

thegraph_data_access

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1 TheGraph data access

courtesy of @markusbkoch submitted by @mzargham

```
[1]: import pandas as pd
import json
import requests
import matplotlib.pyplot as plt
url = 'https://api.thegraph.com/subgraphs/name/balancer-labs/balancer'
query = ''
query {{
    pools(first: 1000, skip:{}) {{
        id
        liquidity
    }}
}}'''
n = 0
pools = []
while True:
    print(f'request {n+1}')
    r = requests.post(url, json = {'query':query.format(n*1000)})
    p = json.loads(r.content)['data']['pools']
    print(f'results {len(p)}')
    pools.extend(p)
    print(f'total {len(pools)}')
    n += 1
    if len(p) < 1000:
        break
subgraph_tvl = pd.DataFrame(pools)
```

```
request 1
results 1000
total 1000
request 2
results 1000
total 2000
request 3
results 948
```

total 2948

```
[2]: subgraph_tv1
```

```
[2]:
```

	id \
0	0x003a70265a3662342010823bea15dc84c6f7ed54
1	0x004e74ff81239c8f2ec0e2815defb970f3754d86
2	0x0077732357ac0f29e26ea629b79ab3b266ddb796
3	0x0092b2d25d76d84d27b999fe93d5e1c70511cd2b
4	0x0099447ef539718bba3c4d4d4b4491d307eedc53
...	...
2943	0xfffe8c31fb0ab62c99fc6e8c724d0f1949dbaa44f
2944	0xffff293e1f6c174867f23351c1510833c8087fecb
2945	0xffff29c8bce4fbe8702e9fa16e0e6c551f364f420
2946	0xffff2a5f81d14729408201341df42af29f3b30458
2947	0xffff82910d352abe04d00d542f0ded0bfc8516f78

	liquidity
0	1451153.045784346621084371881867143
1	680.928486911431236447041487663722
2	0.8653140420464888814426818591183125
3	8.41728837682050716701128507145078
4	0
...	...
2943	2331.204011809222755546645470719059
2944	0
2945	0
2946	3321146.435723162453806488665127968
2947	0

[2948 rows x 2 columns]

```
[3]: subgraph_tv1.liquidity= subgraph_tv1.liquidity.apply(float)
```

```
[4]: subgraph_tv1.sort_values('liquidity', inplace=True)
```

```
[5]: subgraph_tv1.liquidity
```

```
[5]:
```

2947	0.000000e+00
1610	0.000000e+00
1609	0.000000e+00
1607	0.000000e+00
1606	0.000000e+00
...	...
390	4.971867e+07
1069	6.911900e+07
1049	2.222114e+08

```

360      3.176300e+08
2274      3.296378e+08
Name: liquidity, Length: 2948, dtype: float64

```

```
[6]: plt_df=subgraph_tvl[subgraph_tvl.liquidity>1].copy().sort_values('liquidity',
↪ascending=False)
```

```
[7]: subgraph_tvl.describe()
```

```

[7]:      liquidity
count  2.948000e+03
mean   6.182394e+05
std    9.713733e+06
min    0.000000e+00
25%    0.000000e+00
50%    0.000000e+00
75%    6.308724e+02
max     3.296378e+08

