

BioTools Systems biology Report

Author: Bruno Sá, Carissa Bleker, Anže Županič, Miguel Rocha

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Data source: bio.tools Web API (June 30, 2025)

In this report we will analyze the data extracted from the BioTools database more specifically related to the topic 'Systems biology' using the bio.tools Web API.

Automated Report

This notebook is **automatically generated** by querying the [bio.tools](#) Web API for the topic *Systems biology*.

All available data is fetched, programmatically parsed, plotted, and rendered in-line.

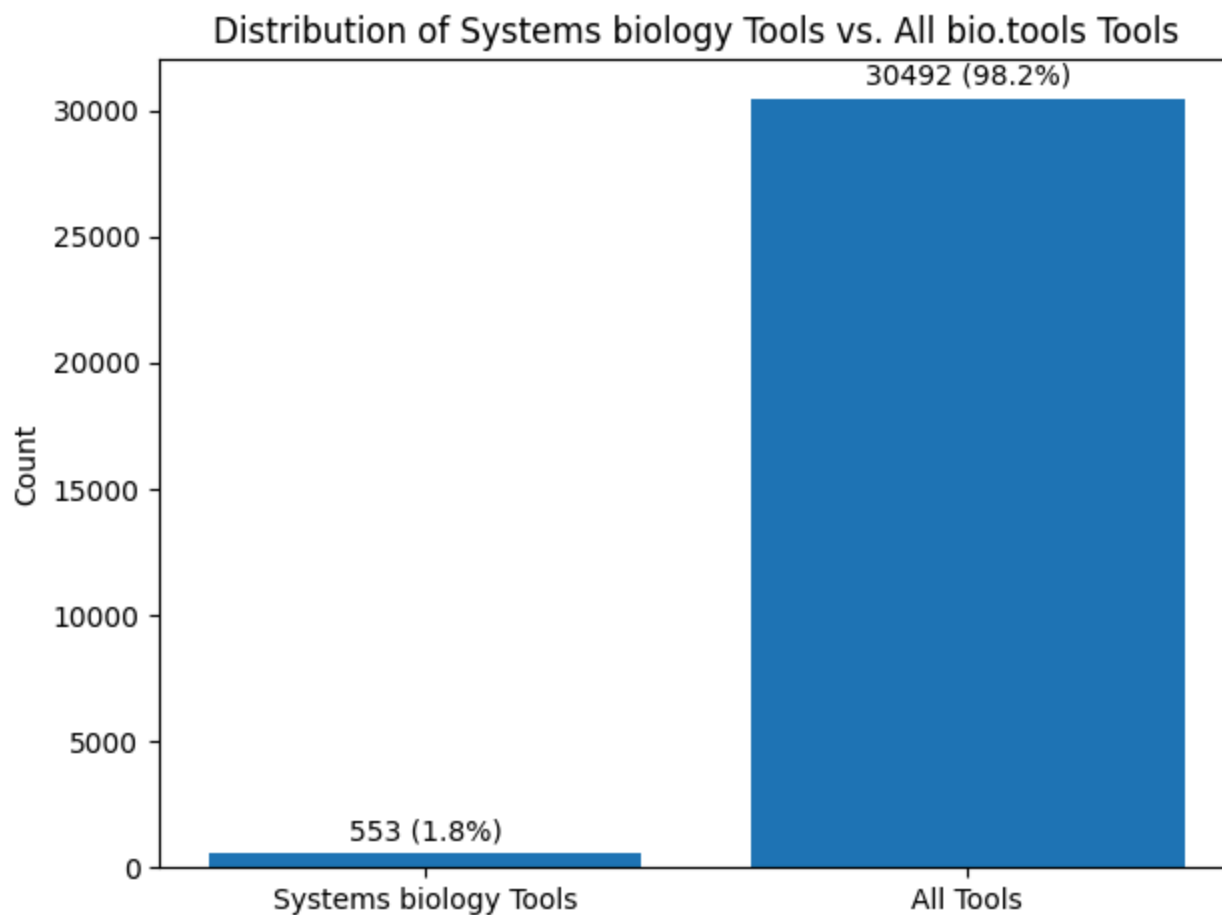
Because the bio.tools schema is consistent across communities, you can adapt this exact code simply by changing the community identifier to produce reports for any other domain.

All available topics can be found in the [BioPortal - EDAM](#) .

Tools Extraction

A total of 553 tools were extracted from the bio.tools database by filtering the topic 'Systems biology'.

As shown in the bar chart below, 553 out of 30492 total tools ($\approx 1.8\%$) are tagged under *Systems biology*.



Attributes Analysis

In this section, we will analyze all the attributes of the tools related to 'Systems biology' extracted from the BioTools database:

- [name](#)
- [description](#)
- [homepage](#)
- [biotoolsID](#)
- [biotoolsCURIE](#)
- [version](#)
- [otherID](#)
- [relation](#)
- [function](#)
- [toolType](#)
- [topic](#)
- [operatingSystem](#)
- [language](#)
- [license](#)
- [collectionID](#)
- [maturity](#)
- [cost](#)
- [accessibility](#)
- [elixirPlatform](#)
- [elixirNode](#)
- [elixirCommunity](#)
- [link](#)
- [download](#)
- [documentation](#)
- [publication](#)
- [credit](#)
- [owner](#)
- [additionDate](#)
- [lastUpdate](#)
- [editPermission](#)
- [validated](#)
- [homepage_status](#)
- [elixir_badge](#)
- [confidence_flag](#)

Note: Detailed definitions for each attribute are available in the [BioTools Curators Guide](#).

Name

A total of 553 unique names were found for the tools related to 'Systems biology'.

Column name: name

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 553

Any additionnal notes can be inserted here.

Description

A total of 553 unique descriptions were found for the tools related to 'Systems biology'.

```
-----  
Column name: description  
-----  
Total number of tags: 553  
Number of empty tags: 0  
Percentage of empty tags: 0.00%  
Number of unique tags: 553  
-----
```

Any additionnal notes can be inserted here.

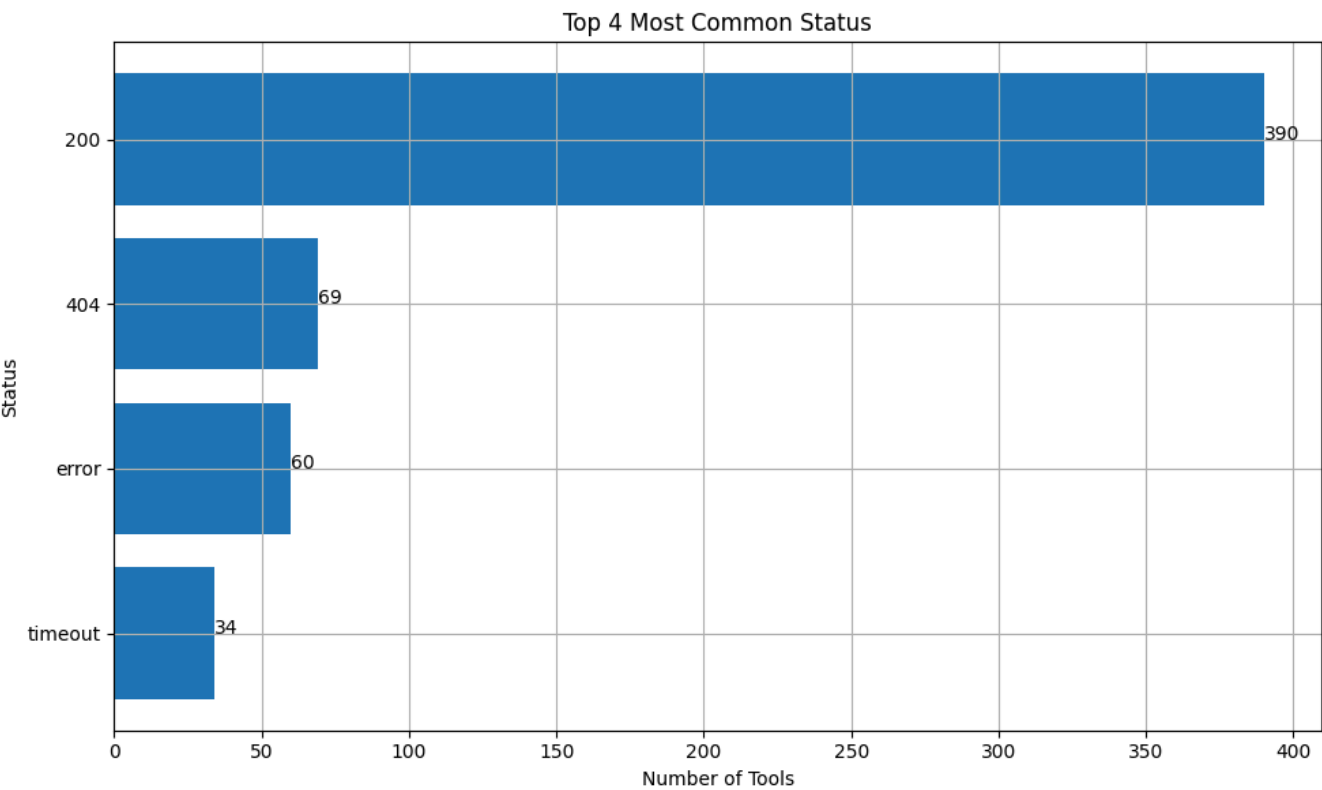
Homepage

A total of 549 unique homepages were found for the tools related to 'Systems biology'.

Column name: homepage

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 549

In order to check the availability of the homepage, we will use the check_url function to check the status of the homepage. Available (200), were not found (error 404), not accessible (several different errors) and timeout (no response in 2 seconds time).



Any additionnal notes can be inserted here.

BiotooolsID

A total of 553 unique biotooolsIDs were found for the tools related to 'Systems biology'.

Column name: biotooolsID

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 553

Any additionnal notes can be inserted here.

BioToolsCURIE

A total of 553 unique BioTools CURIEs were found for the tools related to 'Systems biology'.

Column name: biotoolsCURIE

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 553

Any additionnal notes can be inserted here.

Version

A total of 411 tools without a version.

The other tools have inconsistent version formats.

Column name: version

Total number of tags: 142

Number of empty tags: 411

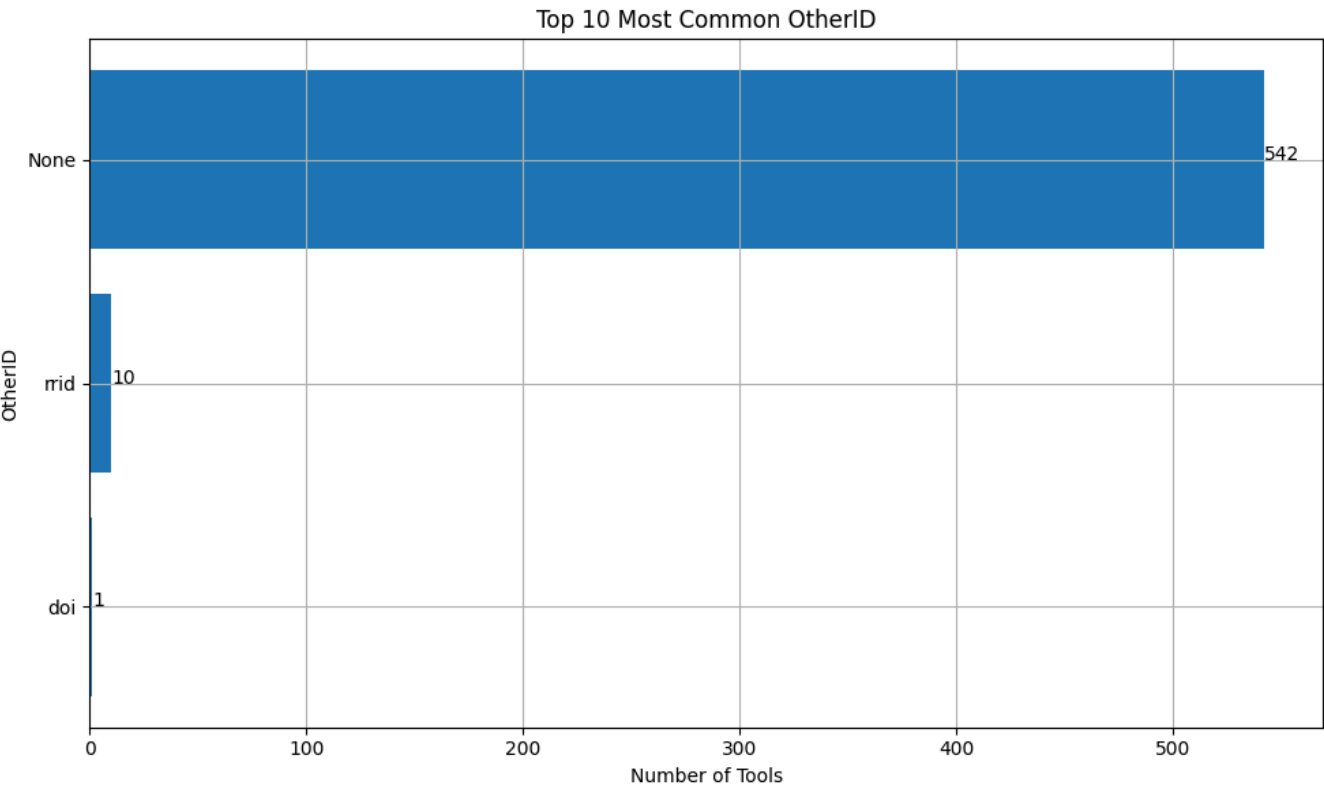
Percentage of empty tags: 74.32%

Any additionnal notes can be inserted here.

