

Who Follows Trump on Twitter?

A Graphical Approach to Social Media Analysis

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Terminology

- **Follower vs. Friend**
- **Network** = Graph - NOT neural/deep network!
- **Nodes**: Like an object. Any Twitter user will be represented as a node
- **Edges**: Links between nodes. An edge from node A to node B means user A follows user B.
- **Degrees**: the total number of connections someone has (followers + friends).

What Aspect of Trump's Followers to Analyse?

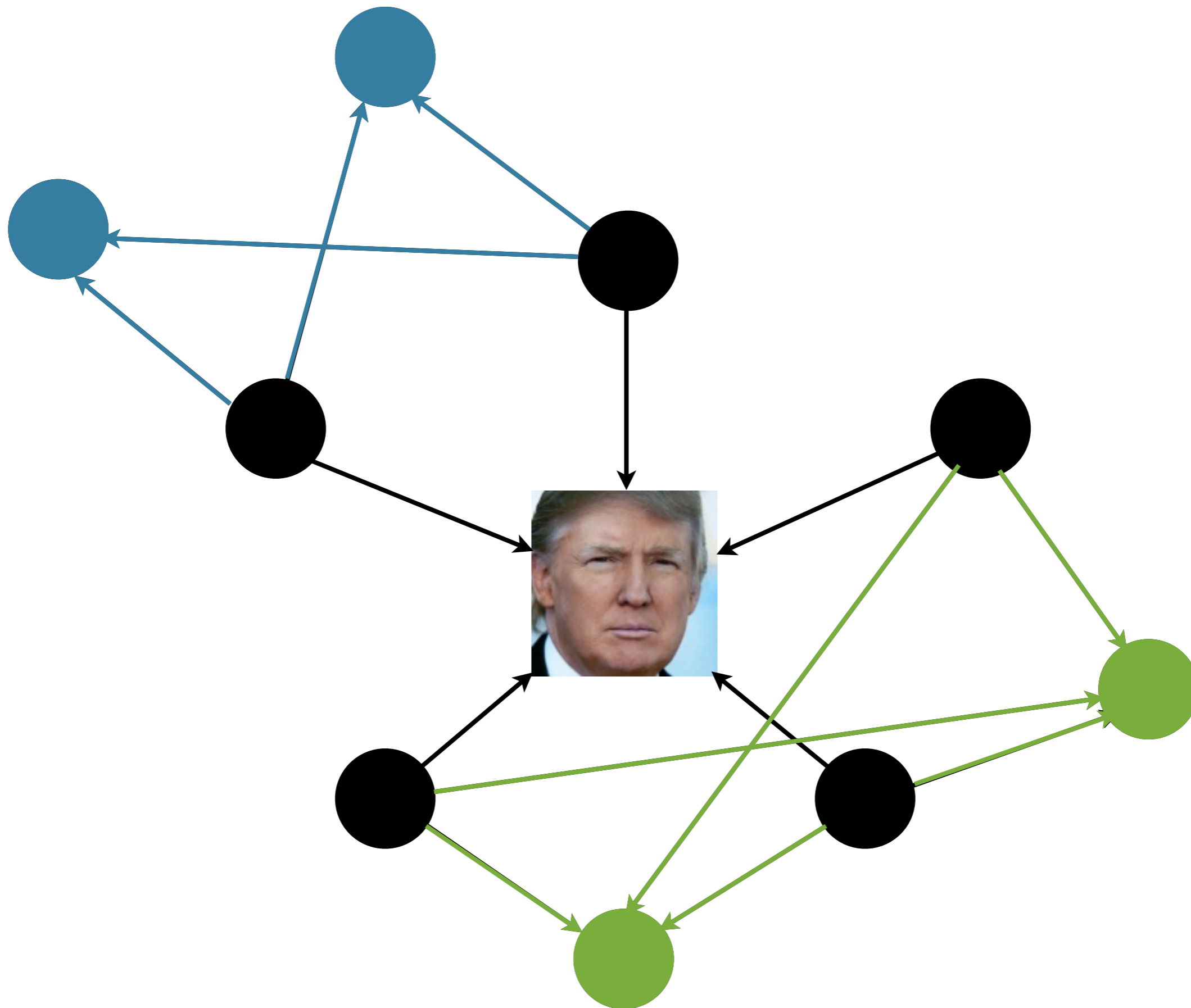
- The words they use in their Tweets? NLP
- Their profile photo? Image processing, deep learning
- Their friends? Network analysis
- geo location, URL sharing, retweet patterns, #Hashtags etc.

Each answers a potentially different question!

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Answers: “Who else do they follow?”