```

```
[8]: plt_df.tail()
```

```

[8]:      id liquidity
334   0x1d261ec7ab834fedb01602c5b7ffc6fc68362bbf  1.577654
978   0x53f160490d7e48ba2c31be4790f3d87a2f4dc662  1.371422
1836  0x9e4a4b53e19410ae519be74f92659e5b0ef9489b  1.330313
2337  0xcb8ec8236aff8e112517f4e9a9ffb413a237e6b7  1.153105
1286  0x6d42692518c8b09c883e7c1e69c97518107f2185  1.030083

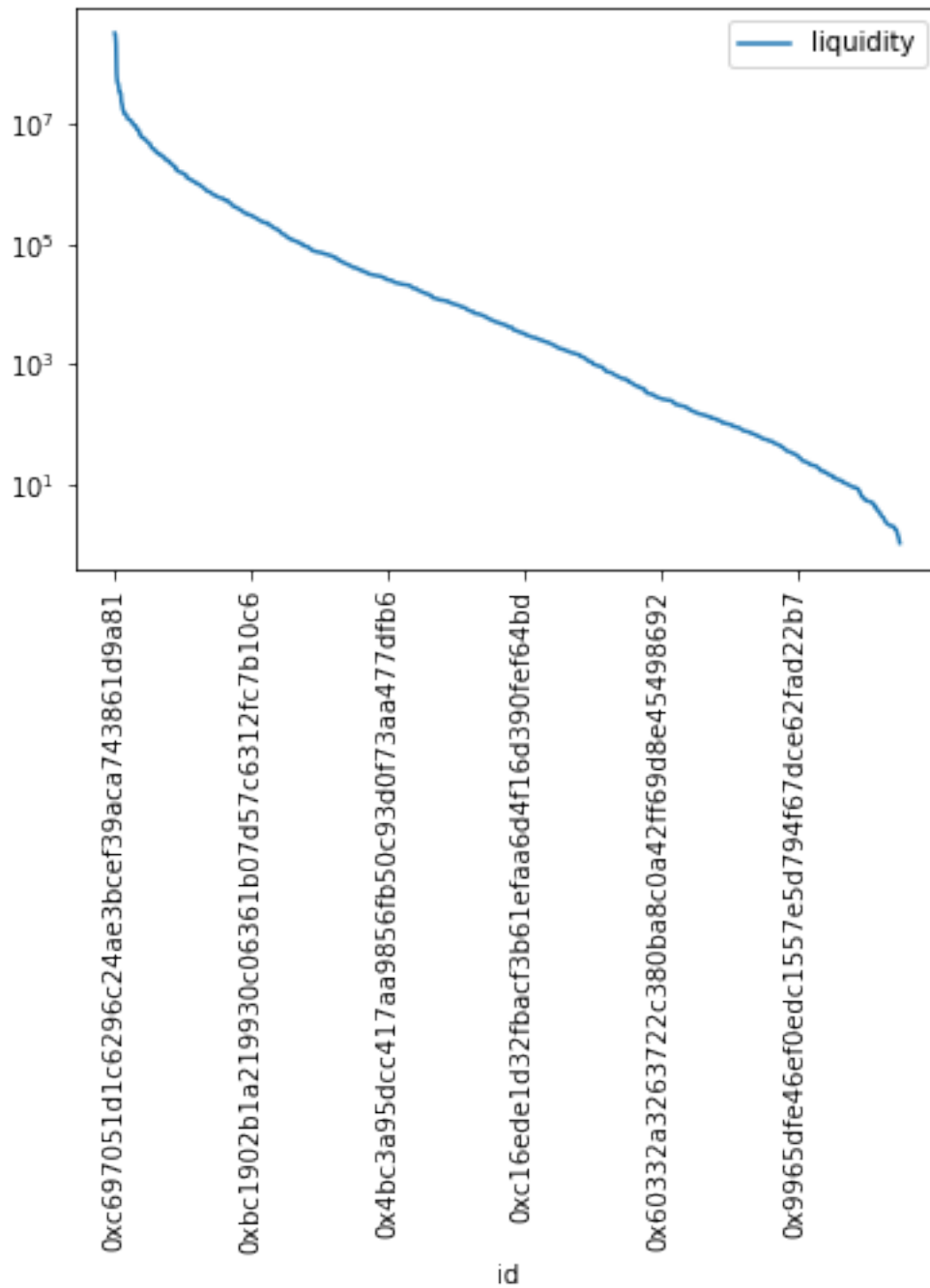
```

```
[9]: plt_df.plot(x='id', y='liquidity', logy=True)
plt.xticks(rotation=90)
```

```

[9]: (array([-200.,   0.,  200.,  400.,  600.,  800., 1000., 1200., 1400.]),
      [Text(-200.0, 0, '0x3e7356c713a9043d0efac4d9b4e2d993d2e62a79'),
        Text(0.0, 0, '0xc697051d1c6296c24ae3bcef39aca743861d9a81'),
        Text(200.0, 0, '0xbc1902b1a219930c06361b07d57c6312fc7b10c6'),
        Text(400.0, 0, '0x4bc3a95dcc417aa9856fb50c93d0f73aa477dfb6'),
        Text(600.0, 0, '0xc16ede1d32fbacf3b61efaa6d4f16d390fef64bd'),
        Text(800.0, 0, '0x60332a3263722c380ba8c0a42ff69d8e45498692'),
