Github project network

By Mariia Bai

Thank you for helping: Leo, Marc and Liubov
Thank you for data: Raphael Tackx

Content

- Data example
- Questions
- Results
- Github structure
- Limitation / ethics aspect

GitHub

Data

Comments

	Repository	ID	User	CreatedAt	CountReactions	CountLike	CountDislike	Sentiment	SentimentScore
1063146	[mrdoob]three.js	1	mrdoob	2010-04-25	0	0	0	POSITIVE	0.9977
1063147	[mrdoob]three.js	1	splatcollision	2011-01-10	0	0	0	POSITIVE	0.9990
1063148	[mrdoob]three.js	2	mrdoob	2010-04-26	0	0	0	POSITIVE	0.7345
1063149	[mrdoob]three.js	2	Ovid	2010-04-26	0	0	0	POSITIVE	0.9975
1063150	[mrdoob]three.js	2	jurjen	2010-04-30	0	0	0	POSITIVE	0.9921

Issues / PR

	Repository	ID	User	Type	State	CommitId	CreatedAt	ClosedAt	IsMerged	CountReactions	CountLike	CountDislike
238087	[mrdoob]three.js	1	chrislloyd	issue	closed	NaN	2010-04-25	2010-04-26	False	0	0	0
238088	[mrdoob]three.js	2	Ovid	issue	closed	NaN	2010-04-26	2010-11-04	False	0	0	0
238089	[mrdoob]three.js	3	icidasset	issue	closed	NaN	2010-06-20	2010-06-21	False	0	0	0
238090	[mrdoob]three.js	4	SignpostMarv	issue	closed	NaN	2010-06-23	2010-06-24	False	0	0	0
238091	[mrdoob]three.js	5	SignpostMarv	issue	closed	NaN	2010-06-23	2010-06-23	False	0	0	0

Questions

- How many communities we have?
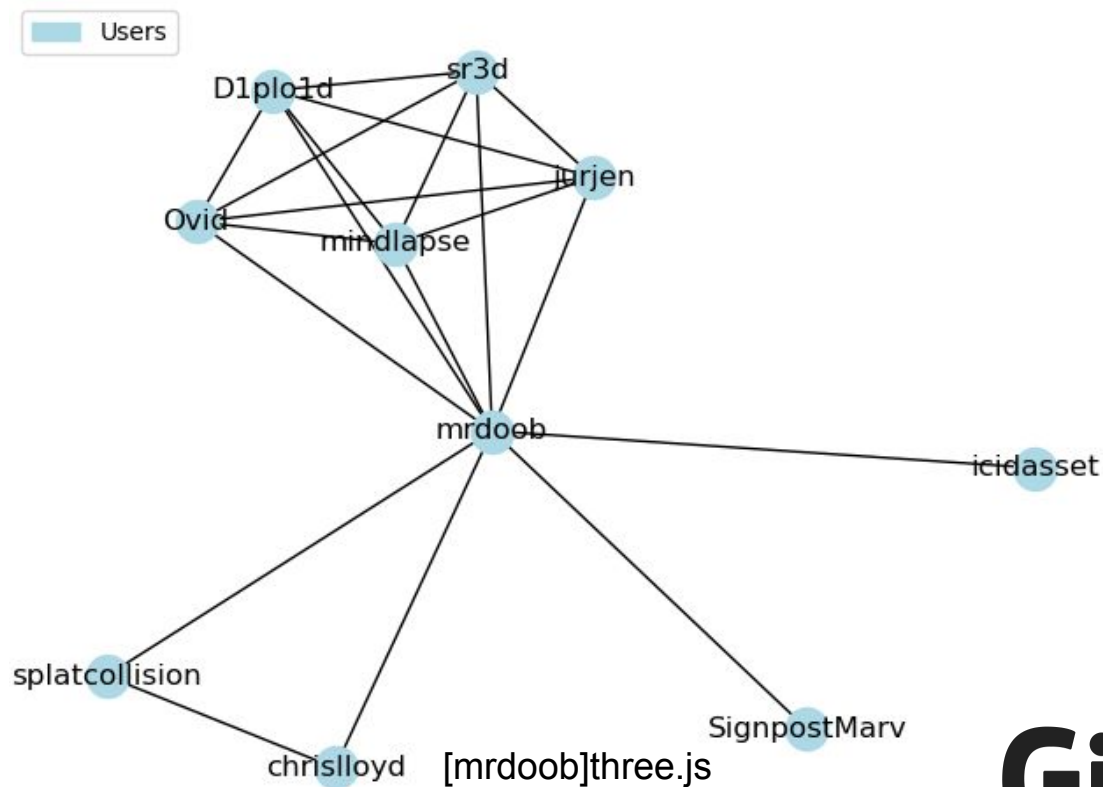- Who is central?
- Difference between networks

