

# Overview in General

This file contains a general overview of the data in the graph including node labels and relationships types.

## References

- [jqassistant](#)
- [Neo4j Python Driver](#)

## Node Labels

### Table 1a - Highest node count by label combination

Lists the 30 label combinations with the highest number of nodes. The labels with the lowest node count are listed in table 1b. The total list would sum up to the total number of labels (100%).

The whole table can be found in the CSV report `Node_label_combination_count`.

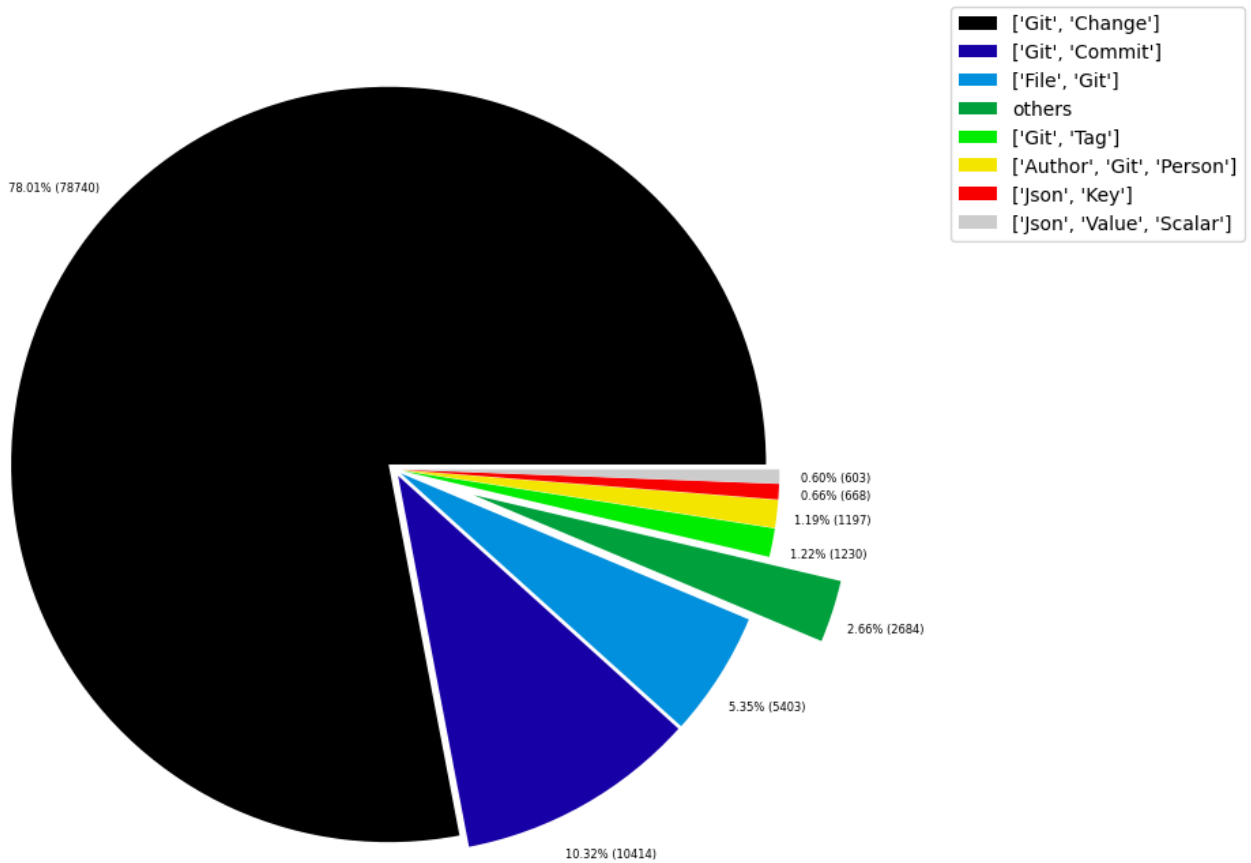
	nodeLabels	nodesWithThatLabels	nodesWithThatLabelsPercent
0	[Git, Change]	78740	78.007509
1	[Git, Commit]	10414	10.317122
2	[File, Git]	5403	5.352738
3	[Git, Tag]	1230	1.218558
4	[Author, Git, Person]	1197	1.185865
5	[Json, Key]	668	0.661786
6	[Json, Value, Scalar]	603	0.597391
7	[Committer, Git, Person]	371	0.367549
8	[NPM, Dependency]	330	0.326930
9	[Type, TS, Primitive]	291	0.288293
10	[Type, TS, Declared]	276	0.273432
11	[TS, ExternalDeclaration]	215	0.213000
12	[Type, TS, Literal]	136	0.134735
13	[Json, Value, Object]	133	0.131763
14	[Type, TS, Union]	119	0.117893
15	[Type, TS, ObjectMember]	101	0.100060
16	[NPM, Script]	91	0.090153
17	[TS, Property]	65	0.064395
18	[TS, Function]	47	0.046563
19	[Type, TS, FunctionParameter]	40	0.039628
20	[Type, Object, TS]	39	0.038637
21	[File, Directory]	34	0.033684
22	[Type, TS, Function]	34	0.033684
23	[TS, Parameter]	33	0.032693
24	[Git, Branch]	32	0.031702
25	[Package, File, Json, NPM]	29	0.028730
26	[TS, ExternalModule]	25	0.024767
27	[TS, Variable]	24	0.023777
28	[Value, TS, Literal]	20	0.019814
29	[JQAssistant, Rule, Concept]	19	0.018823