Tools

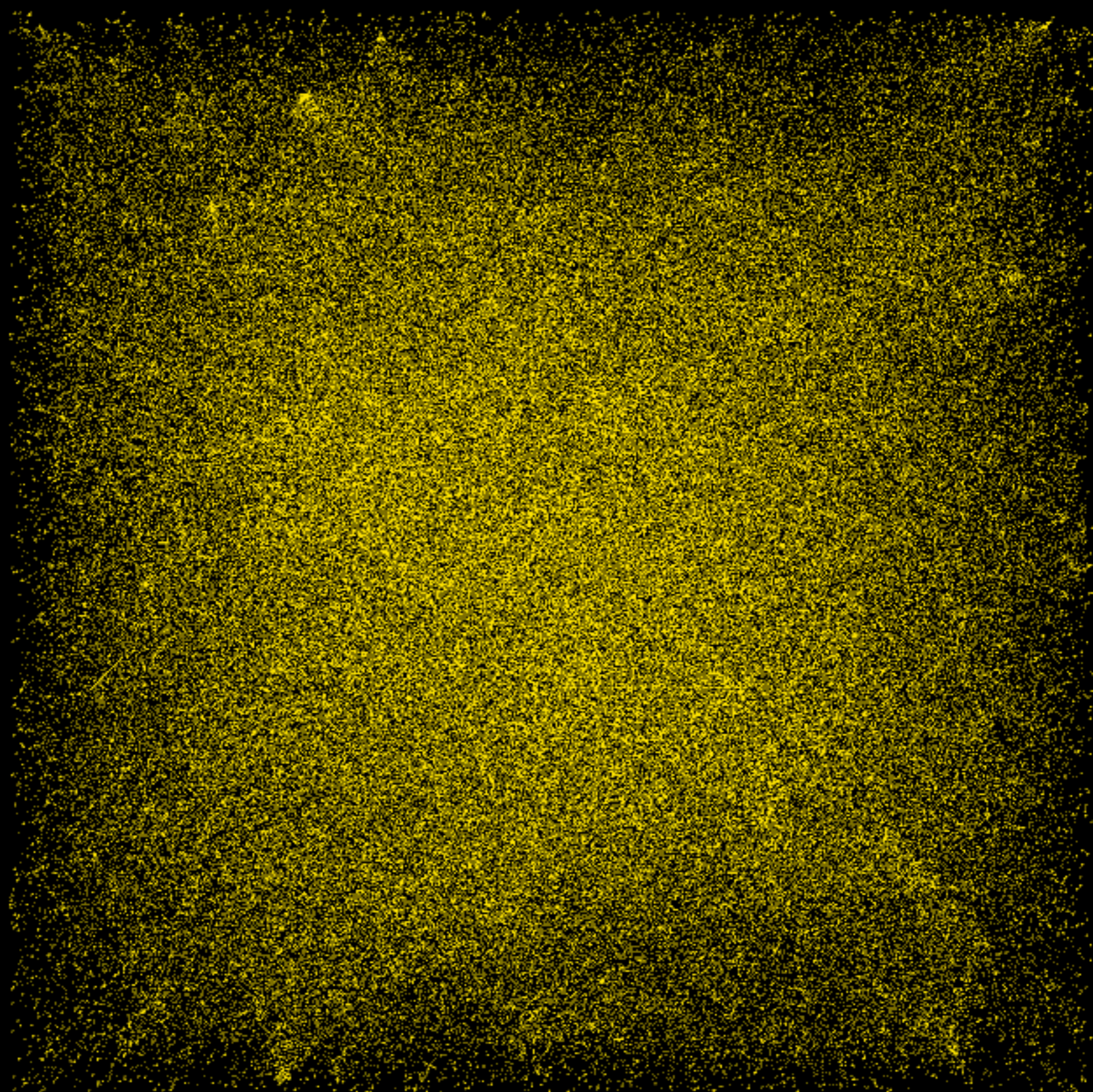
- Python's NetworkX and the community library: to answer the question
- Gephi: to explore and visualise the network