GitHub
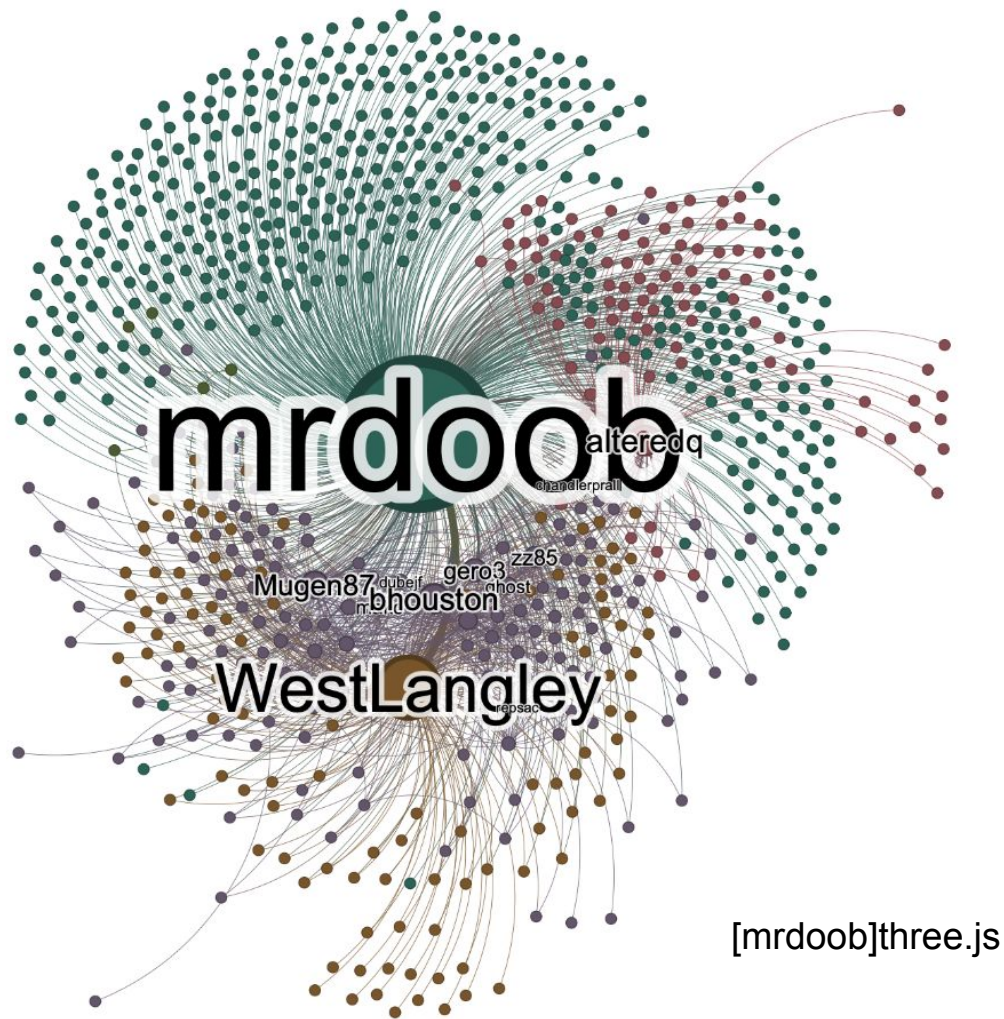
Results - FULL GRAPH

[mrdoob]three.js

GitHub
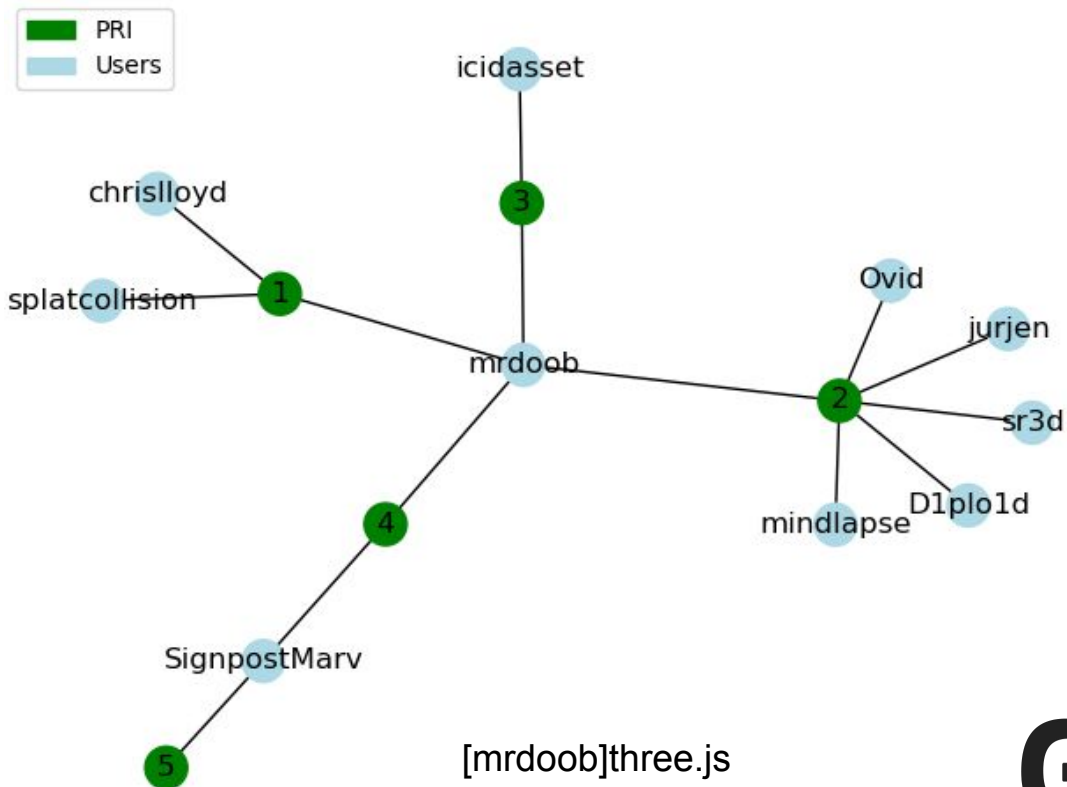