OtherID

Column name: otherID

Total number of tags: 11
Number of empty tags: 542
Percentage of empty tags: 98.01%

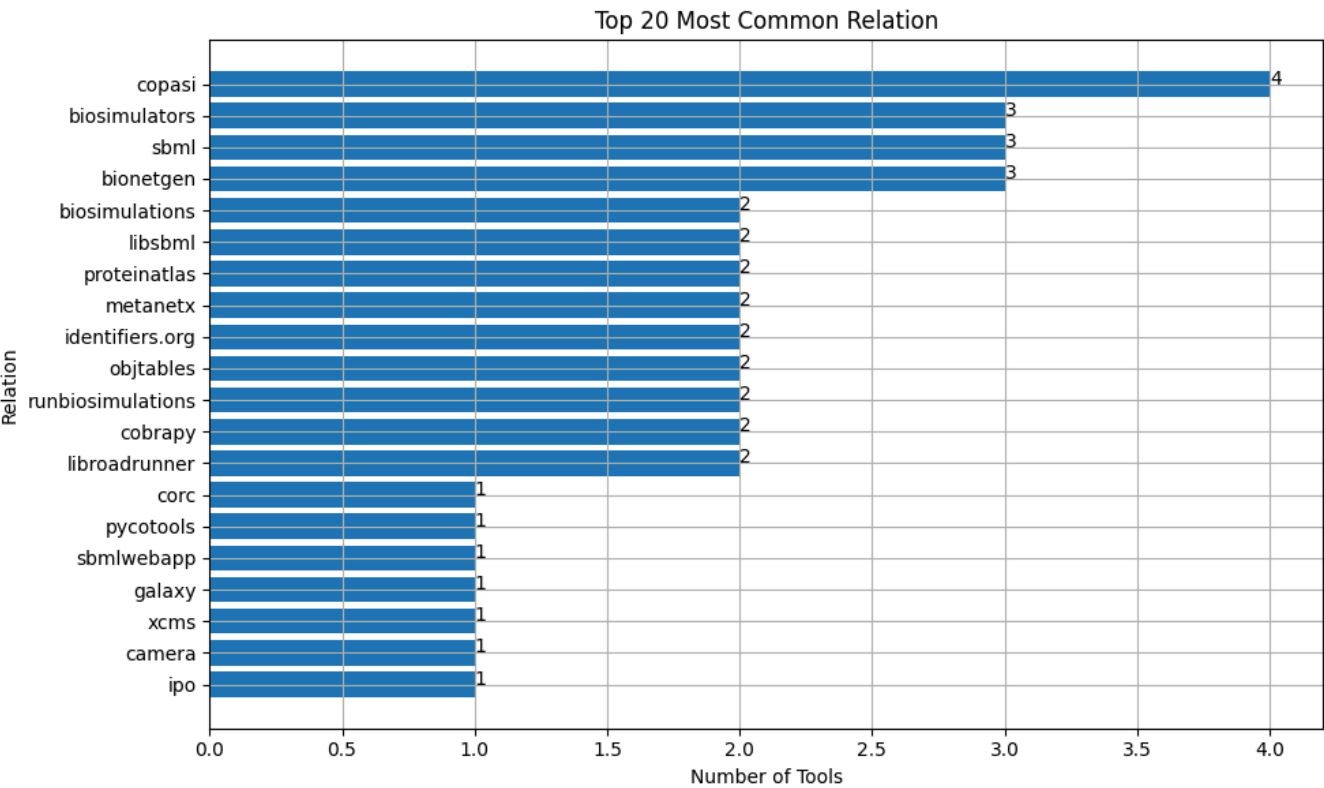


Any additionnal notes can be inserted here.

Relation

Column name: relation

Total number of tags: 23
Number of empty tags: 530
Percentage of empty tags: 95.84%



Any additionnal notes can be inserted here.

Function

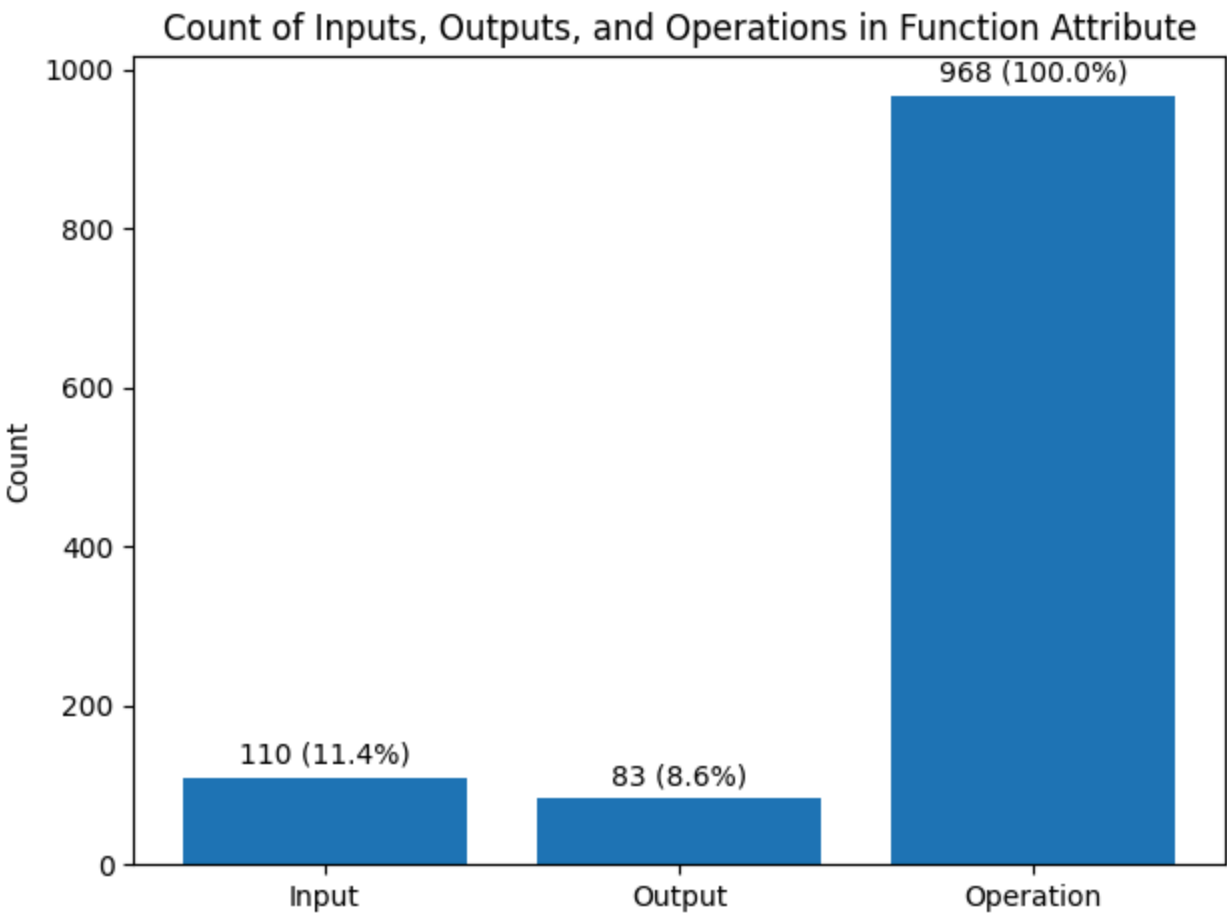
This attribute describes the primary function of the tool, the input and output and the operation it performs.

Its importante to note that a single tool can have multiple operations

```
-----
Column name: function
-----
Total number of tags: 538
Number of empty tags: 15
Percentage of empty tags: 2.71%
-----
```

The bar graph below illustrates the distribution of tool functions associated with 'Systems biology'.

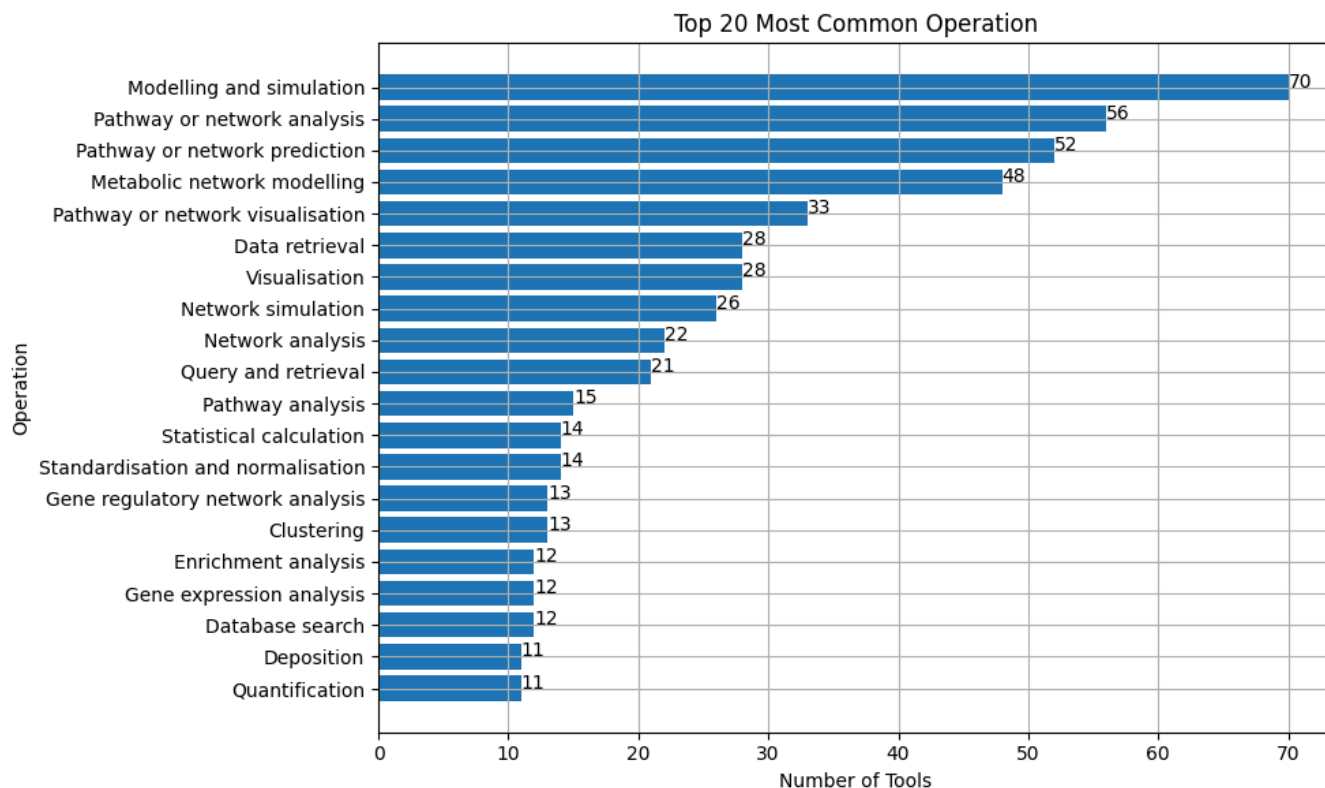
It's important to note that these fields primarily support interoperability; their limited availability can make automated workflow generation challenging.



Any additionnal notes can be inserted here.

Function - Operation

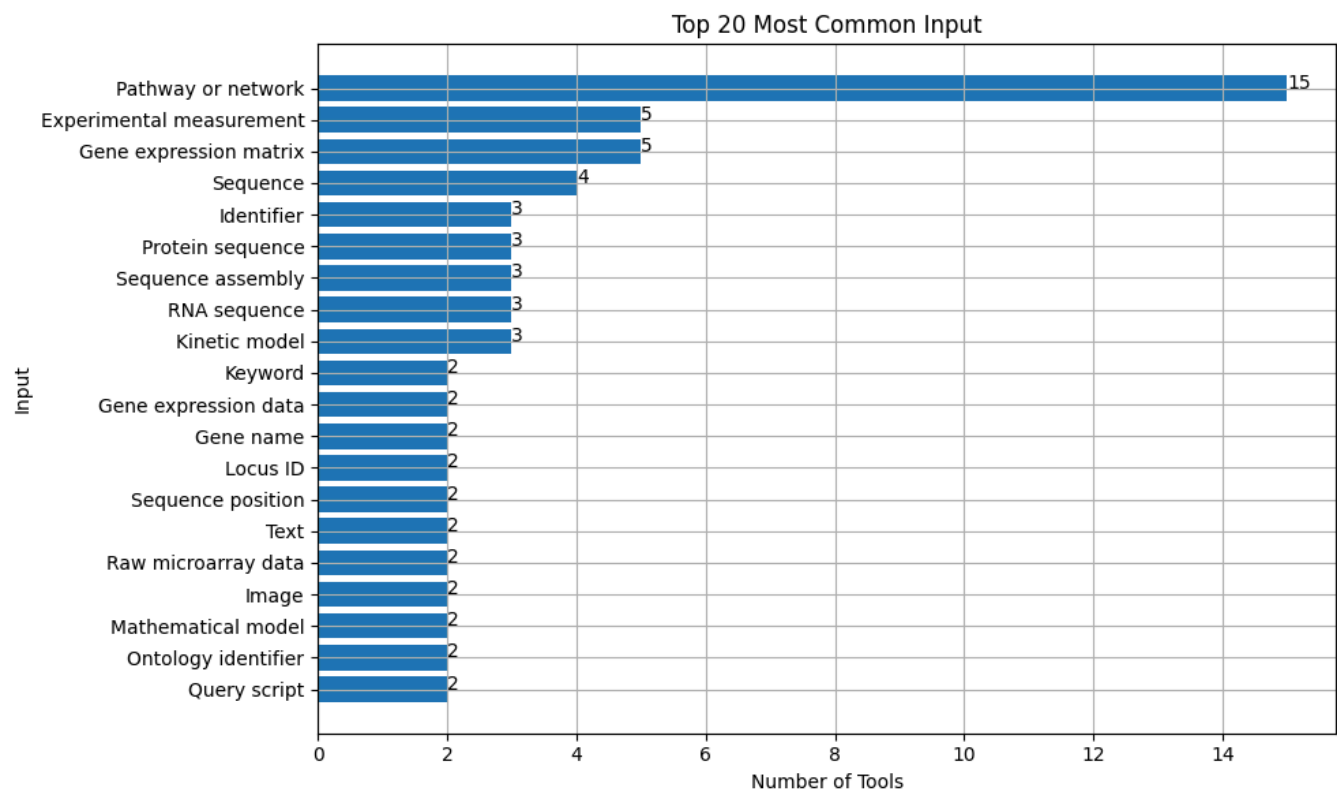
The bar graph below illustrates the distribution of tool operations associated with 'Systems biology'.



Any additional notes can be inserted here.

Function - Input

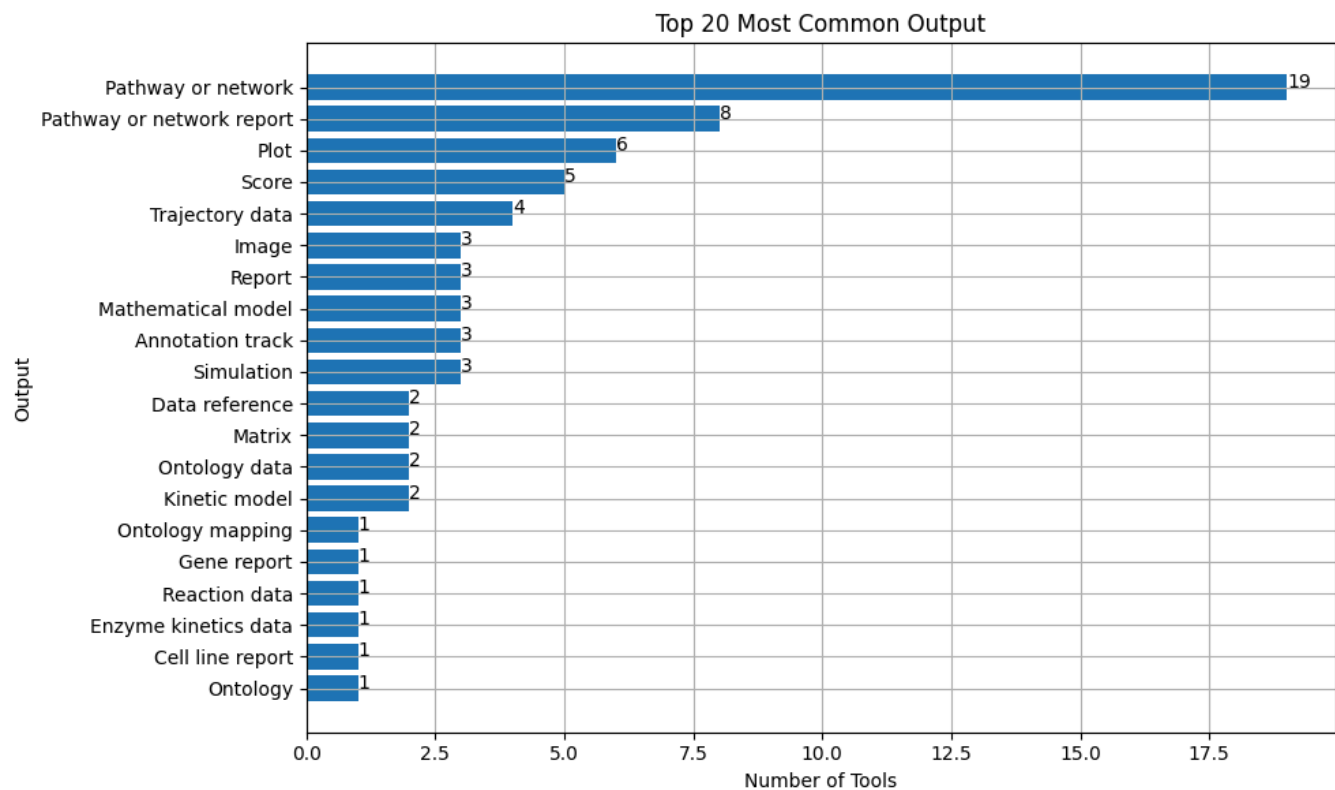
The bar graph below illustrates the distribution of tool inputs associated with 'Systems biology'.