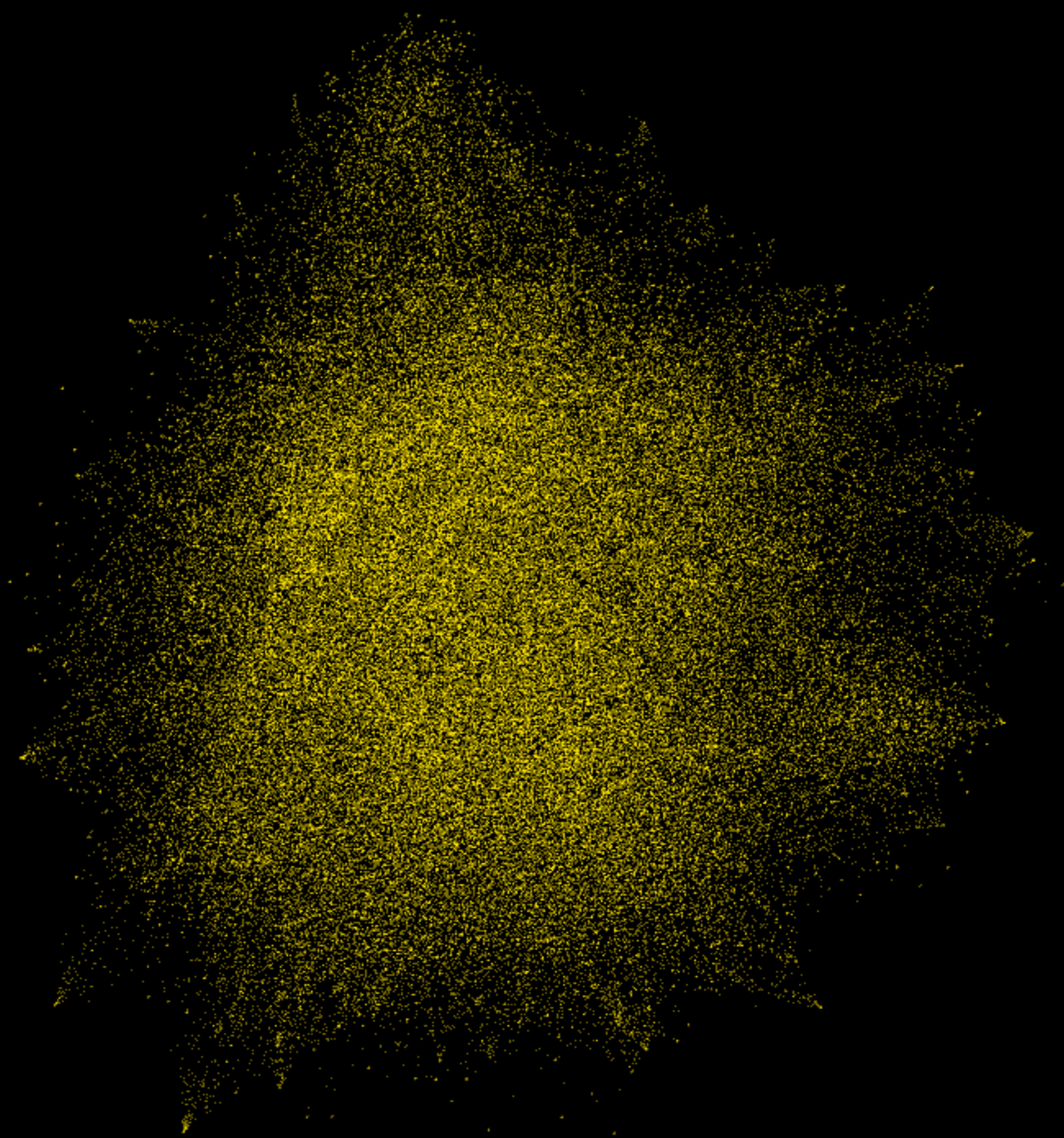
The Data

- Got all of Trump's followers on 05/06/2016 - 8.6 million
- Randomly sampled 12902 Trump followers and got all of their friends
- Total number of nodes: 2 million
- Total number of edges: 4.5 million

The Data

- Outliers:
 - Only follows Trump or 10K other friends
 - Super nodes
- After removing outliers:
 - Number of Trump followers left: 8178
 - Number of nodes: 48K
 - Number of edges: 814K