Results - Bipartite graph
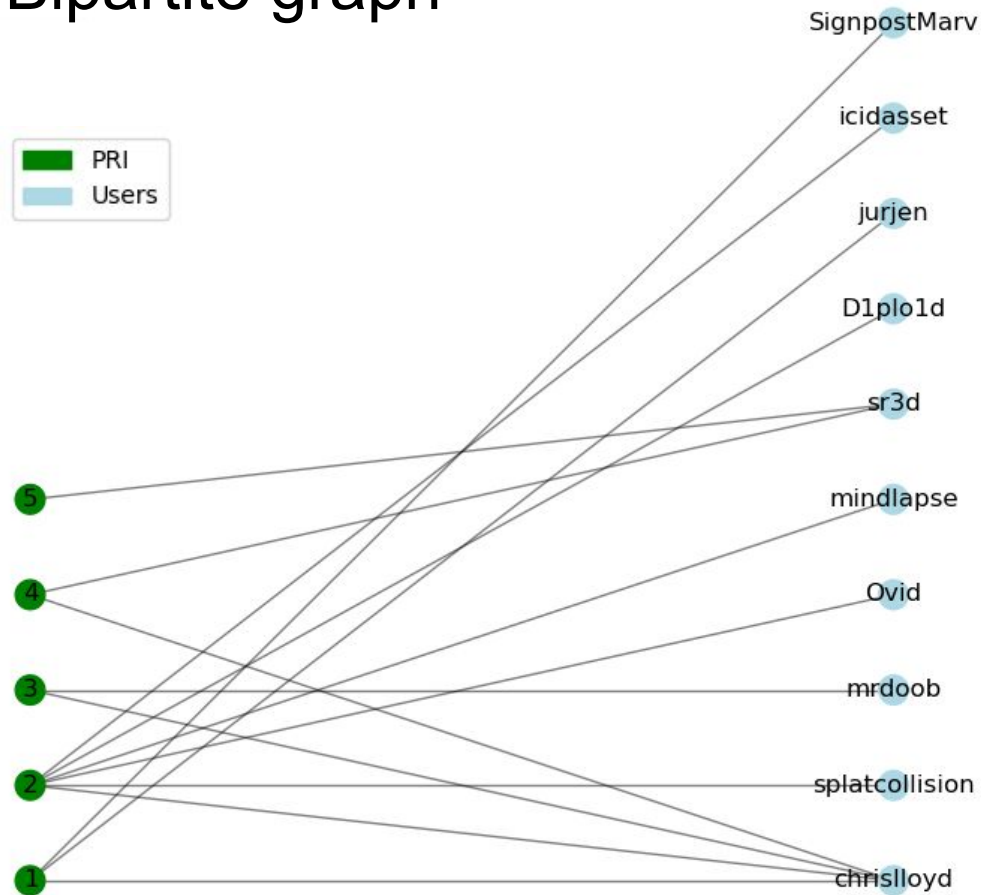
Results - Projection on users