## Chart 1a - Highest node count by label combination

Values under 0.5% will be grouped into "others" to get a cleaner plot. The group "others" is then broken down in Chart 1b.

<Figure size 640x480 with 0 Axes>

Nodes per label combination (more than 0.5% overall)



## Table 1b - Lowest node count by label combination

Lists the 30 label combinations with the lowest number of nodes until they reach 0.5% of the total node count, which are shown above.

	nodeLabels	nodesWithThatLabels	nodesWithThatLabelsPercent
0	[Analyze, Task, JQAssistant]	1	0.000991
1	[File, TS, Scan]	1	0.000991
2	[TS, Method]	1	0.000991
3	[Repository, File, Git]	1	0.000991
4	[TS, Constructor]	1	0.000991
5	[Value, TS, ObjectMember]	1	0.000991
6	[TS, Class]	1	0.000991
7	[TS, Enum]	2	0.001981
8	[Value, Object, TS]	3	0.002972
9	[Type, TS, Tuple]	3	0.002972
10	[Value, TS, Function]	4	0.003963
11	[TS, TypeParameter]	4	0.003963
12	[Value, TS, Complex]	5	0.004953
13	[NPM, Engine]	6	0.005944
14	[Project, TS]	6	0.005944
15	[File, Local]	6	0.005944
16	[Value, TS, Call]	6	0.005944
17	[Value, TS, Member]	6	0.005944
18	[File, TS, Local, Module]	6	0.005944
19	[Type, TS, TypeParameterReference]	6	0.005944
20	[TS, EnumMember]	8	0.007926
21	[Type, TS, NotIdentified]	11	0.010898
22	[Json, Value, Array]	12	0.011888
23	[Value, TS, Declared]	13	0.012879
24	[TS, TypeAlias]	16	0.015851
25	[File, Directory, Local]	16	0.015851
26	[TS, Interface]	17	0.016842
27	[Type, TS, Intersection]	17	0.016842
28	[JQAssistant, Rule, Concept]	19	0.018823
29	[Value, TS, Literal]	20	0.019814

## Chart 1b - Lowest node count by label combination

Shows the lowest (less than 0.5% overall) node count label combinations. Therefore, this plot breaks down the "others" slice of the pie chart above. Values under 0.01% will be grouped into "others" to get a cleaner plot.