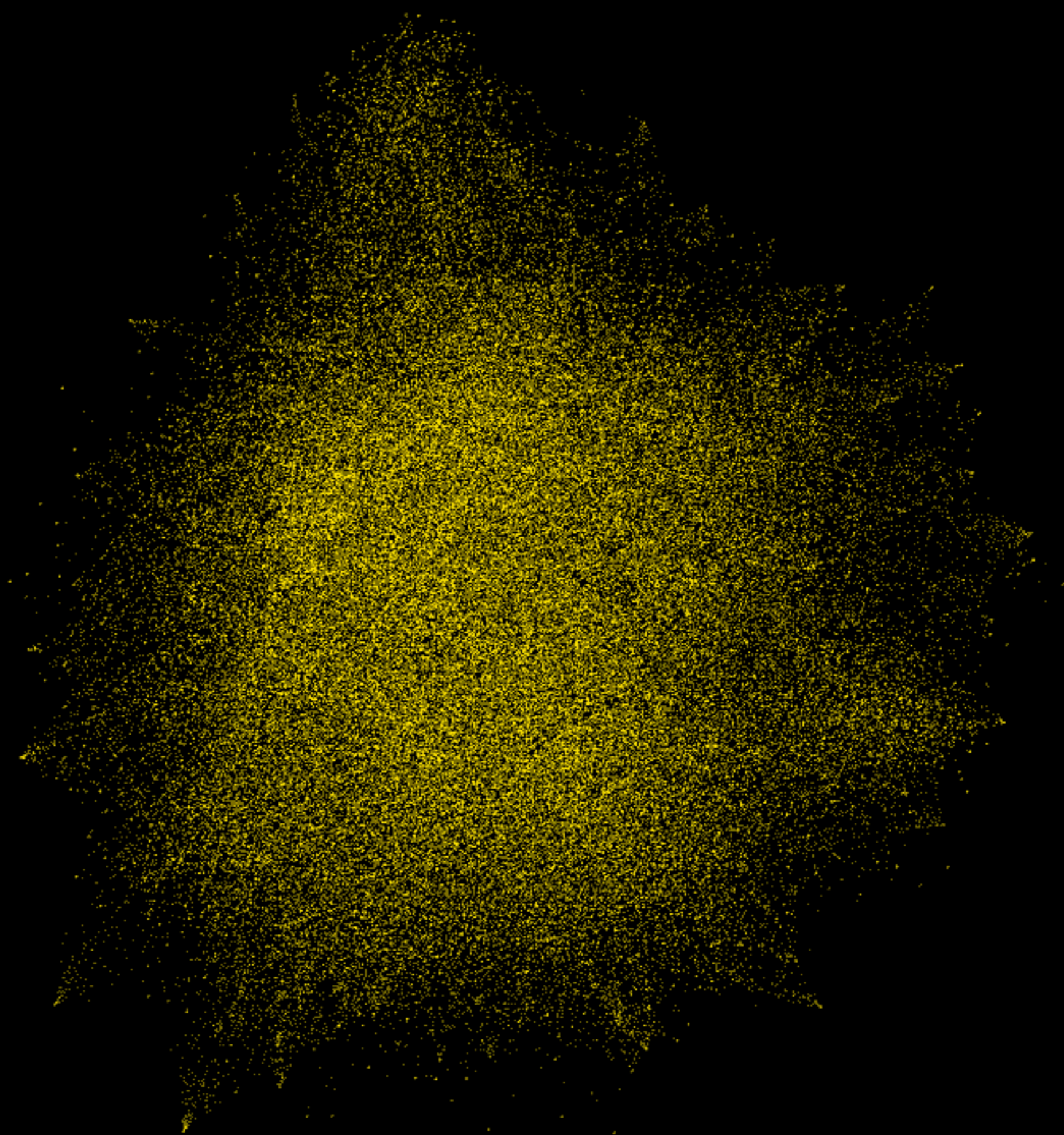


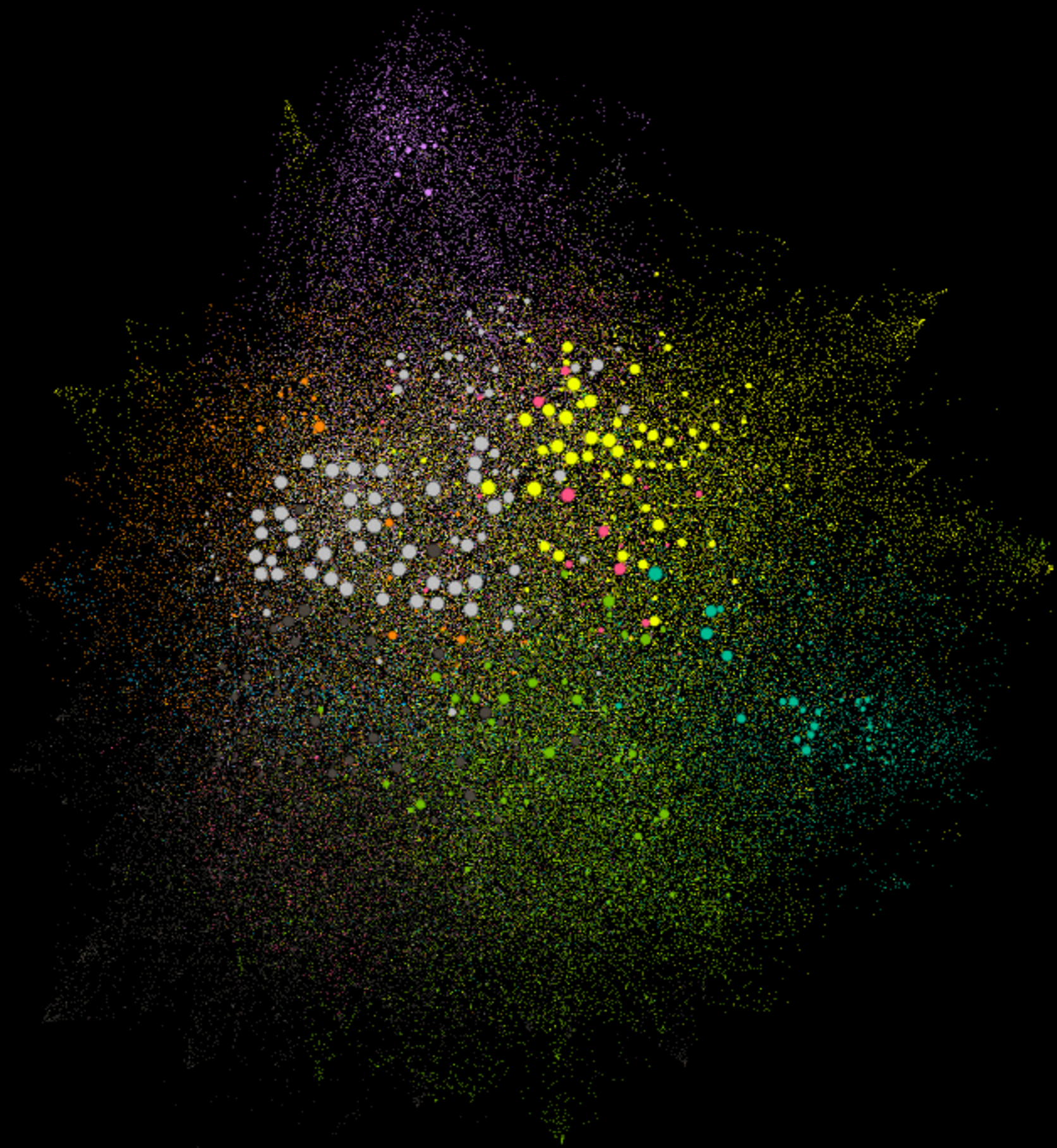
Community Detection

- Assign each node to one and only one community based on the network's structure
- Clustering!
- Louvain Modularity (Blondel et al. 2008)
 - Super fast!
 - Only one hyper parameter to tweak.

Who's Important?

- **Centrality measures**
 - assign scores to each node based on certain criteria
 - degree, betweenness, closeness, PageRank, eigenvector, etc.





A Closer look

Community 4:

- Number of Trump followers: 1742 (~21%)
- Their top 8 friends:
 1. Adam Schefter
 2. Dr. Ben Carson
 3. Sean Hannity
 4. Megyn Kelly
 5. Marco Rubio
 6. Ted Cruz
 7. Ann Coulter
 8. Bill O'Reilly

A Closer look

Community 6:

- Number of Trump followers: 588 (~7%)
- Their top 8 friends:
 1. Lord Sugar
 2. Wayne Rooney
 3. Cristiano Ronaldo
 4. Piers Morgan
 5. Jonathan Ross
 6. Gary Lineker
 7. Jeremy Clarkson
 8. Rio Ferdinand