Results
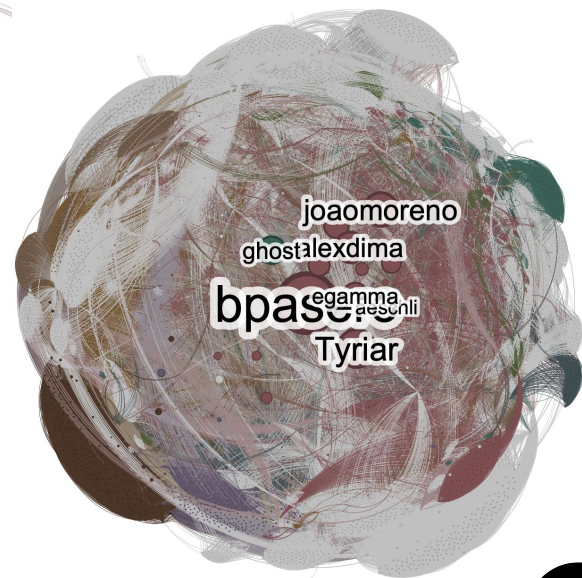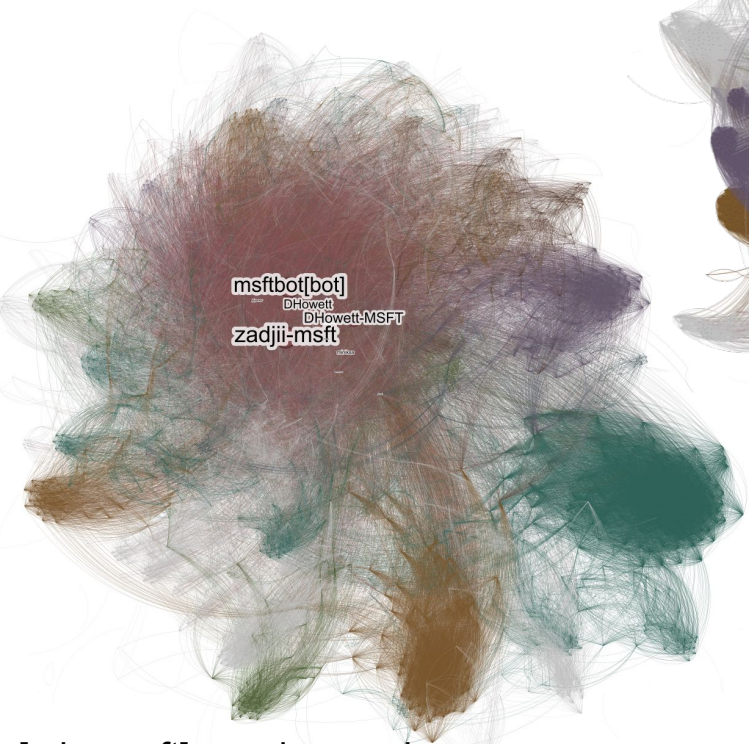

