Cohousing Now Meetup
 - 13621192 Marin Acoustic Guitar Group
 - 13833032 Concord Wiki - All About Our City, Written by Our City
 - 1420856 Got Wind and Water ...
 - 14357862 Quest Hiking Group
 - 1458833 Carl Jung and Active Imagination
 - 15248952 Point Reyes Station Ukulele meetup - 2nd Sunday
 - 1553353 The Graceful Power of The Consciousness
 - 1568840 Marin Meditation and Conversation Meetup
 - 1591091 North Bay Mobile Drive-In
 - 1594076 Kayakers' Alliance

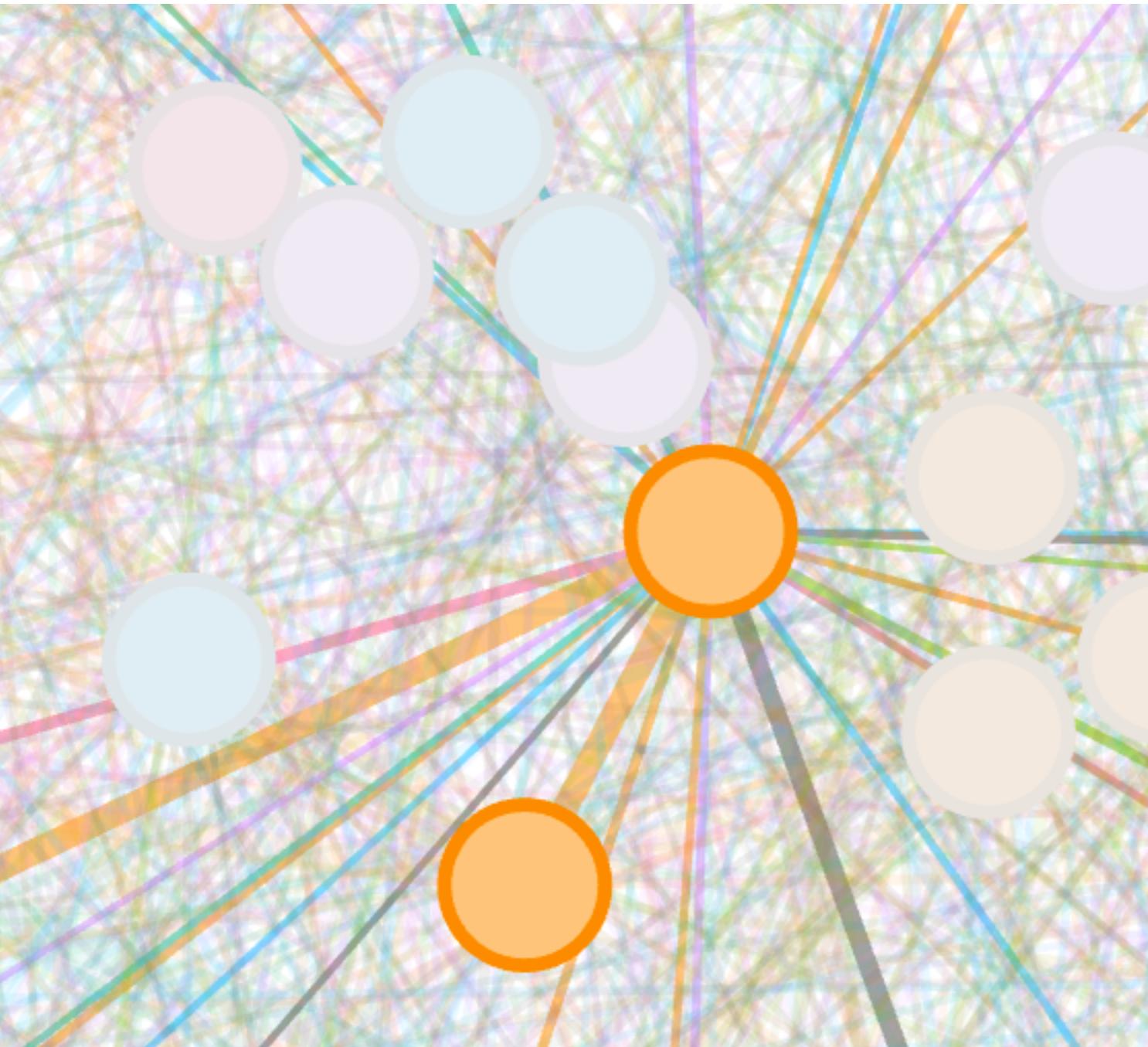
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- 10629662 The Borg
 - 14110492 Hotspot 2.0 (SF Bay Area)
 - 19103758 Sports Hackathon
 - 19110209 Crowdfunding Valley
 - 19169430 The Business of Coworking
 - 19327448 Hello World! SF
 - 19430925 Khan Academy (Unofficial) Study Group
 - 19496103 Elevator Pitch Practice -Record Your Presentation, Brush up
 - 19540059 Friends of Canadian Wilderness Meetup

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- 1082686 An Alternative to Dating as Usual
 - 1225656 Decriminalize Prostitution!
 - 12776342 OneTaste East Bay
 - 12790222 Real Pleasure Marin
 - 13638892 Cougar Parties & Cruises
 - 1504976 Date Me, If You Dare
 - 1614811 Tantra with Moneeka
 - 1682003 Sequoians Nudist Park, Castro Valley Ca.

Get a sense of where your neighbors are going.

FUTURE DIRECTIONS

- *App to browse Meetup groups*
- *Bootstrap a Meetup Recommender*
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- *Sniff out the social heartbeats of an area*
- *Stretch yourself in ways you would not have imagined*



QUESTIONS?

- 11276052 Crowd-tasting: Whisky and other spirits [SF]
- 1128669 Happy Hour Club
- 1271344 New York Giants Fans Unite in San Fran
- 1326081 The San Francisco Live Indie Music Group
- 1342563 Mission Dive Bars
- 1506076 The NY Yankees Unite in SF
- 1547183 Women who like Beer
- 1683009 Chicago Sports Fans in the Bay Area
- 1714061 San Francisco Chicago Bears Fans -Bear Down!!
- 1733916 Bay area Hockey fans!
- 1750312 San Francisco Homebrewers Guild
- 1761523 San Francisco Fighting Illini Sports Fans
- 17705802 San Francisco Notre Dame Football Meetup
- 18219976 Sirwisa Brewing Collective
- 18397603 San Francisco Scotch and Whisk(e)y Meetup
- 18522920 SF Bourbon
- 18887862 Alcohol Alchemy - Learn. Make. Share.
- 20082043 Rose Kingz Mens Basketball Tournament
- 5847432 SF Young Professional Canadian Expats
- 901849 Bay Area Beer Socials