A Closer look

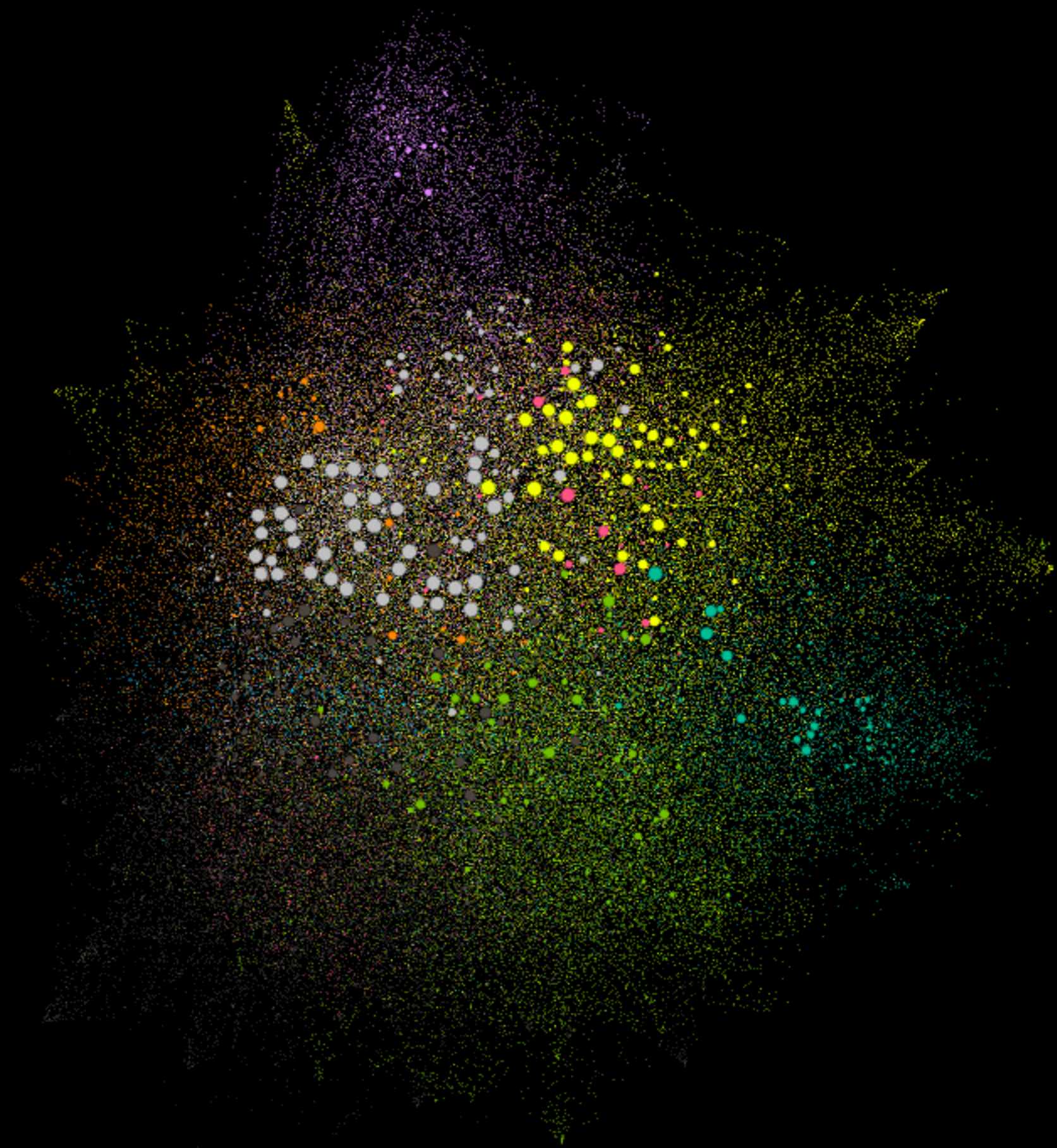
Community 7:

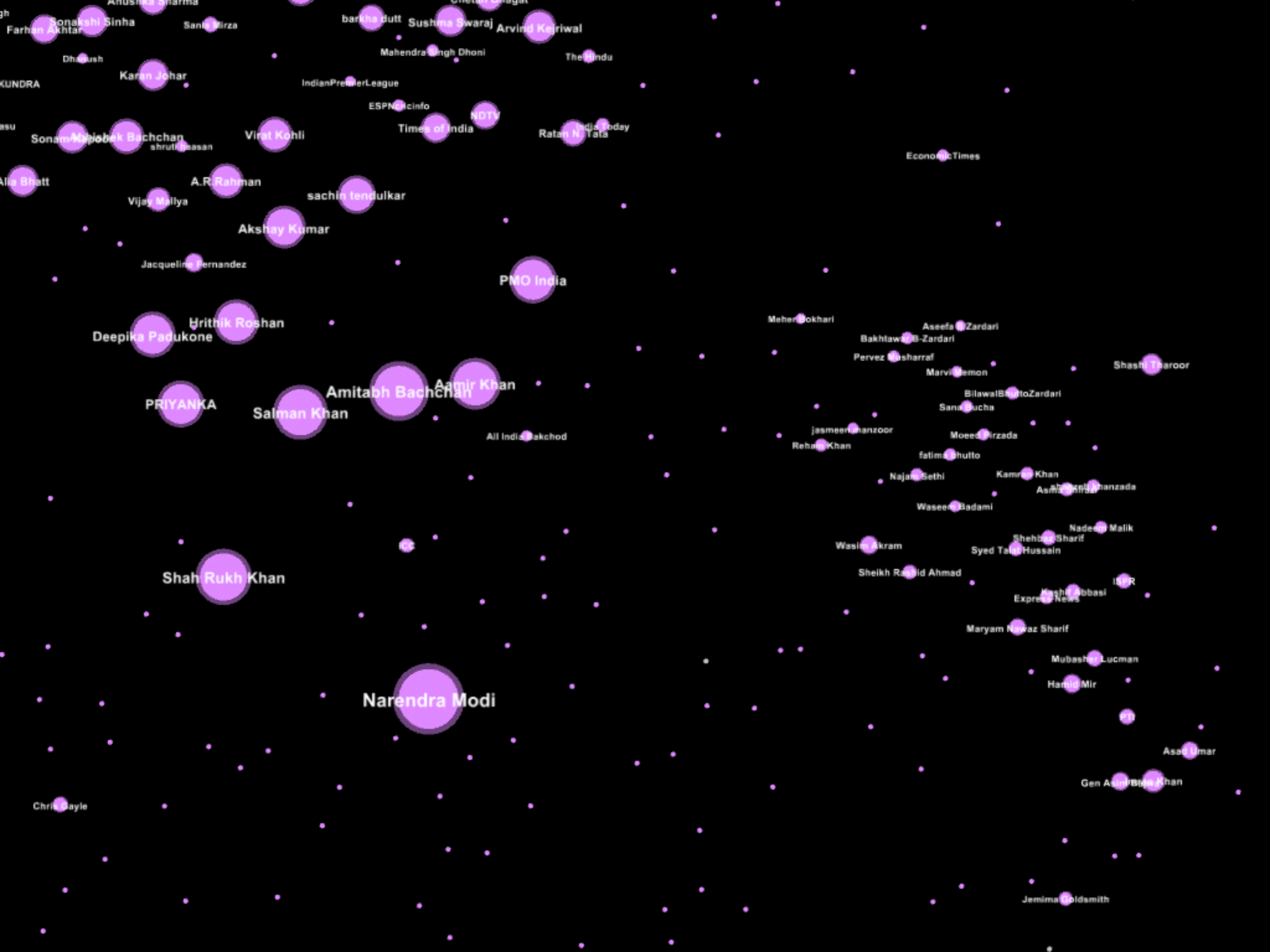
- Number of Trump followers: 412 (~5%)
- Their top 8 friends:
 1. Lil Wayne WEEZY
 2. Sean Diddy Combs
 3. Chris Brown
 4. T.I.
 5. Trey Songz
 6. Alicia Keys
 7. J. Cole
 8. Ludacris