[mrdoob]three.js

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Results

[mrdoob]three.js

[microsoft]TypeScript
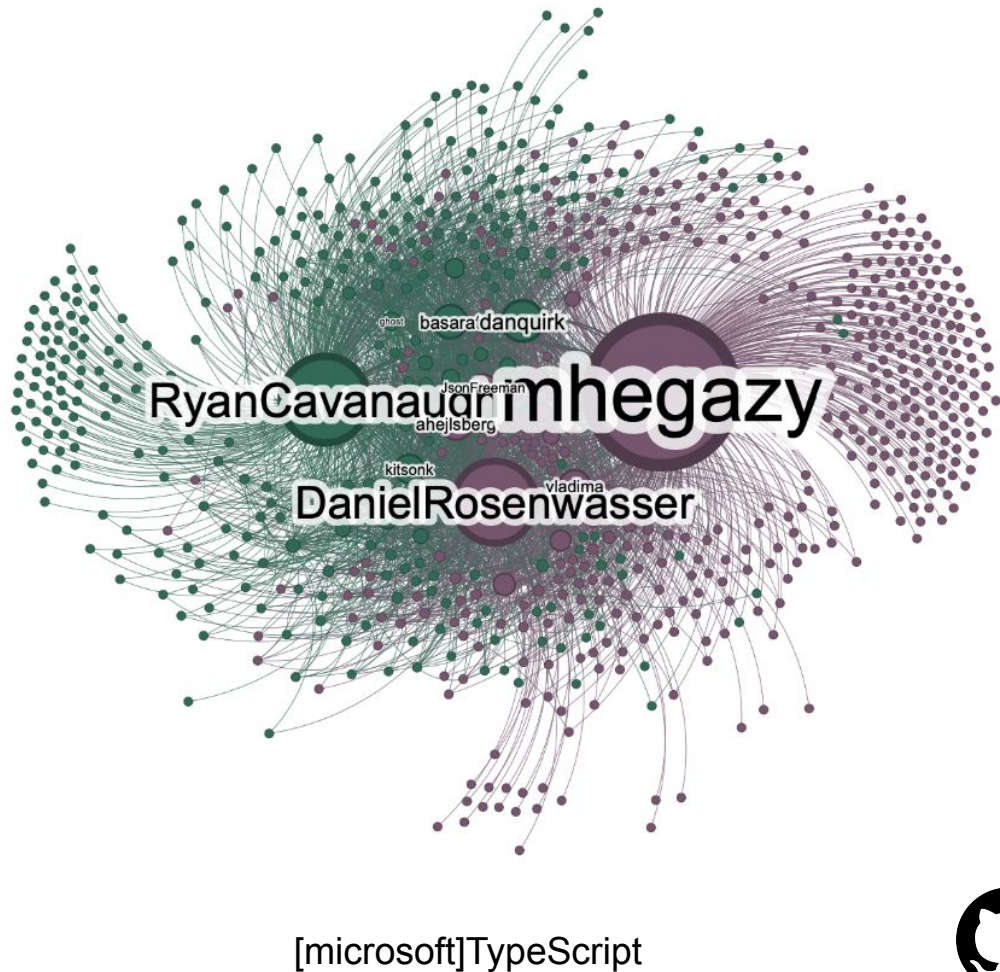