        Text(1000.0, 0, '0x9965dfe46ef0edc1557e5d794f67dce62fad22b7'),
        Text(1200.0, 0, ''),
        Text(1400.0, 0, '')])

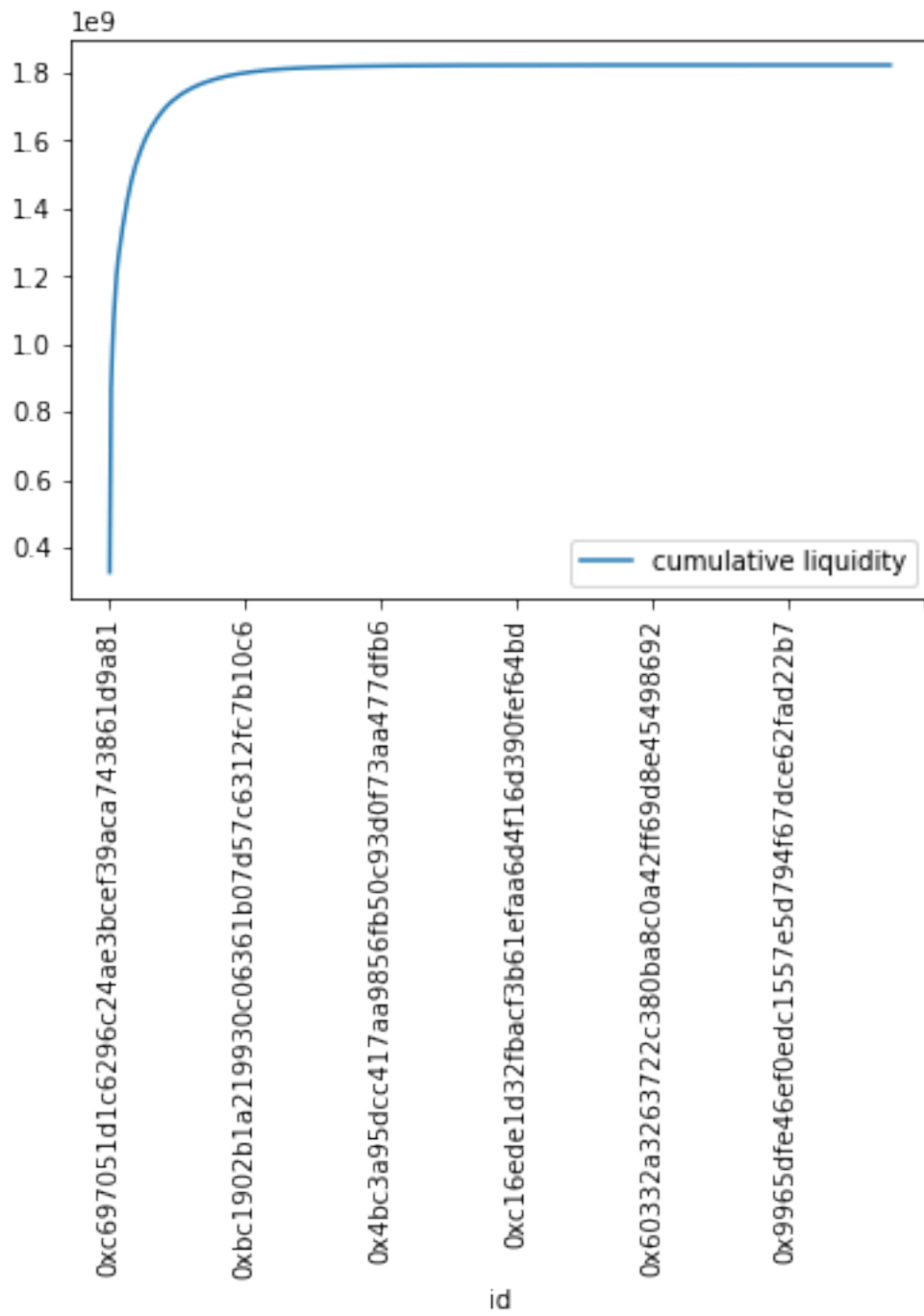
```



```
[10]: plt_df['cumulative liquidity'] = plt_df.liquidity.cumsum()
```

```
[11]: plt_df.plot(x='id', y='cumulative liquidity', logy=False)
plt.xticks(rotation=90)
```

```
[11]: (array([-200.,    0.,  200.,  400.,  600.,  800., 1000., 1200., 1400.]),
      [Text(-200.0, 0, '0x3e7356c713a9043d0efac4d9b4e2d993d2e62a79'),
       Text(0.0, 0, '0xc697051d1c6296c24ae3bcef39aca743861d9a81'),
       Text(200.0, 0, '0xbc1902b1a219930c06361b07d57c6312fc7b10c6'),
       Text(400.0, 0, '0x4bc3a95dcc417aa9856fb50c93d0f73aa477dfb6'),
       Text(600.0, 0, '0xc16ede1d32fbacf3b61efaa6d4f16d390fef64bd'),
       Text(800.0, 0, '0x60332a3263722c380ba8c0a42ff69d8e45498692'),
       Text(1000.0, 0, '0x9965dfe46ef0edc1557e5d794f67dce62fad22b7'),
       Text(1200.0, 0, ''),
       Text(1400.0, 0, '')])
```



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