Any additionnal notes can be inserted here.

Function - Output

The bar graph below illustrates the distribution of tool outputs associated with 'Systems biology'.



Any additional notes can be inserted here.

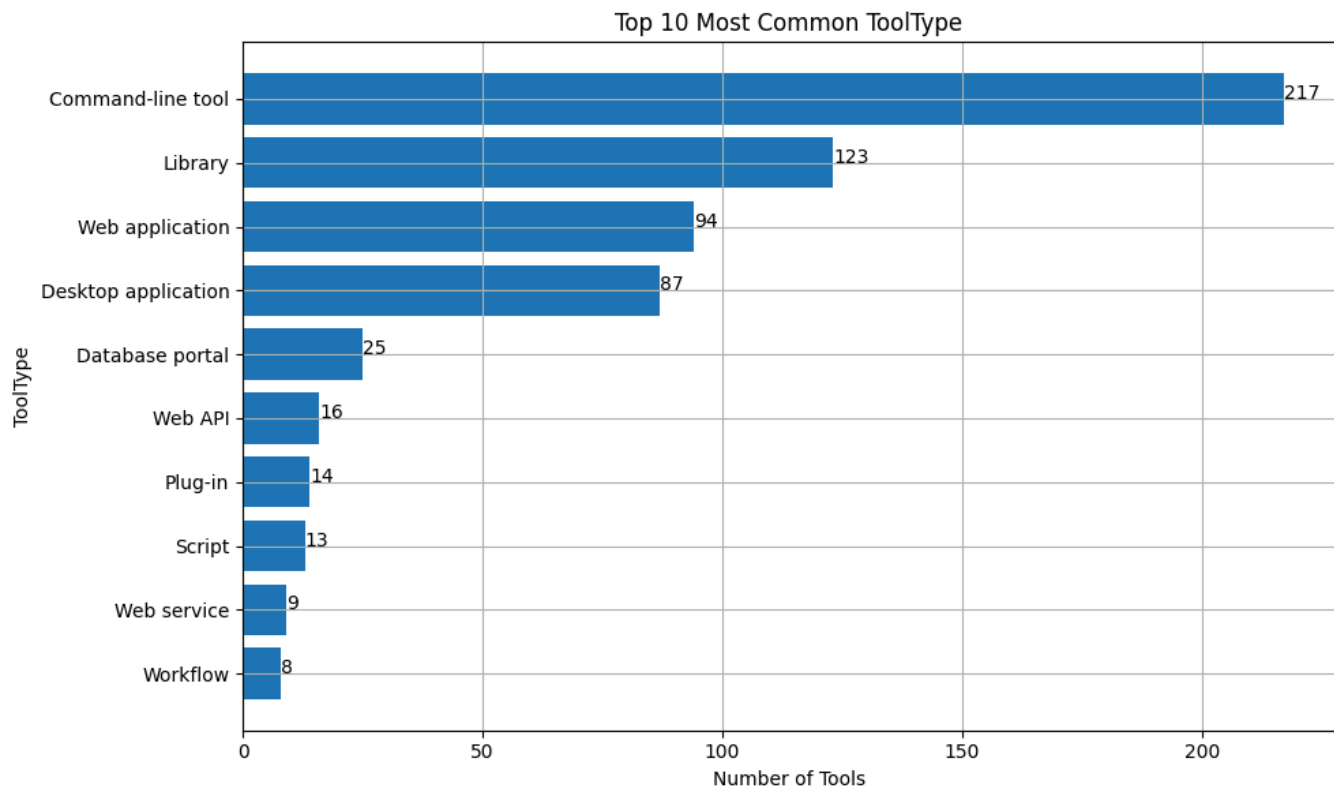
ToolType

Column name: toolType

Total number of tags: 529

Number of empty tags: 24

Percentage of empty tags: 4.34%



Any additionnal notes can be inserted here.

Topic

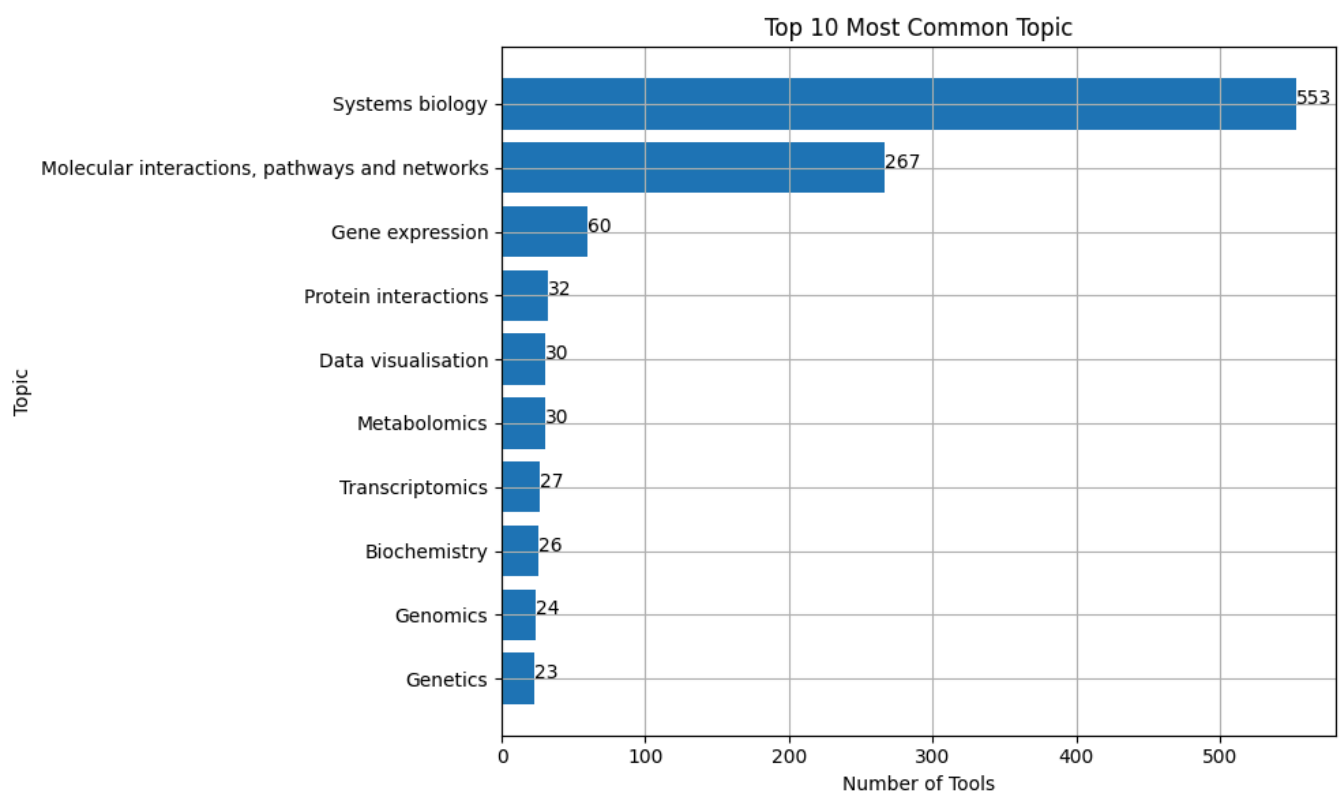
As expected, the topic Systems biology is present in all tools related to 'Systems biology'.

Column name: topic

Total number of tags: 553

Number of empty tags: 0

Percentage of empty tags: 0.00%



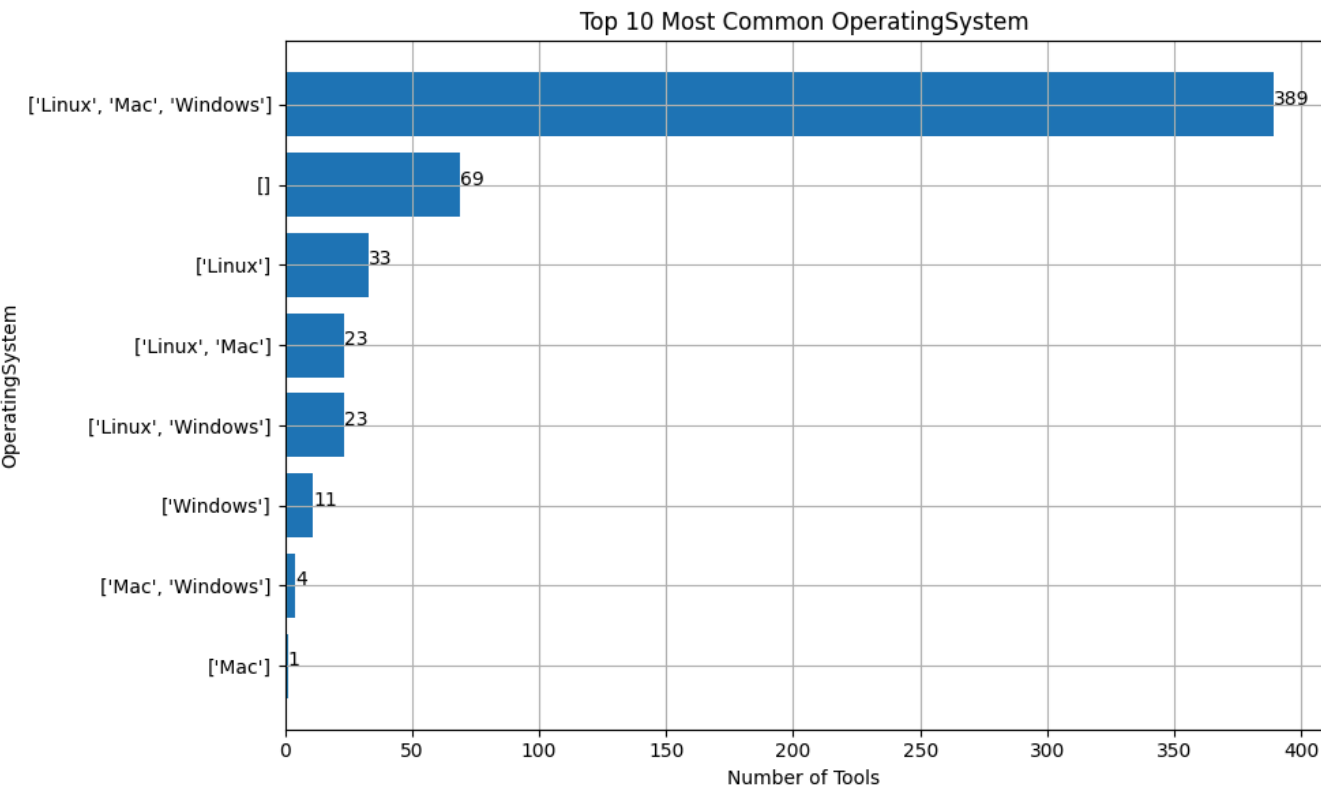
Any additionnal notes can be inserted here.

Operating System

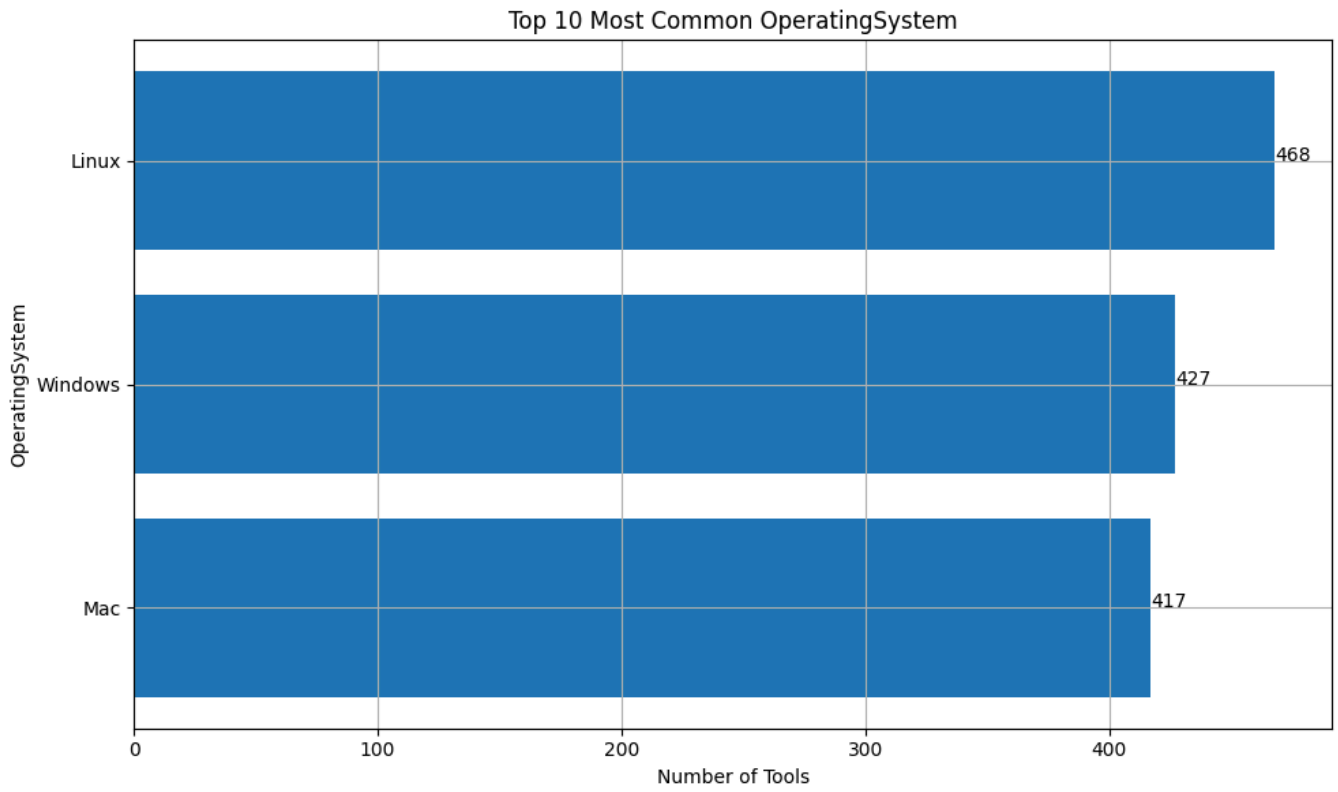
Column name: operatingSystem

Total number of tags: 484
Number of empty tags: 69
Percentage of empty tags: 12.48%

The bar graph below illustrates the distribution of operating systems associated with 'Systems biology'.



