

Visualizing Github contributions

a course project of Information Visualization

Davidson Zheng

The data - Github

- web-based Git repository hosting service / source code management platform
- open source projects
- social network-like data of how developers work on repositories

The data - Github

- Commits (additions and deletions)
- Contributors
- Star
- Fork
- Issues

Insights of data - Individual

For developers, github is a great portfolio website

- **popularities** (followers, starred)
- **projects** getting involved (repositories)
- **amount** of contributions (total commits)
- **frequency** of contributions (daily/weekly/monthly commits)
- **quality** of code (stars, forks)
- **skill** set (number of languages used)
- etc.

Insights of data - Organization

- trending **projects** (stars, forks)
- competent **developers** (number of commits, activity, etc.)
- problems (issues)
- etc.

Getting the data via Github API

Getting the trending projects during the last month

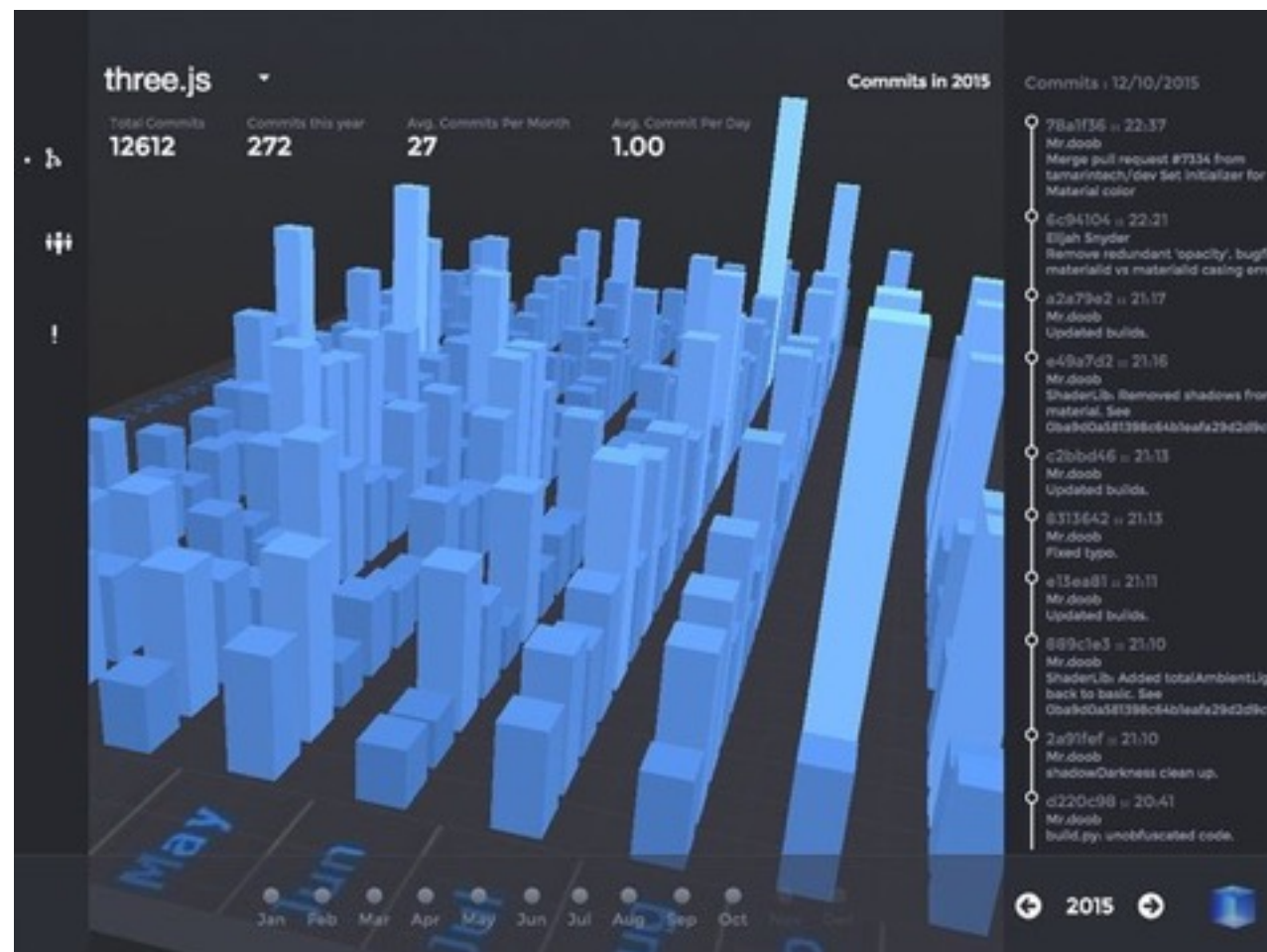
```
curl -G https://api.github.com/search/repositories \
--data-urlencode "q=created:>`date -v-1m '+%Y-%m-%d'`" \
--data-urlencode "sort=stars" \
--data-urlencode "order=desc" \
-H "Accept: application/vnd.github.preview" \
| jq ".items" > trending_project_1m.json
```

Getting the data via Github API

```
{
  "id": 50603846,
  "name": "parse-server",
  "full_name": "ParsePlatform/parse-server",
  "owner": {
    ...
    "type": "Organization",
  },
  ...
  "stargazers_count": 6432,
  "watchers_count": 6432,
  "language": "JavaScript",
  "has_issues": true,
  "has_downloads": true,
  "has_wiki": true,
  "has_pages": false,
  "forks_count": 1335,
  "mirror_url": null,
  "open_issues_count": 105,
  "forks": 1335,
  "open_issues": 105,
  "watchers": 6432,
  "default_branch": "master",
  "score": 1
},
```

My visualization

interactive 3d treemap with d3+three.js



References

d3 Treemap

<https://github.com/mbostock/d3/wiki/Treemap-Layout>

Counting Stars on Github (treemap visualization of github)

<http://adereth.github.io/blog/2013/12/23/counting-stars-on-github/>

D3 in 3D: **Combining d3.js and three.js**

<http://www.billdwhite.com/wordpress/2015/01/12/d3-in-3d-combining-d3-js-and-three-js/>

5 entertaining things you can find with the **GitHub Search API**

<https://gist.github.com/jasonrudolph/6065289>

threejs examples - minecraft

http://threejs.org/examples/#webgl_geometry_minecraft

Being implemented...