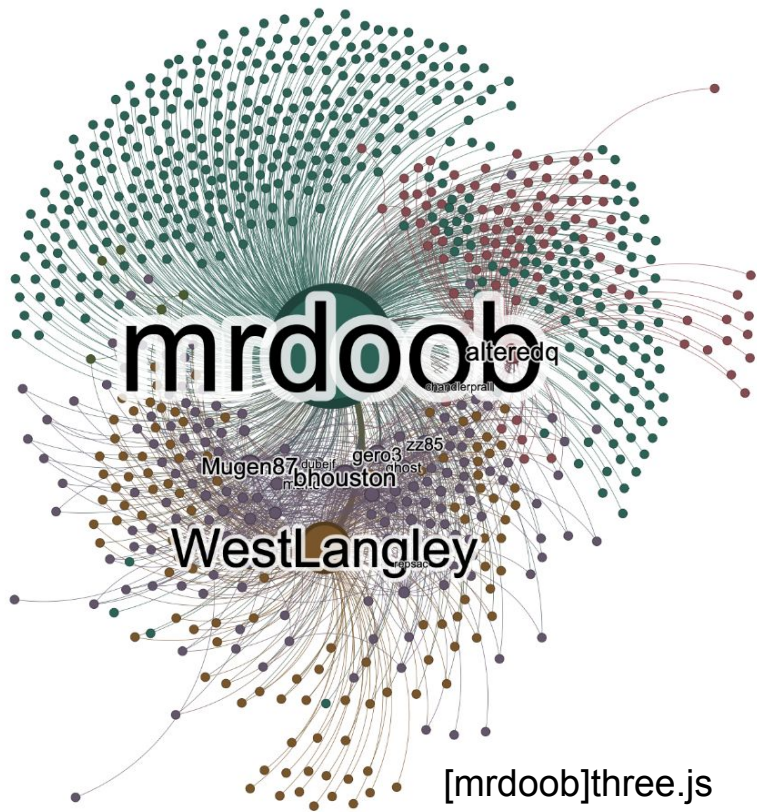
Results - Microsoft

to be continued

[microsoft]TypeScript_graph_users

RyanCavanaugh

DanielRosenwasser

mhegazy

msftbot[bot]