Furthermore, the bar graph below illustrates the overall distribution of operating systems associated with 'Systems biology'.



Any additionnal notes can be inserted here.

Language

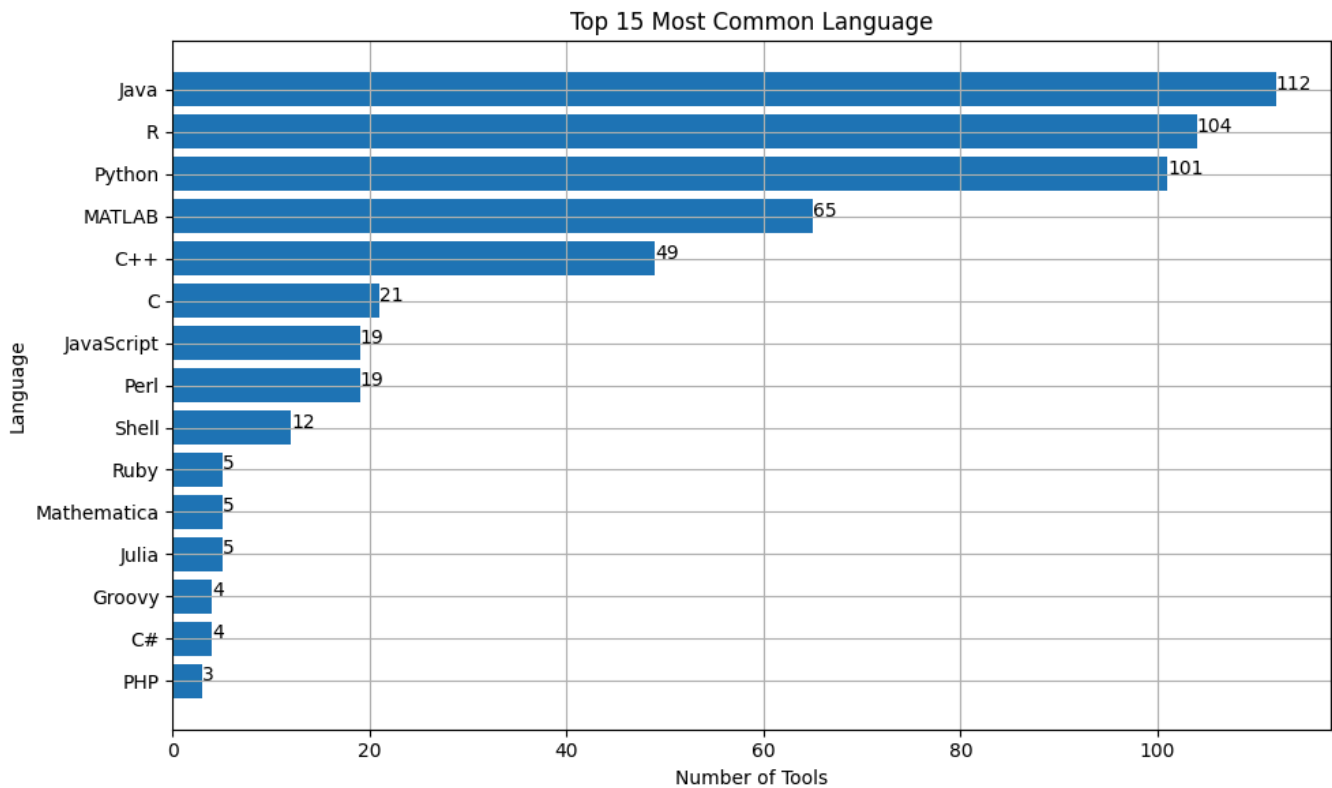
Column name: language

Total number of tags: 414

Number of empty tags: 139

Percentage of empty tags: 25.14%

The bar graph below illustrates the distribution of languages associated with 'Systems biology'.



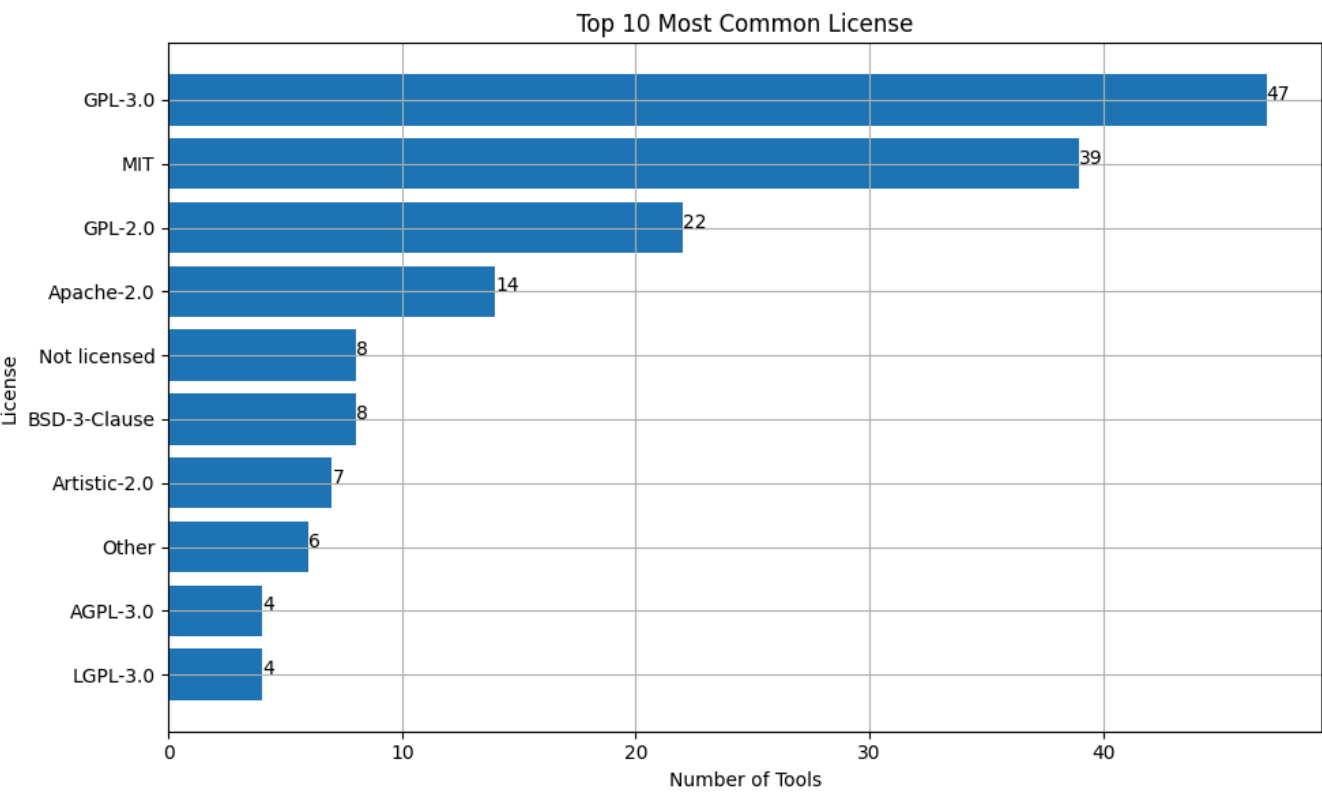
Any additional notes can be inserted here.

License

Its important to note that exist a 'Not licensed ' option available and not being used.

Column name: license

Total number of tags: 176
Number of empty tags: 377
Percentage of empty tags: 68.17%



Any additionnal notes can be inserted here.

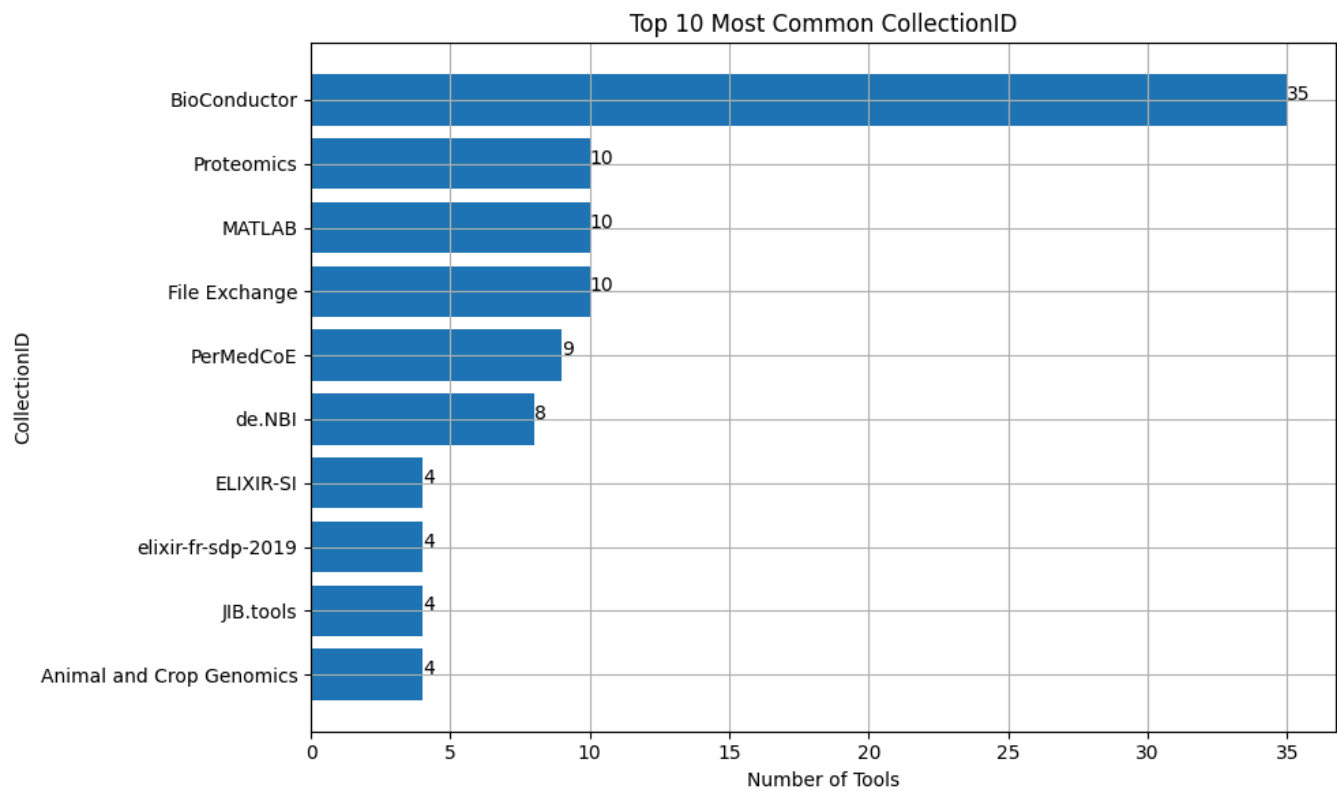
CollectionID

Column name: collectionID

Total number of tags: 104

Number of empty tags: 449

Percentage of empty tags: 81.19%

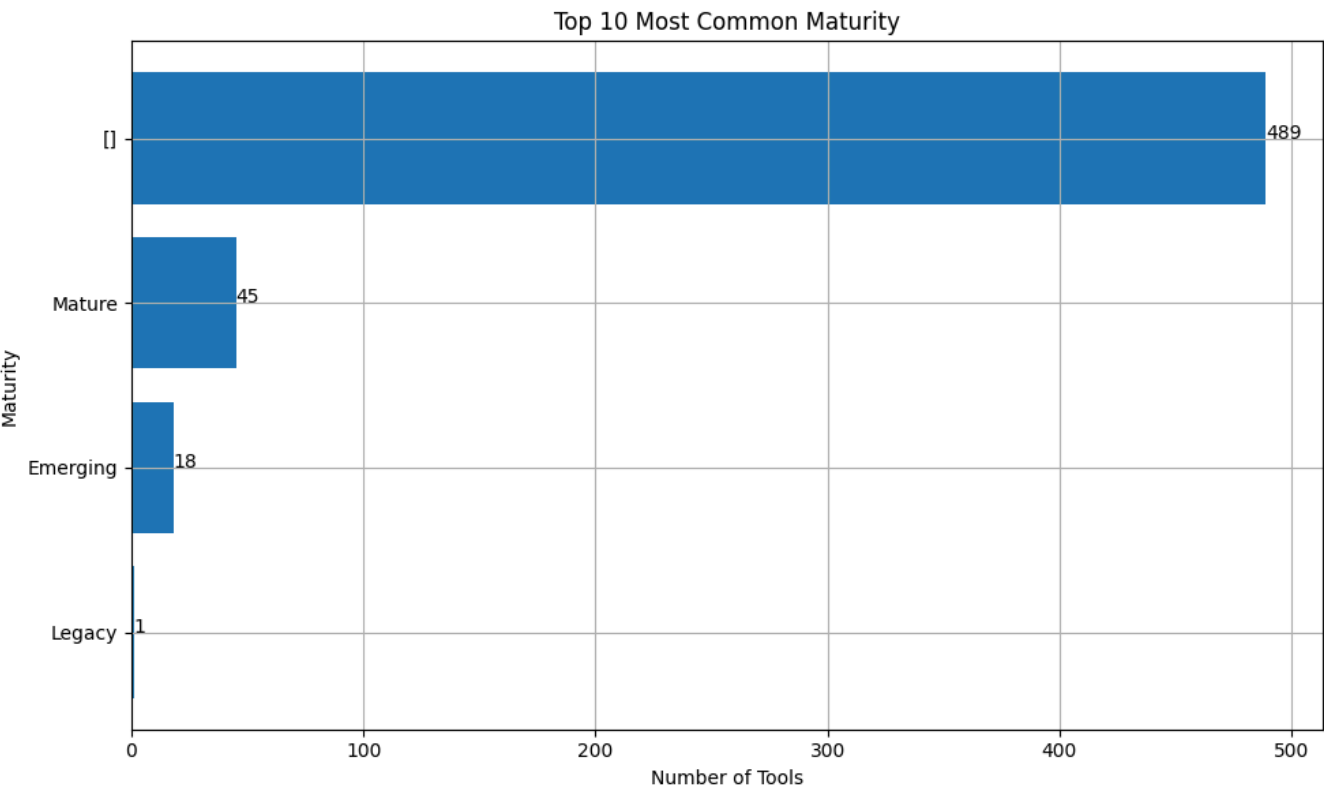


Any additionnal notes can be inserted here.