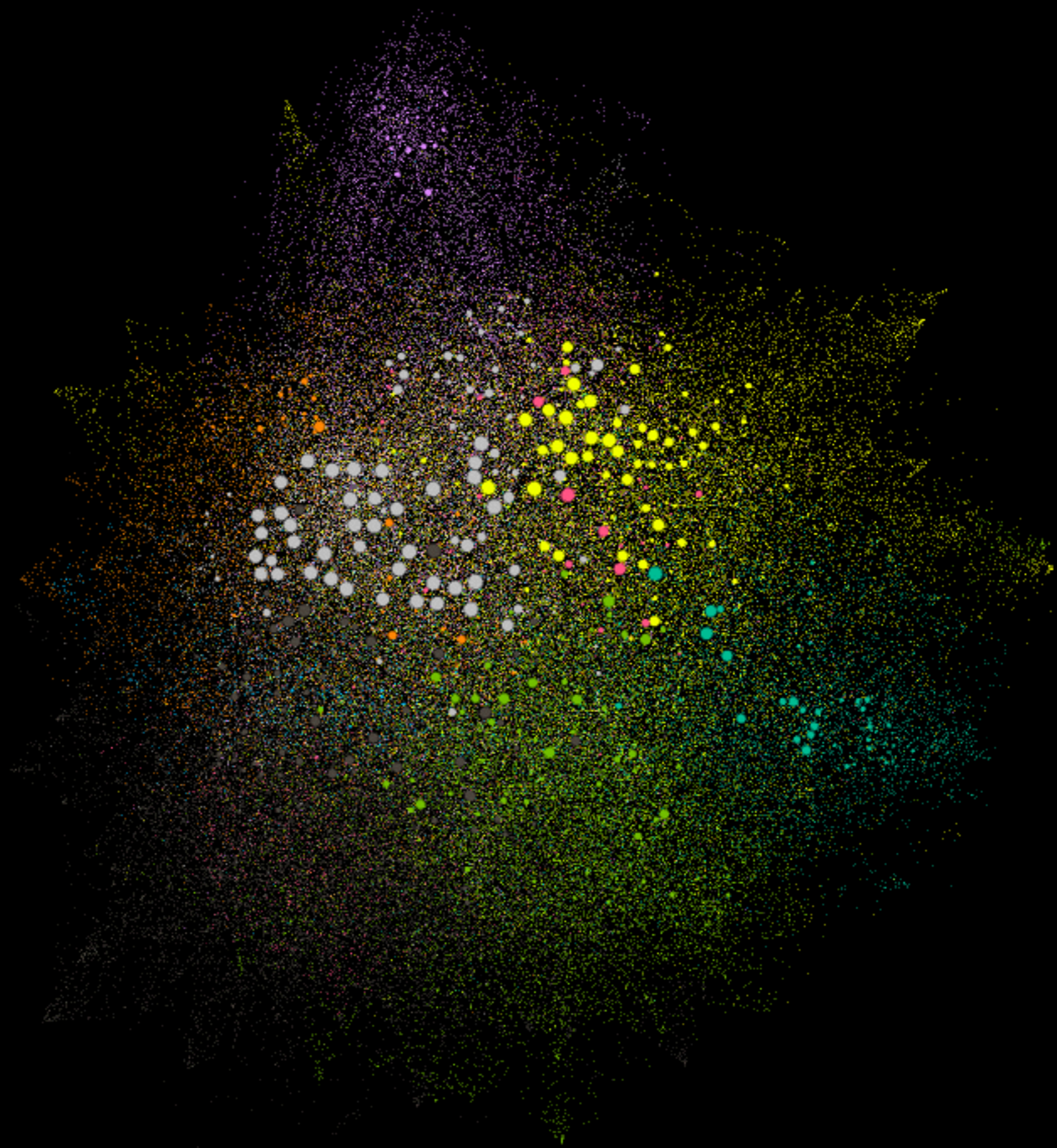
A Closer look

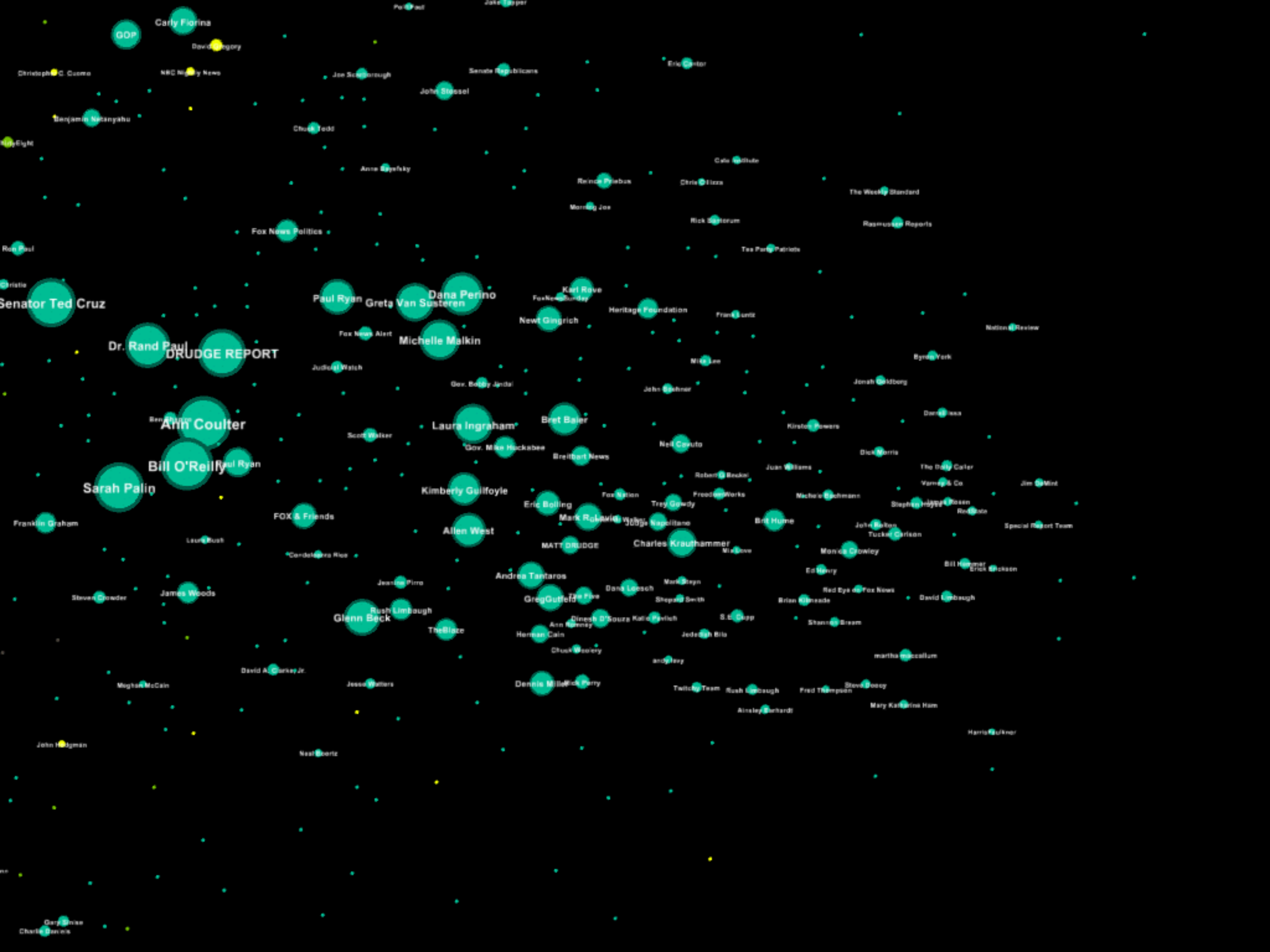
Community 12:

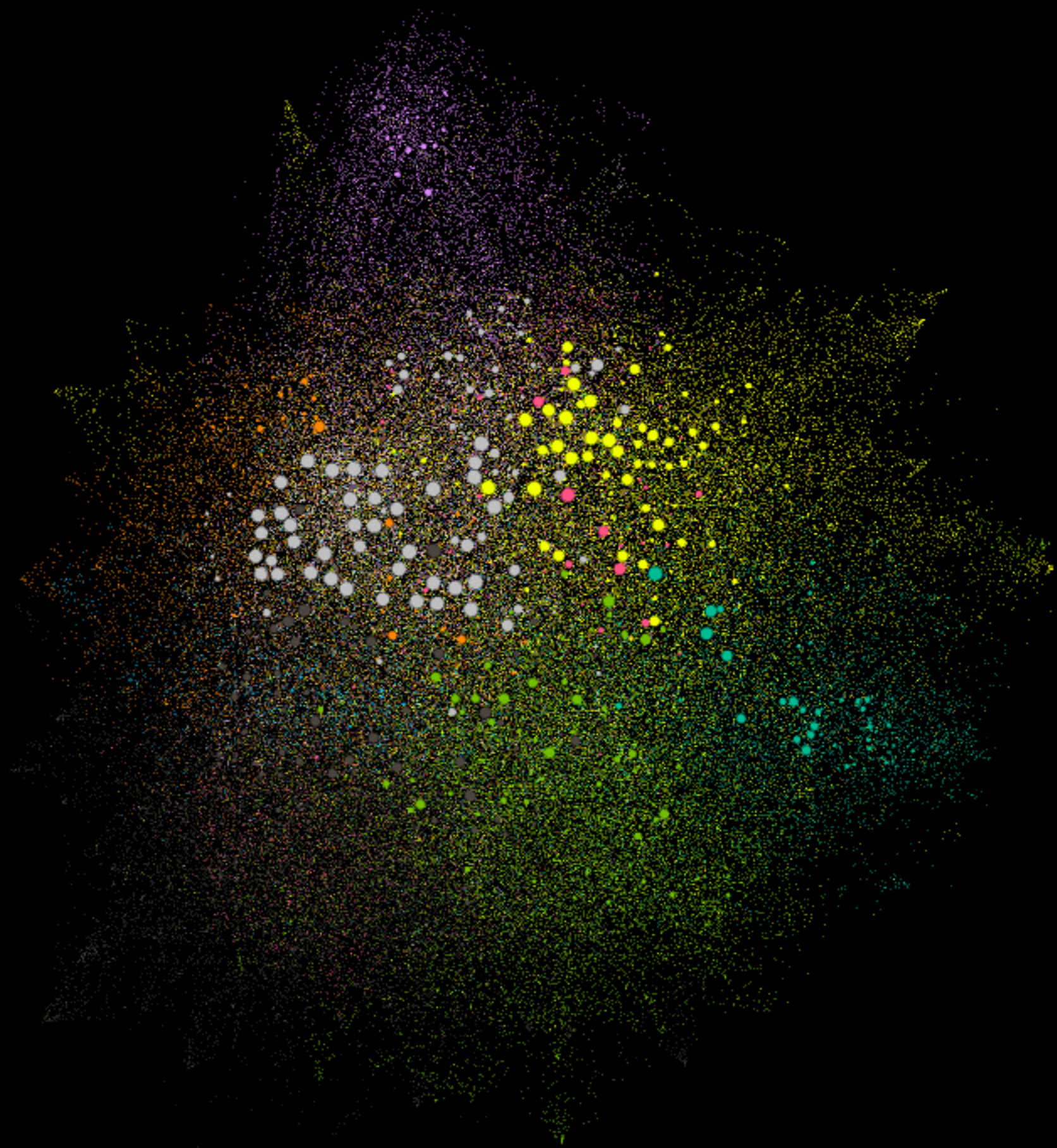
- Number of Trump followers: 368 (~5%)
- Their top 8 friends:
 1. PlayStation
 2. Xbox
 3. Dwayne Johnson
 4. Rockstar Games
 5. John Cena
 6. Steam
 7. WWE
 8. Triple H