DHowett

DHowett-MSFT

zadjii-msft

joaomoreno

ghost alexdima

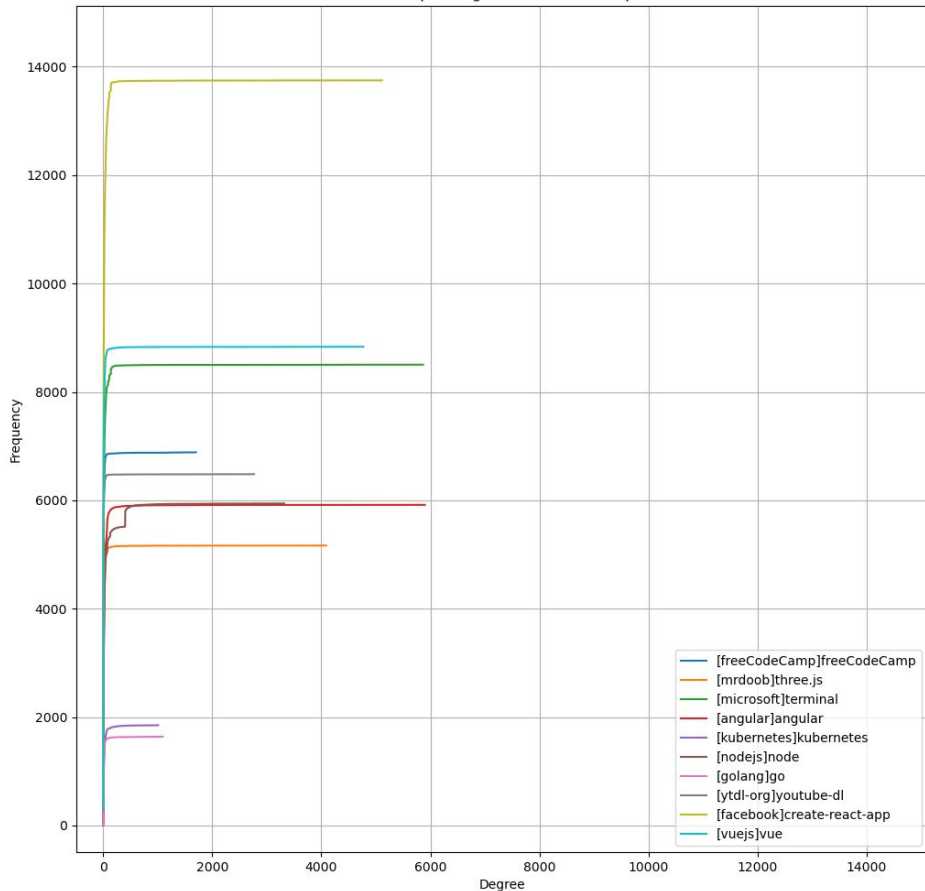bpasero egamma aeschli

Tyriar

[microsoft]terminal_graph_users

10

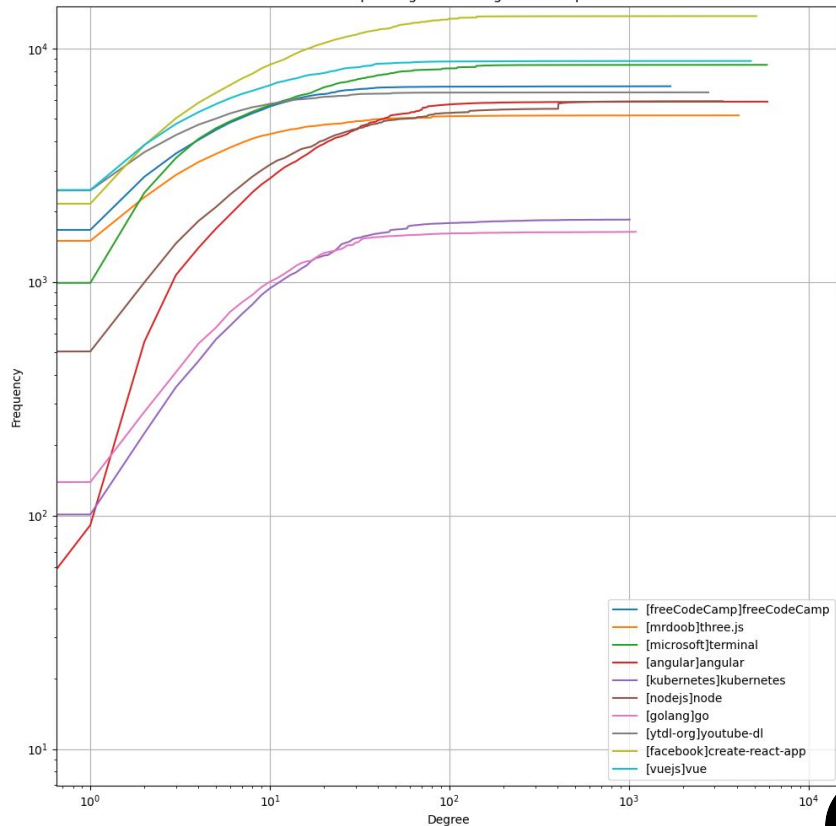[microsoft]vscode_graph_users

Cumulative histograms for first 10 repositories

Cumulative step histograms for first 10 repositories

Cumulative step histograms for log first 10 repositories

Github structure


```
.
├── data_original
│   ├── github_1000stars_comments.csv
│   ├── github_1000stars_issues.csv
│   └── mrdoob_three.js.csv
├── figures
│   ├── plots
│   │   ├── Cumulative step histograms for first 10 repositories.png
│   │   ├── Cumulative step histograms for last 10 repositories.png
│   │   ├── Cumulative step histograms for top +-10 repositories.png
│   │   ├── [mrdoob]three.js- bipartite graph.png
│   │   ├── [mrdoob]three.js- full graph.png
│   │   └── [mrdoob]three.js- projection on users.png
│   └── results_gephi
│       ├── microsoft.pdf
│       └── threejs.pdf
├── gephi
│   ├── freeCoseCamp.gephi
│   ├── g_users_network.gephi
│   ├── g_users_network_2.gephi
│   └── network with marc.gephi
├── notebooks
│   ├── 1_bmarid_github.ipynb
│   ├── 2_bmarid_github.ipynb
│   ├── 3_bmarid_github.ipynb
│   ├── 4_bmarid_github.ipynb
│   └── _bmarid_github.ipynb
├── results
│   ├── data_created
│   │   ├── 2_edges.csv
│   │   ├── 2_nodes.csv
│   │   └── three.js-id_commit-user.csv
```

```
├── results