Maturity

Column name: maturity

Total number of tags: 64
Number of empty tags: 489
Percentage of empty tags: 88.43%

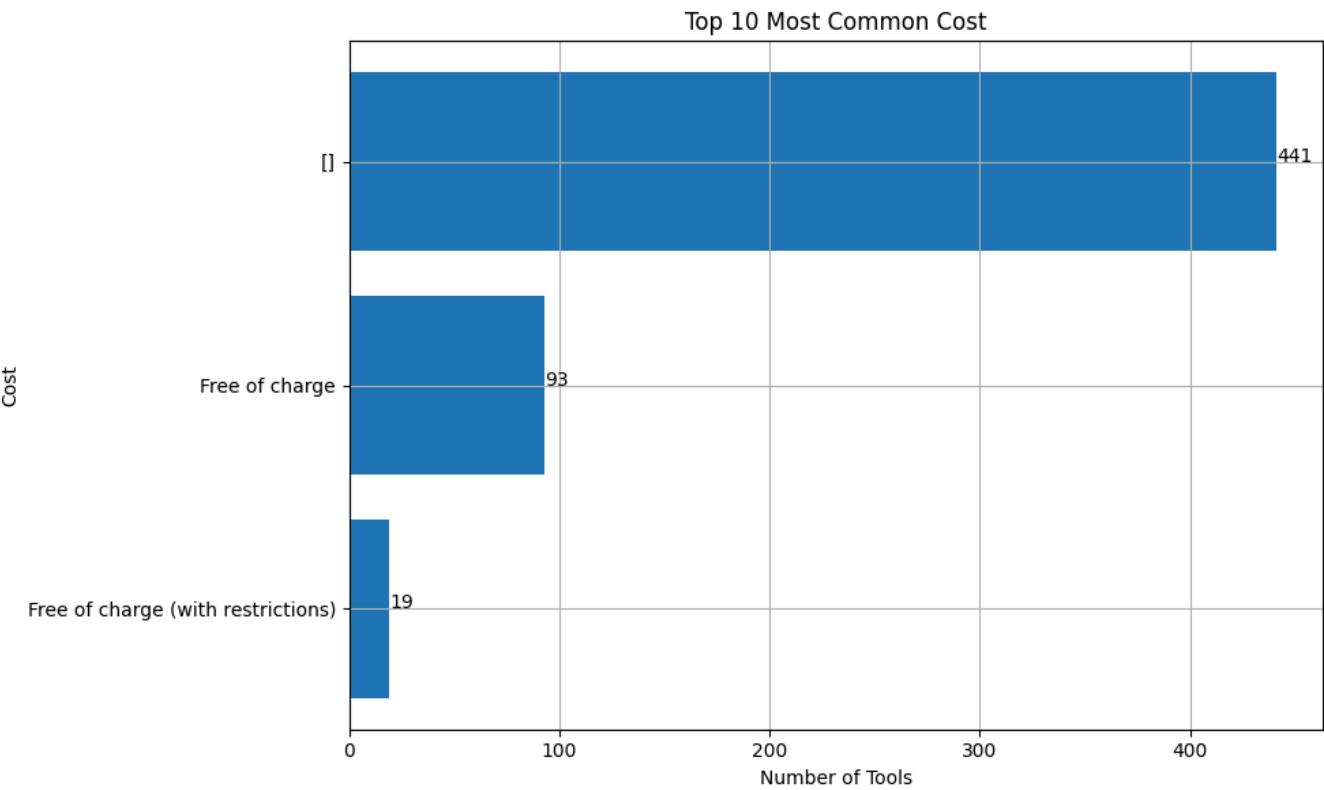


Any additionnal notes can be inserted here.

Cost

Column name: cost

Total number of tags: 112
Number of empty tags: 441
Percentage of empty tags: 79.75%

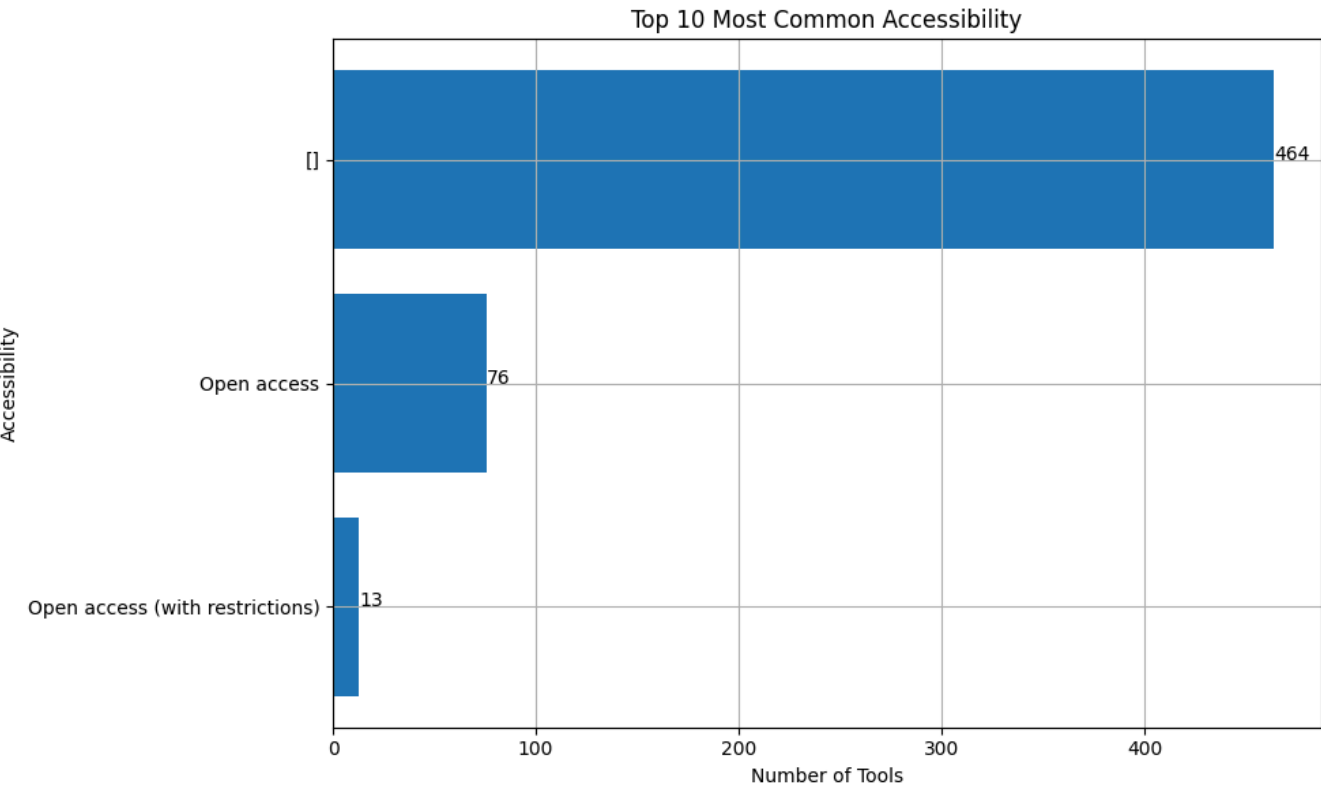


Any additionnal notes can be inserted here.

Accessibility

Column name: accessibility

Total number of tags: 89
Number of empty tags: 464
Percentage of empty tags: 83.91%

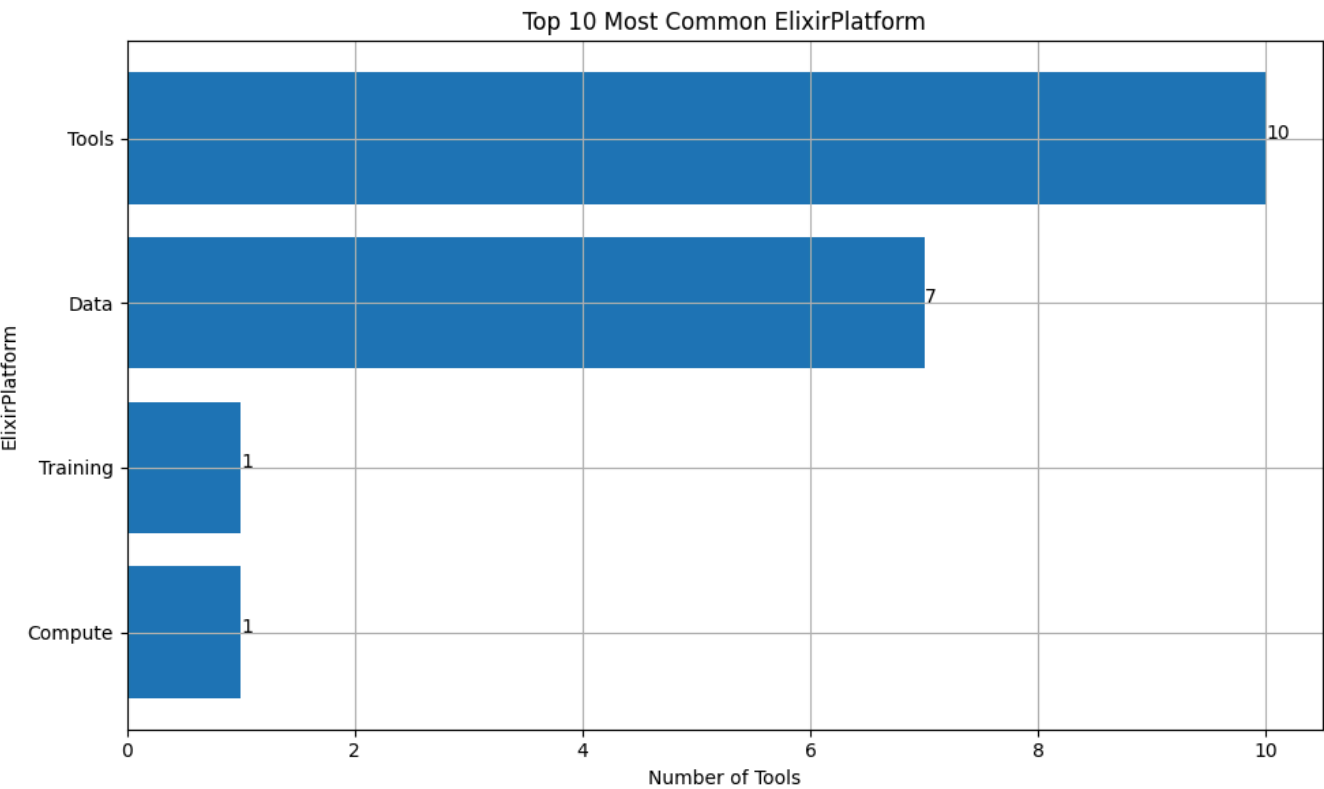


Any additionnal notes can be inserted here.

Elixir Platform

Column name: elixirPlatform

Total number of tags: 18
Number of empty tags: 535
Percentage of empty tags: 96.75%

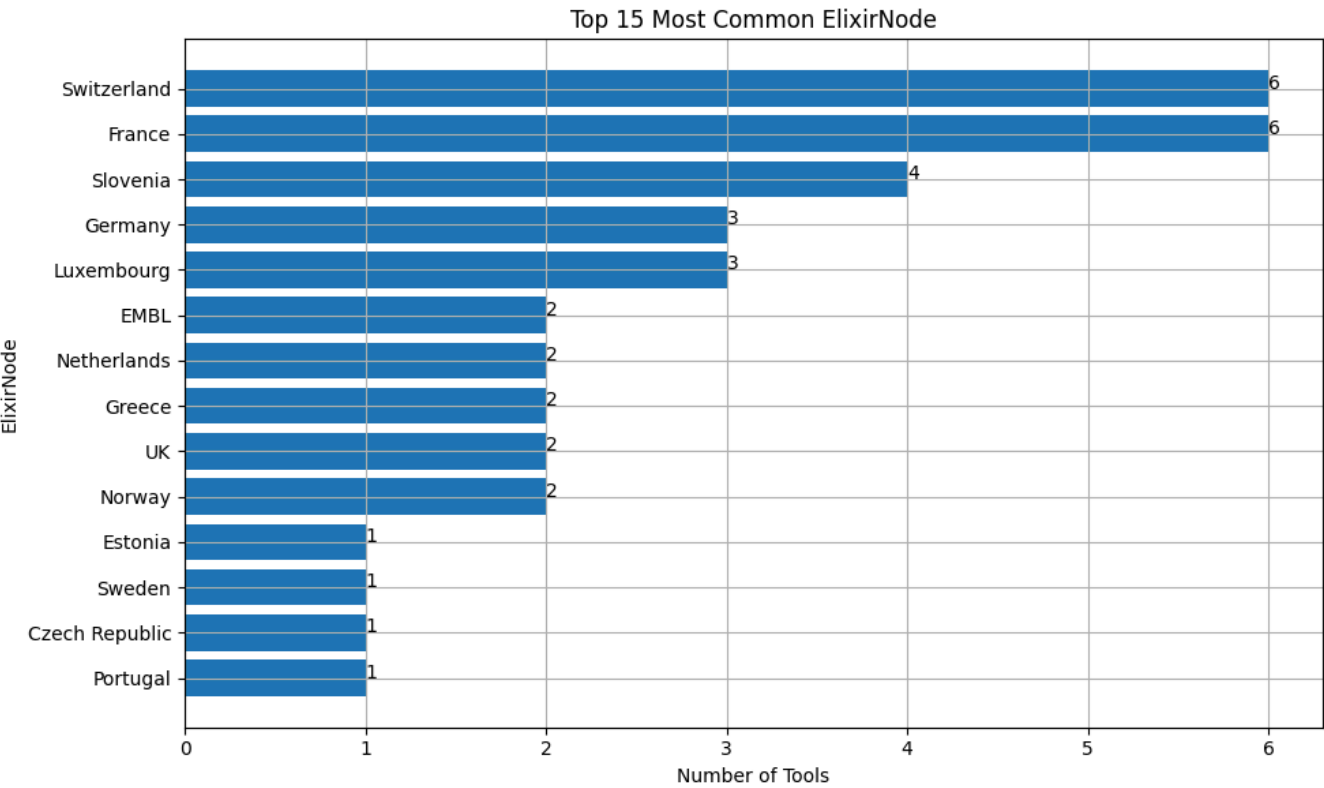


Any additionnal notes can be inserted here.

