

Bus factor estimation

Bus factor is a measurement which attempts to estimate the number of key persons a project would need to lose in order for it to become stalled due to lack of expertise. It is commonly used in the context of software development.

For example, if a given project is developed by a single person, then the project's bus factor is equal to 1 (it's likely for the project to become unmaintained if the main contributor suddenly stops working on it).

Your task is to implement a program which will find popular GitHub projects with a bus factor of 1.

Given a programming language name (`language`) and a project count (`project_count`), your program should fetch the first `project_count` most popular projects (sorted by the number of GitHub stars) from the given `language` .

Then, for each project, you should inspect its contributor statistics.

We assume a project's bus factor is 1 if its most active developer's contributions account for **75% or more** of the total contributions count from the top 25 most active developers.

Input: programming language name, number of projects to consider

Output: list of tuples containing the project's name, top contributor's name and their contribution percentage

Example

```
$ ./bus_factor.py --language rust --project_count 50
```

project: 996.ICU	user: 996icu	percentage: 0.80
project: ripgrep	user: BurntSushi	percentage: 0.89
project: swc	user: kdy1	percentage: 0.79
project: Rocket	user: SergioBenitez	percentage: 0.86
project: exa	user: ogham	percentage: 0.85

project: rustdesk	user: rustdesk	percentage: 0.85
project: sonic	user: valeriansaliou	percentage: 0.94
project: iced	user: hecrj	percentage: 0.88
project: delta	user: dandavison	percentage: 0.88
project: navi	user: denisidoro	percentage: 0.79
project: hyper	user: seanmonstar	percentage: 0.79
project: book	user: carols10cents	percentage: 0.76
project: xsv	user: BurntSushi	percentage: 0.92
project: py-spy	user: benfred	percentage: 0.81

The above is a list of projects which match our bus factor criteria, chosen from the first 50 most starred Rust projects.

Requirements

- make use of GitHub's REST API to get the data (for example, here's how you can search through repositories:
<https://docs.github.com/en/rest/reference/search#search-repositories>)
- use GitHub token authentication (<https://github.com/settings/tokens>)
- provide the personal GitHub token either through a file or an environment variable (don't hardcode it)
- use any one of these languages to implement your solution: **Python, Rust, JavaScript/TypeScript**
- language name and other search criteria must be specified as command-line parameters
- sort the popular GitHub projects by their number of stars

Your project can include any third-party libraries which you deem necessary (but you should be able to explain why you need them).

You'll get **bonus points** for using an **async framework** and having **automated tests**.

Please upload your solution to a **public Git repository** on a hosting platform of your choice (GitHub, GitLab, BitBucket) and send us a link to that repo.

We generally expect you to send us your solution **within a week** from receiving this description. If you need more time or the time slot is not suitable for you - let us know!