│   ├── data_created
│   │   ├── 2_edges.csv
│   │   ├── 2_nodes.csv
│   │   └── three.js-id_commit-user.csv
│   ├── graph
│   │   ├── [CyC2018]CS-Notes_graph_users.gexf
│   │   ├── [angular]angular_graph_users.gexf
│   │   ├── [codecrafters-io]build-your-own-x_graph_users.gexf
│   │   ├── [donnemartin]system-design-primer_graph_users.gexf
│   │   ├── [facebook]create-react-app_graph_users.gexf
│   │   ├── [freeCodeCamp]freeCodeCamp_graph_users.gexf
│   │   ├── [golang]go_graph_users.gexf
│   │   ├── [jackfrued]Python-100-Days_graph_users.gexf
│   │   ├── [jlevy]the-art-of-command-line_graph_users.gexf
│   │   ├── [justjavac]free-programming-books-zh_CN_graph_users.gexf
│   │   ├── [kubernetes]kubernetes_graph_users.gexf
│   │   ├── [labuladong]fucking-algorithm_graph_users.gexf
│   │   ├── [microsoft]terminal_graph_users.gexf
│   │   ├── [mrdoob]three.js_graph_users.gexf
│   │   ├── [nodejs]node_graph_users.gexf
│   │   ├── [ossu]computer-science_graph_users.gexf
│   │   ├── [torvalds]linux_graph_users.gexf
│   │   ├── [trekhleb]javascript-algorithms_graph_users.gexf
│   │   ├── [vuejs]vue_graph_users.gexf
│   │   ├── [ytdl-org]youtube-dl_graph_users.gexf
│   │   ├── graph_full.gexf
│   │   ├── graph_users.gexf
│   │   └── graph_users_microsoft.gexf
├── save
│   ├── _bmarid_github.ipynb
│   ├── graph_full.gexf
│   └── graph_users.gexf
```

GitHub

Thank you!

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