ElixirNode

Column name: elixirNode

Total number of tags: 35
Number of empty tags: 518
Percentage of empty tags: 93.67%

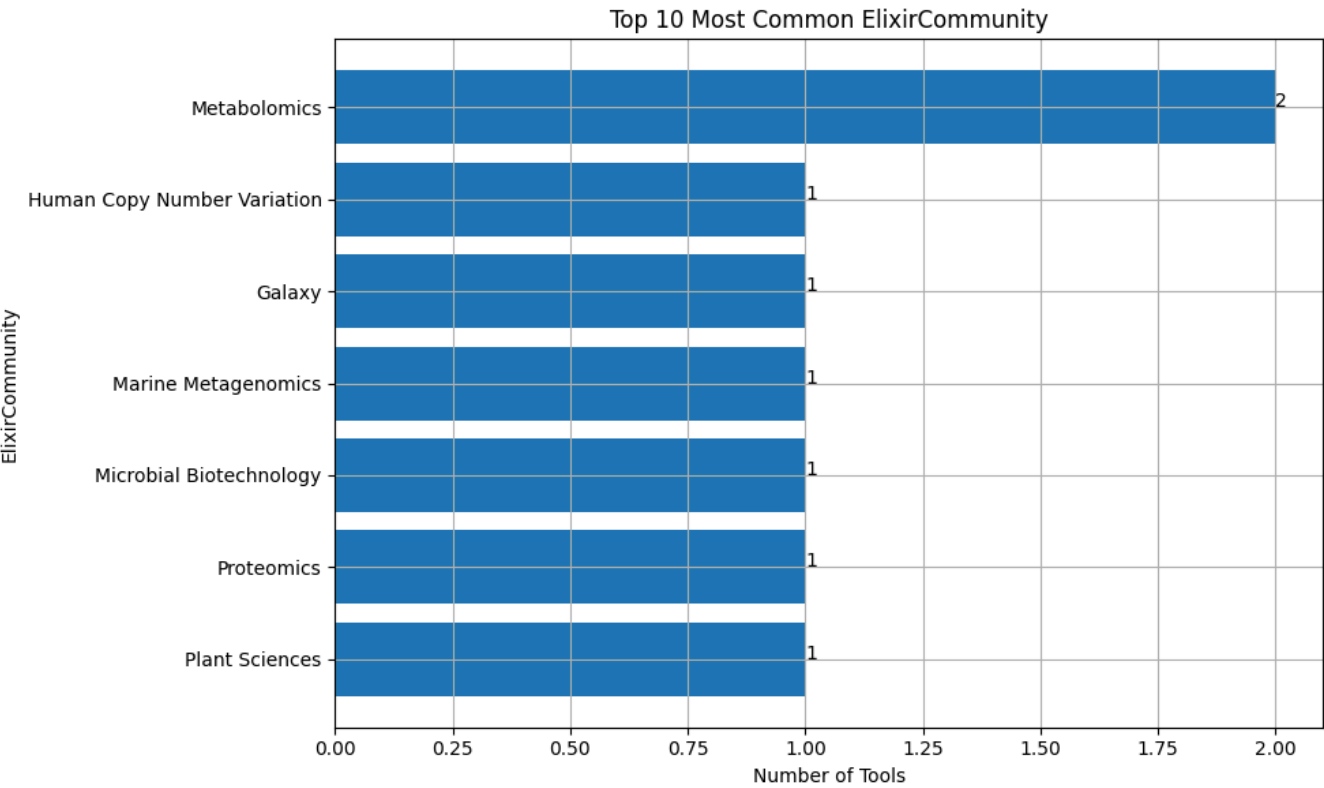


Any additionnal notes can be inserted here.

ElixirCommunity

Column name: elixirCommunity

Total number of tags: 5
Number of empty tags: 548
Percentage of empty tags: 99.10%

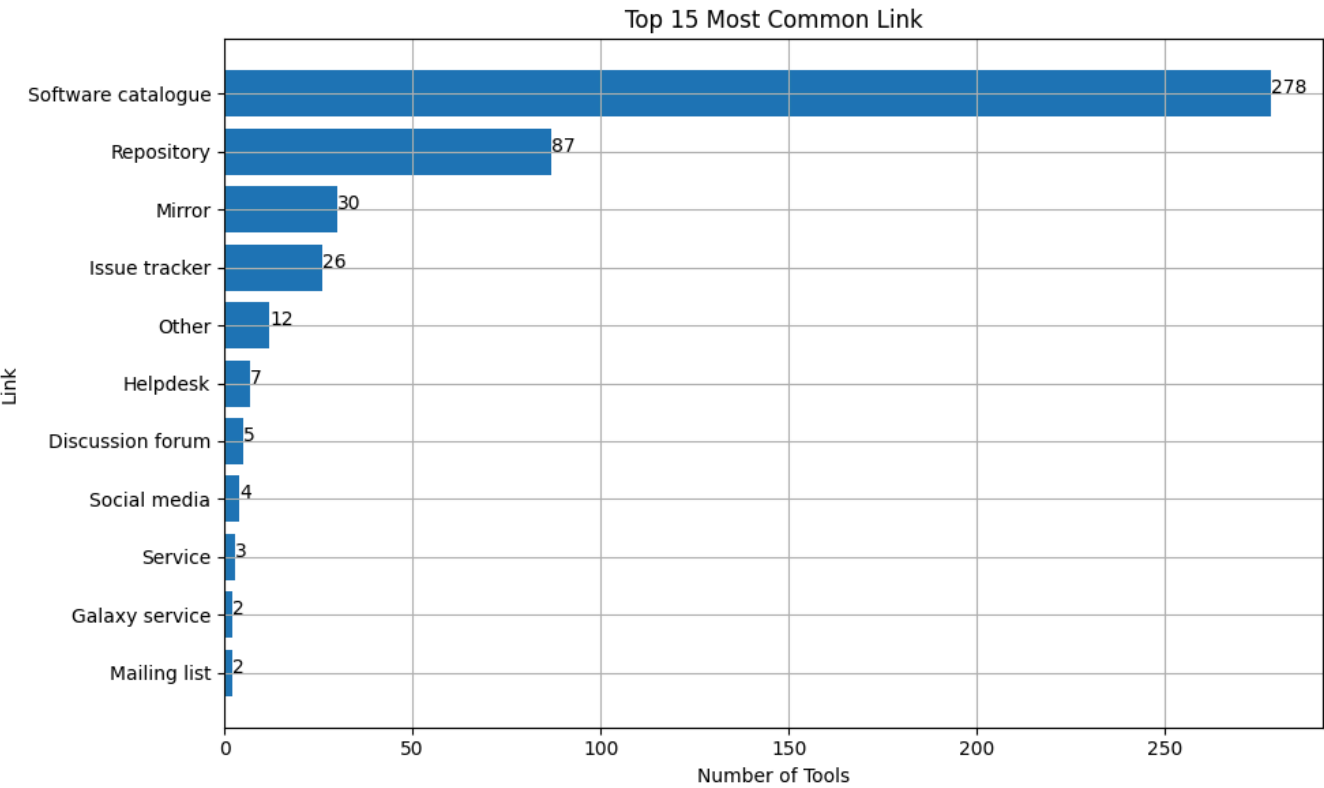


Any additionnal notes can be inserted here.

Link

Column name: link

Total number of tags: 376
Number of empty tags: 177
Percentage of empty tags: 32.01%



Any additionnal notes can be inserted here.

Publication

Column name: publication

Total number of tags: 520

Number of empty tags: 33

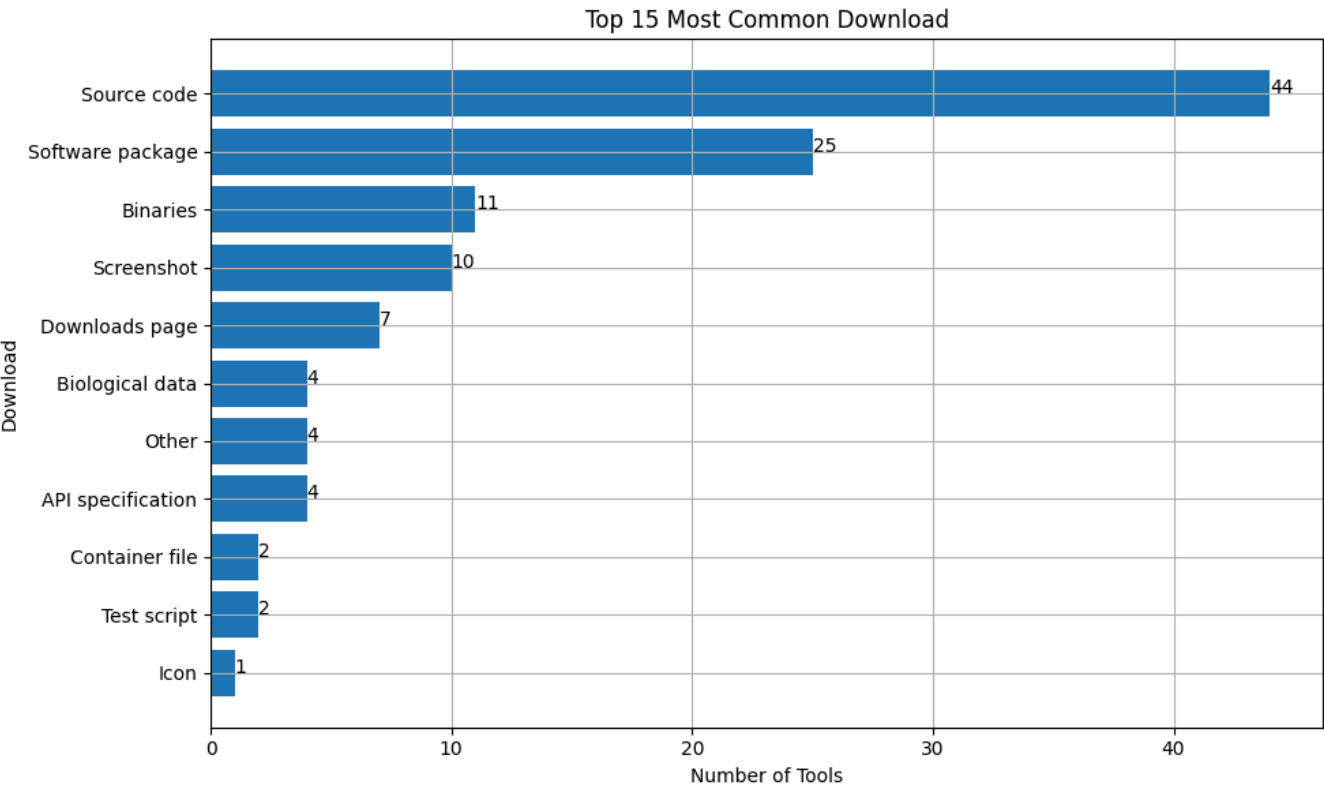
Percentage of empty tags: 5.97%

Any additionnal notes can be inserted here.

Download

Column name: download

Total number of tags: 89
Number of empty tags: 464
Percentage of empty tags: 83.91%

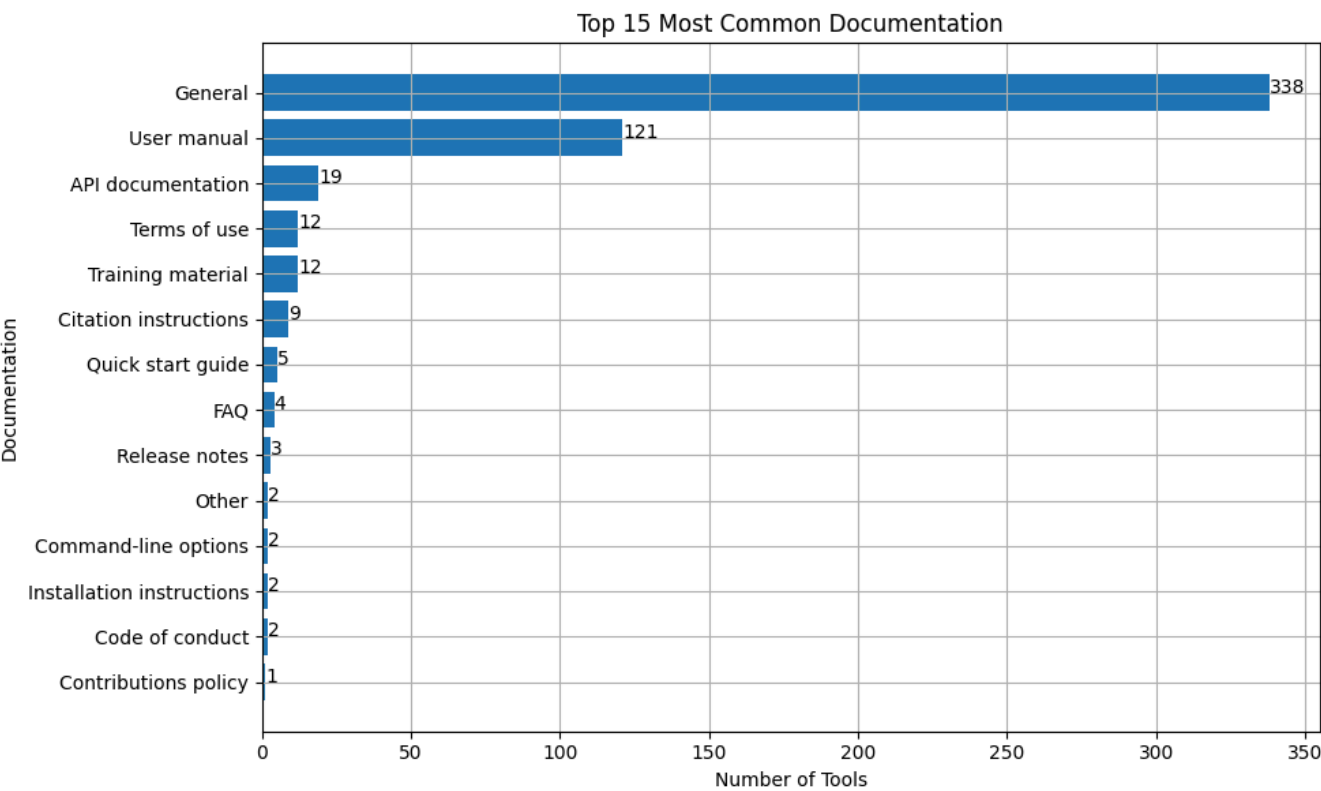


Any additionnal notes can be inserted here.

Documentation

Column name: documentation

Total number of tags: 450
Number of empty tags: 103
Percentage of empty tags: 18.63%



Any additionnal notes can be inserted here.