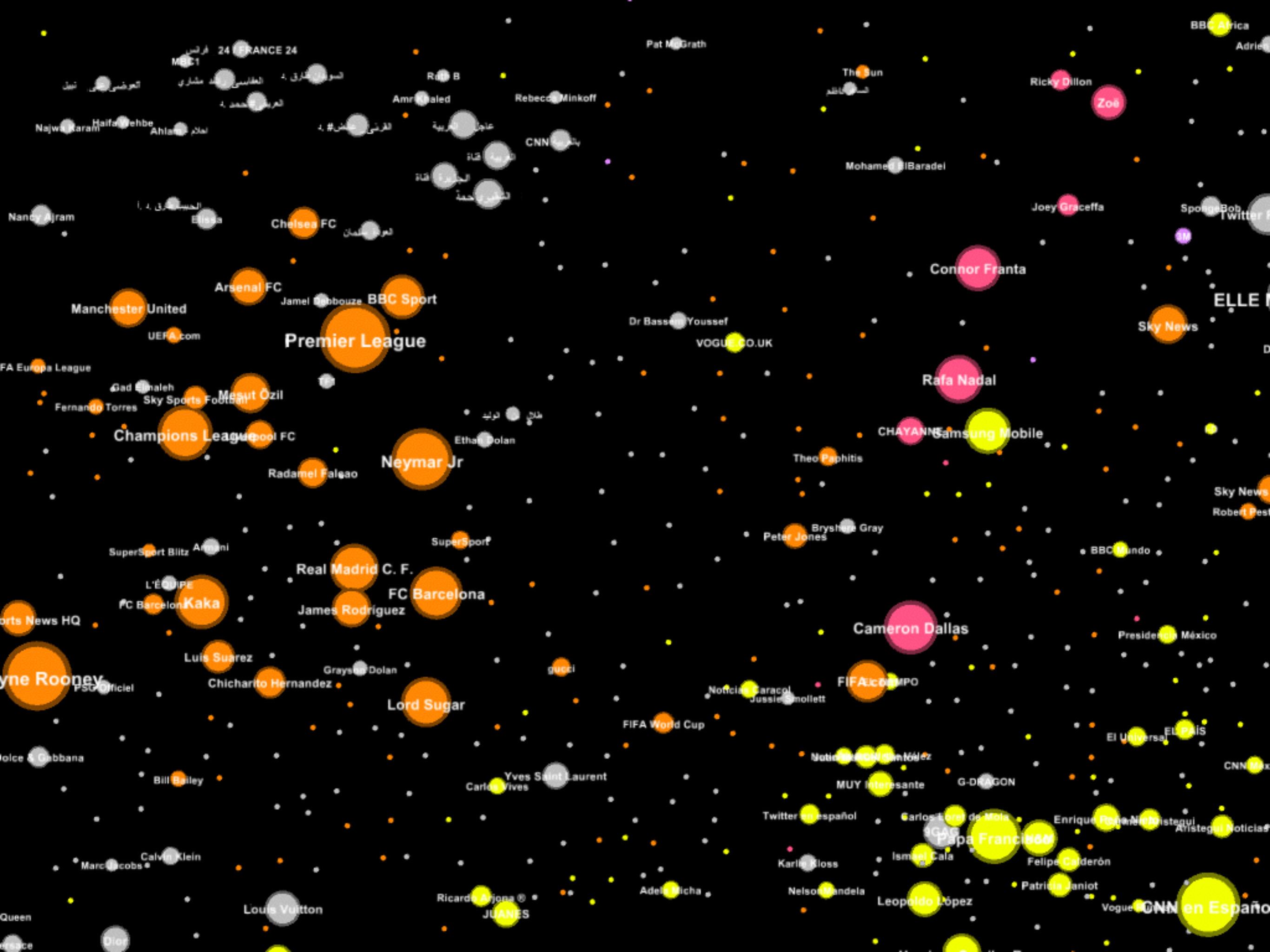












- The code to re-produce this is available on: <https://github.com/motasay/trump-followers>
- The dataset is available on: <http://bit.ly/TRUMPIT>