Publication

Column name: publication

Total number of tags: 520

Number of empty tags: 33

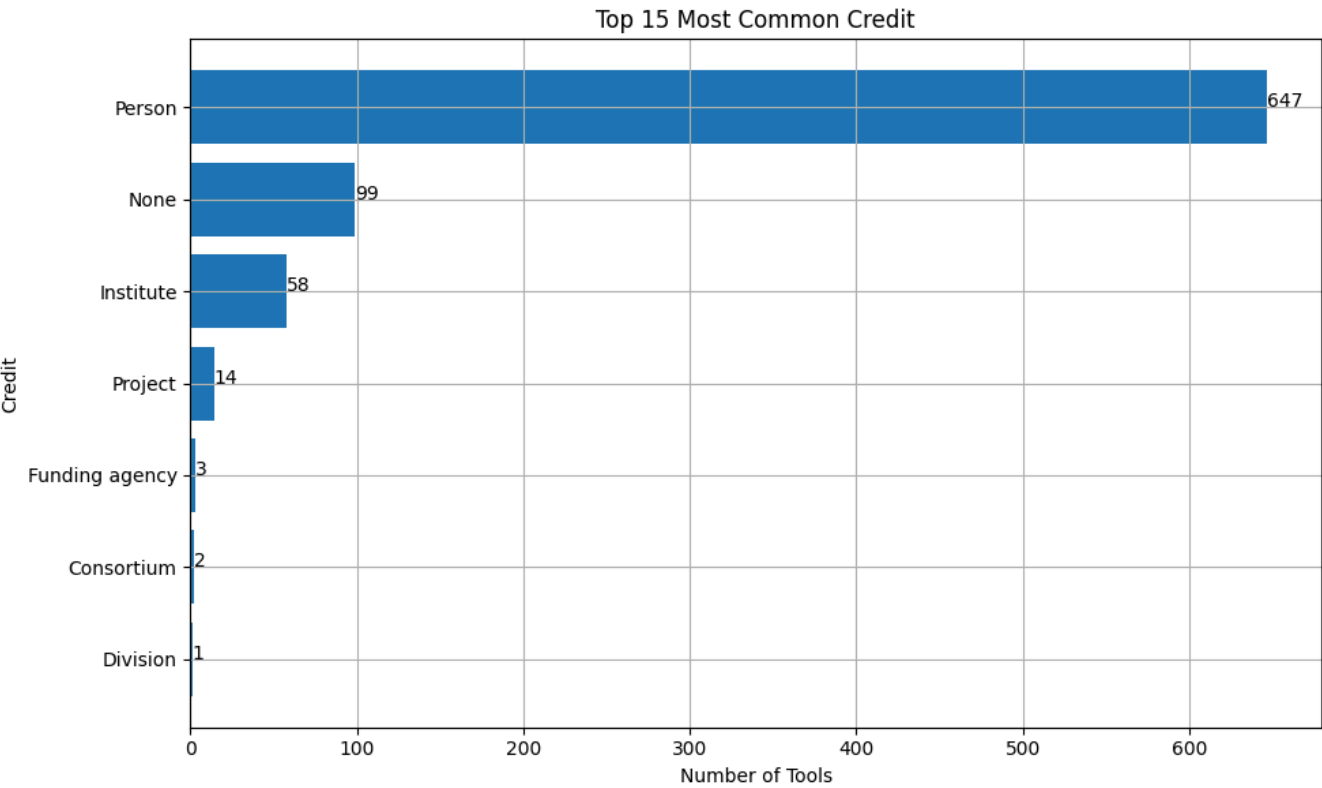
Percentage of empty tags: 5.97%

Any additionnal notes can be inserted here.

Credit

Column name: credit

Total number of tags: 535
Number of empty tags: 18
Percentage of empty tags: 3.25%



Any additionnal notes can be inserted here.

Owner

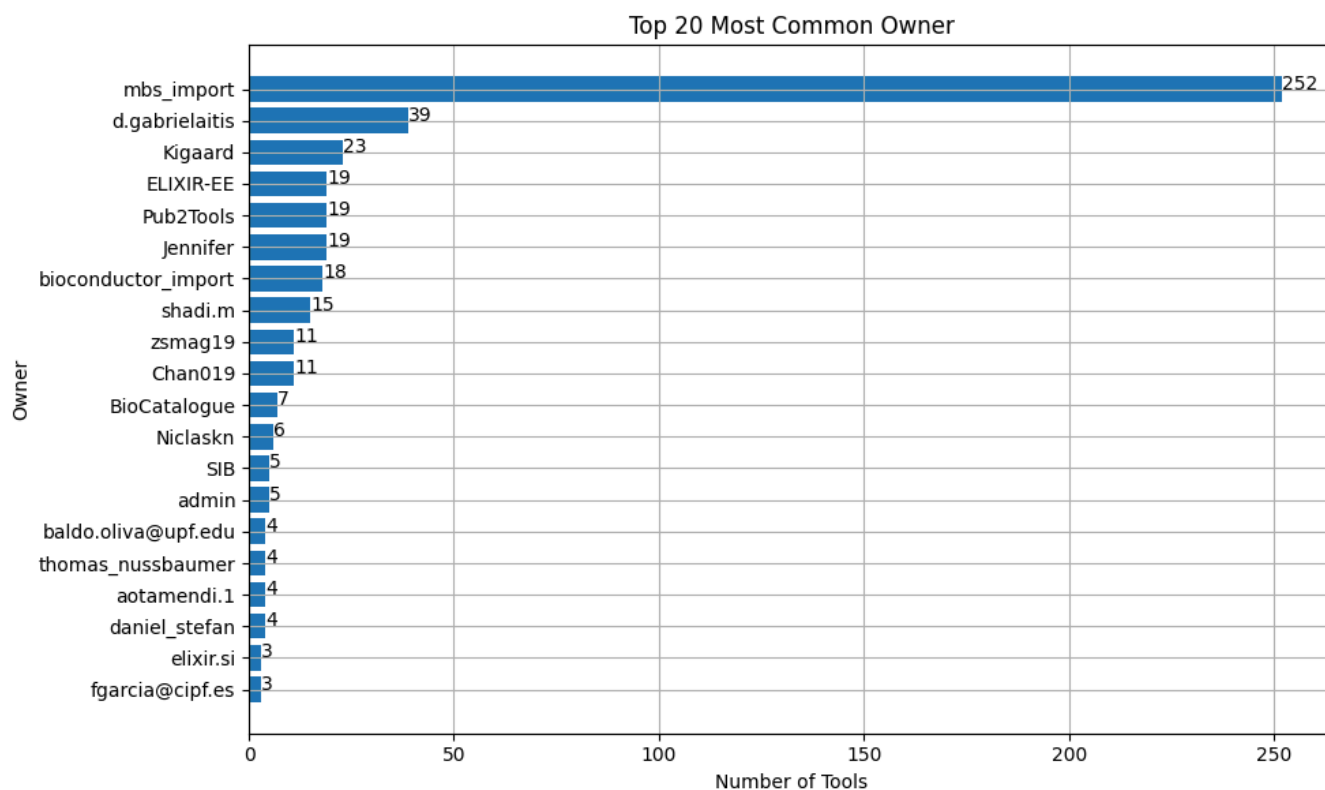
Column name: owner

Total number of tags: 553

Number of empty tags: 0

Percentage of empty tags: 0.00%

Number of unique tags: 85

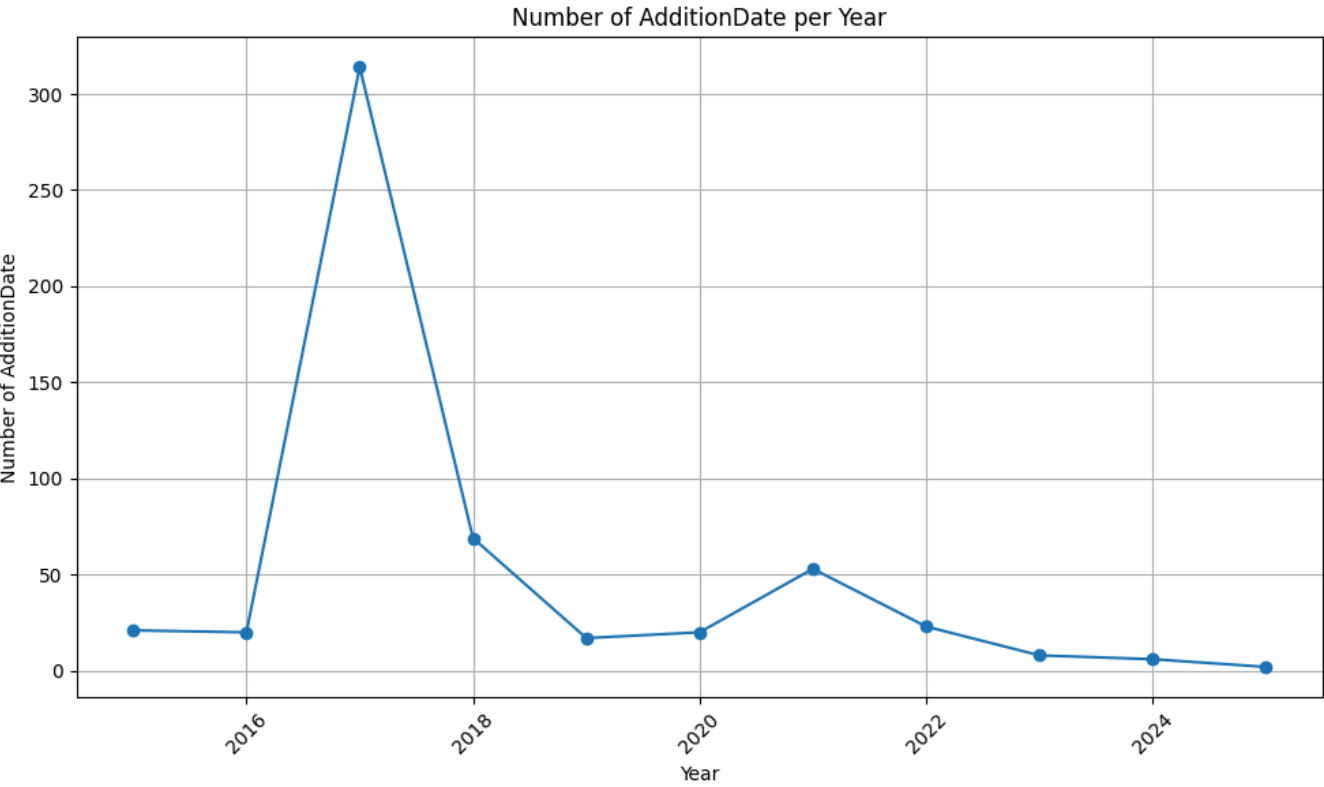


Any additional notes can be inserted here.

Addition Date

Column name: additionDate

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 541

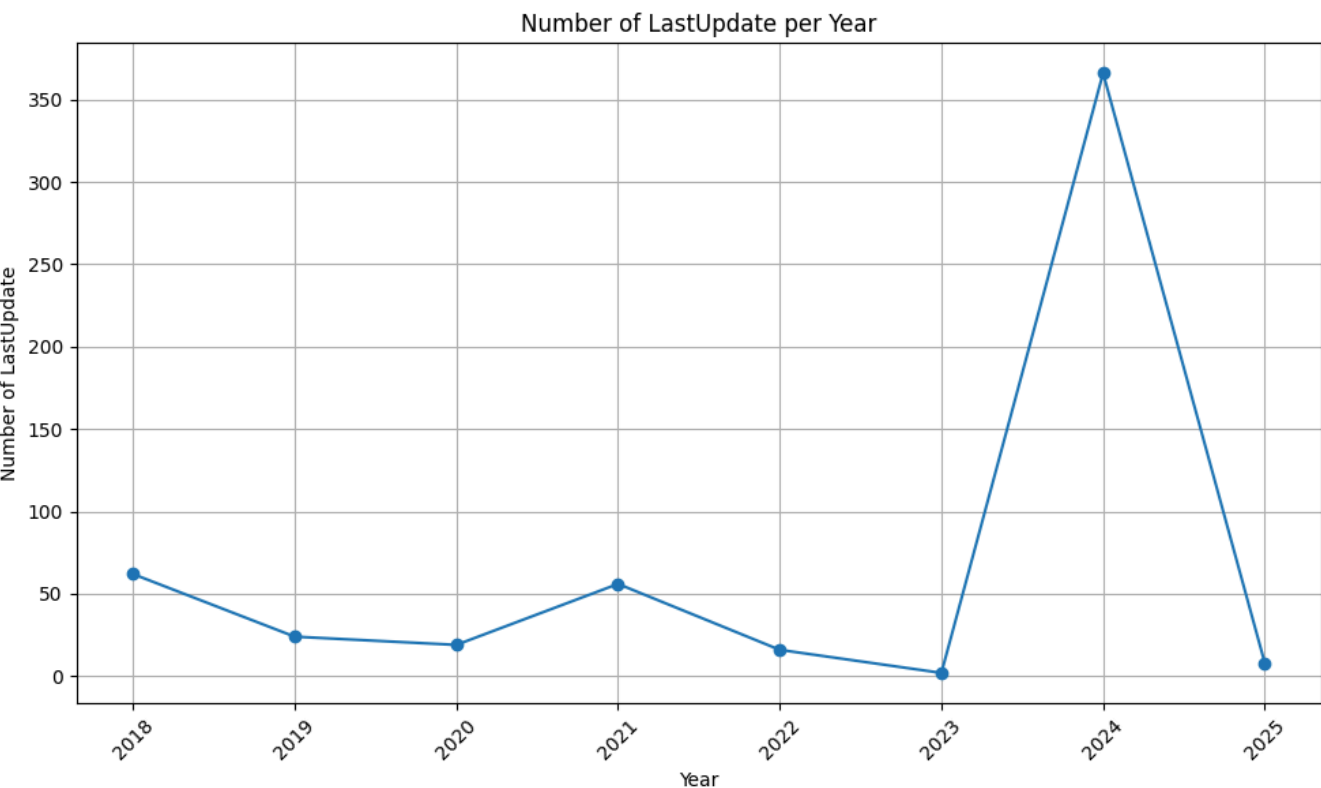


Any additionnal notes can be inserted here.

LastUpdate

Column name: lastUpdate

Total number of tags: 553
Number of empty tags: 0
Percentage of empty tags: 0.00%
Number of unique tags: 506



Any additionnal notes can be inserted here.

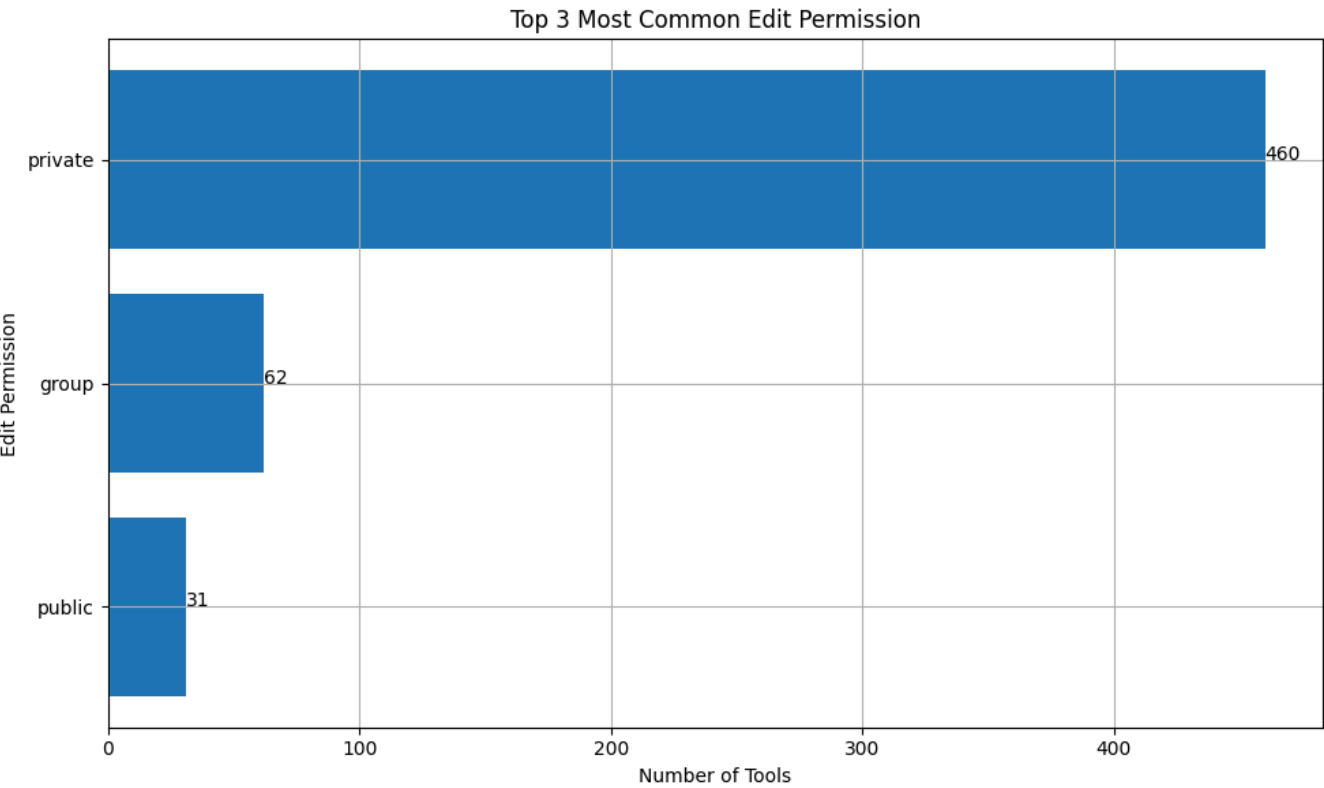
EditPermission

Column name: editPermission

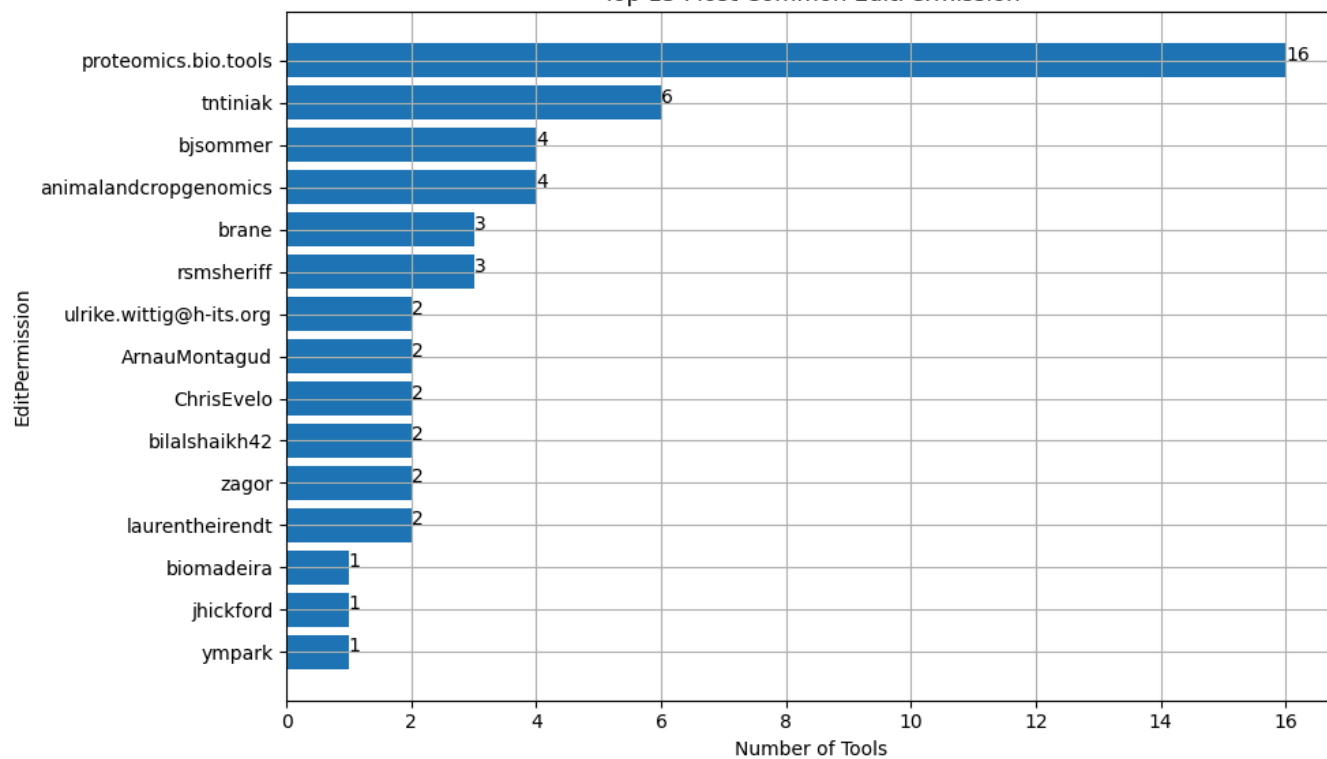
Total number of tags: 553

Number of empty tags: 0

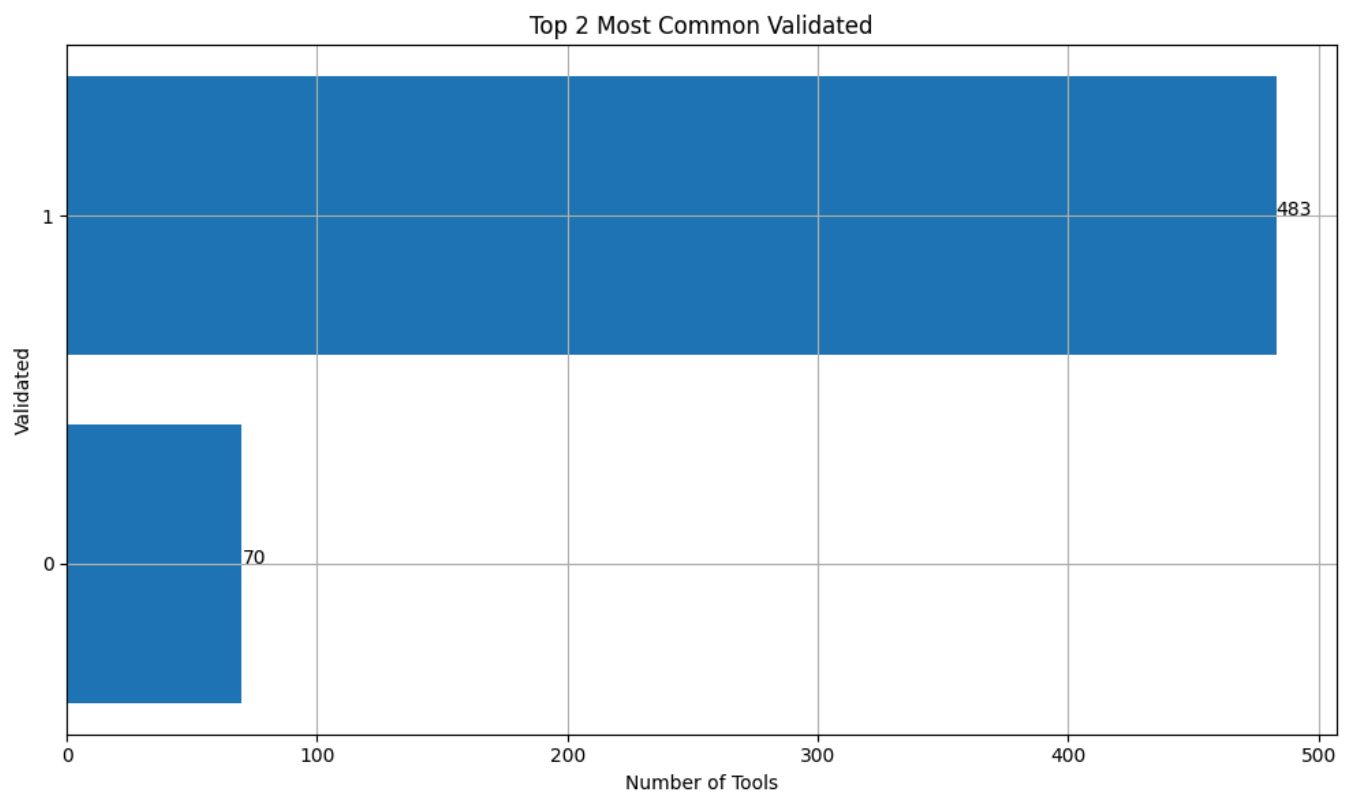
Percentage of empty tags: 0.00%



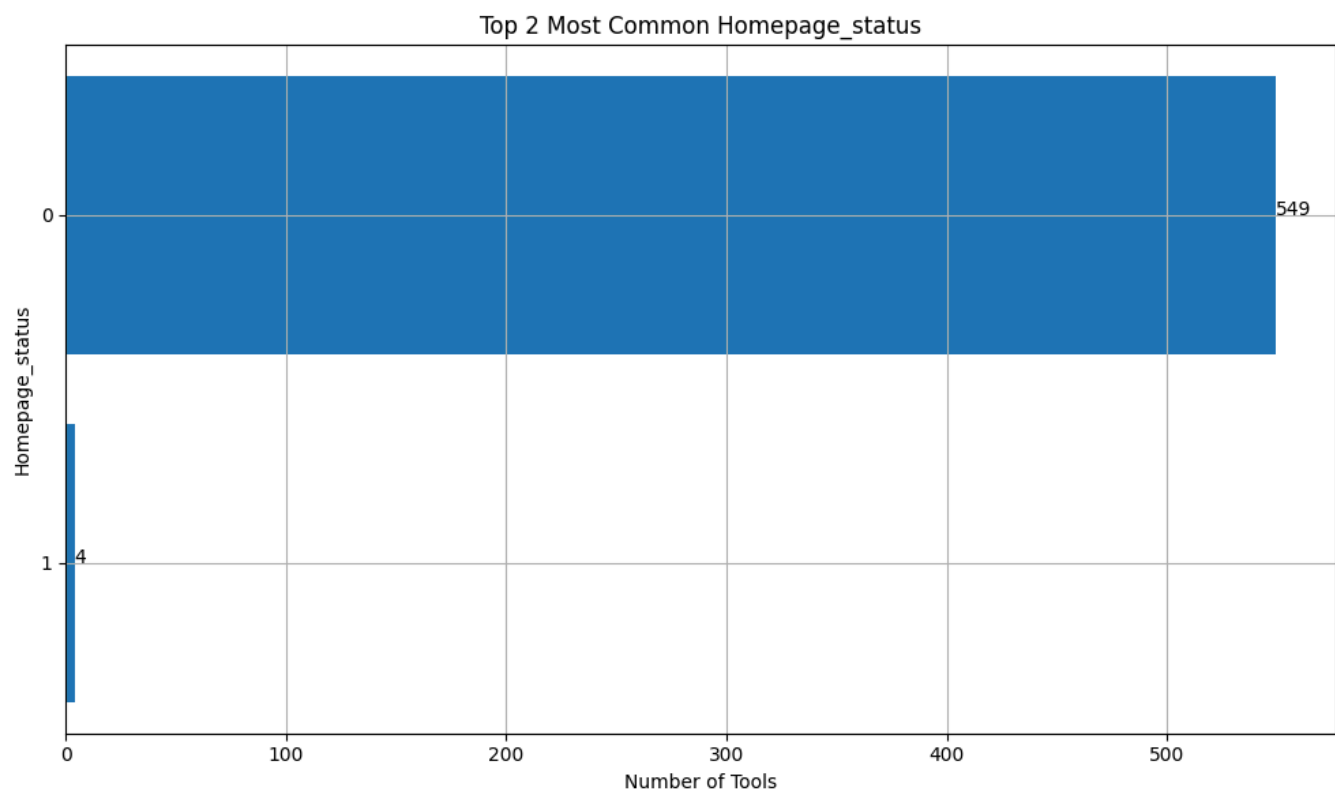
Top 15 Most Common EditPermission



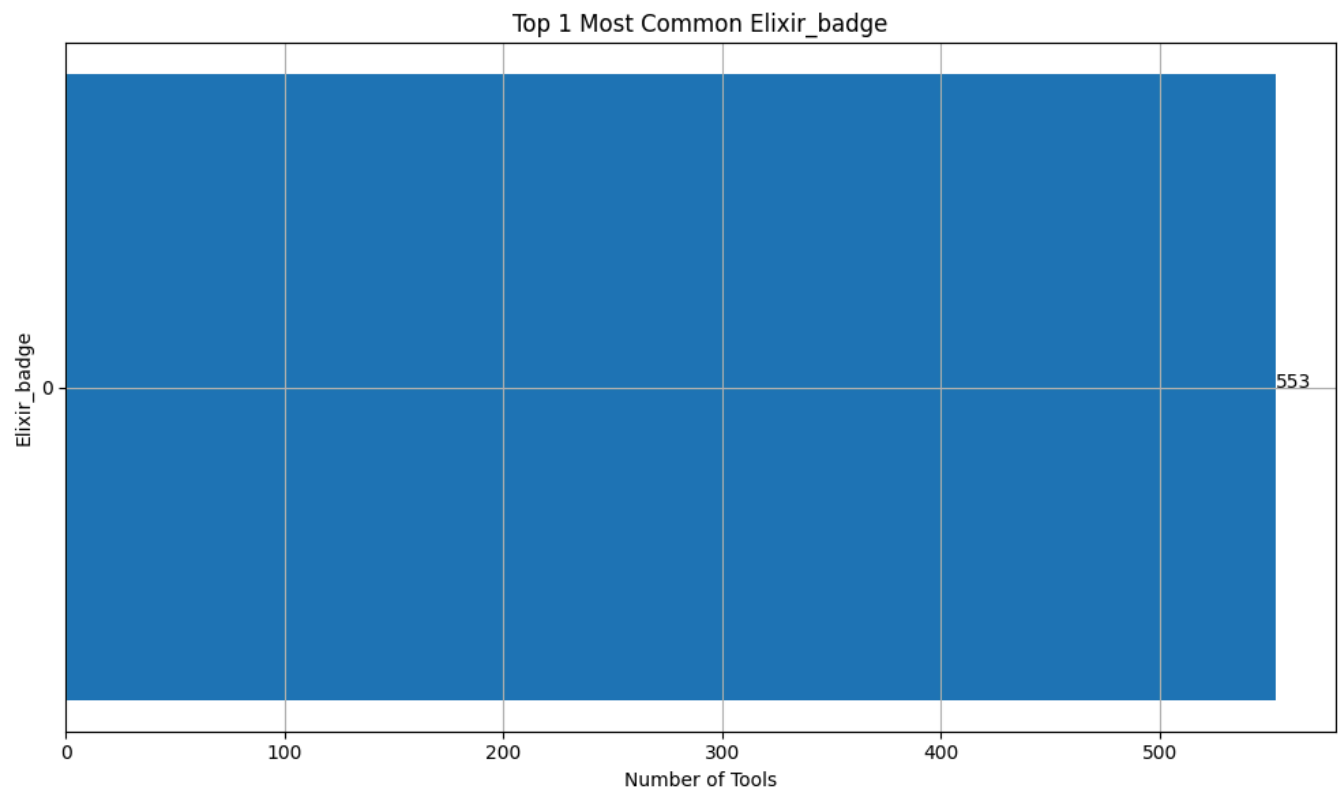
Validated



Homepage Status



Elixir_badge



Confidence Flag