<Figure size 640x480 with 0 Axes>

Nodes per label combination (less than 0.5% overall)

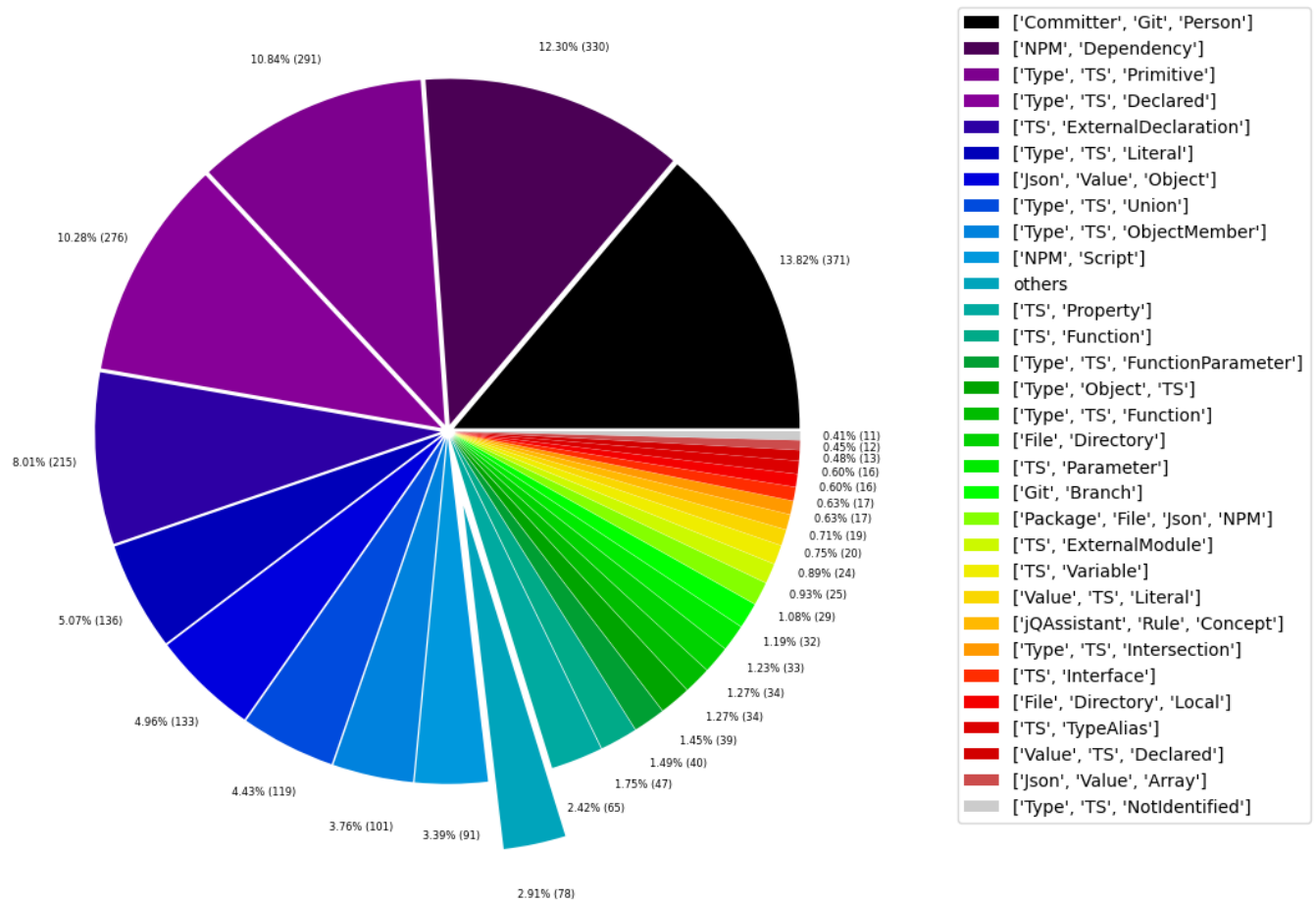


Table 1c - Highest node count by single label

Lists the 40 labels with the highest number of nodes. Doesn't sum up to the total number of nodes or 100% because one node can have multiple labels. Helps to identify commonly used labels.

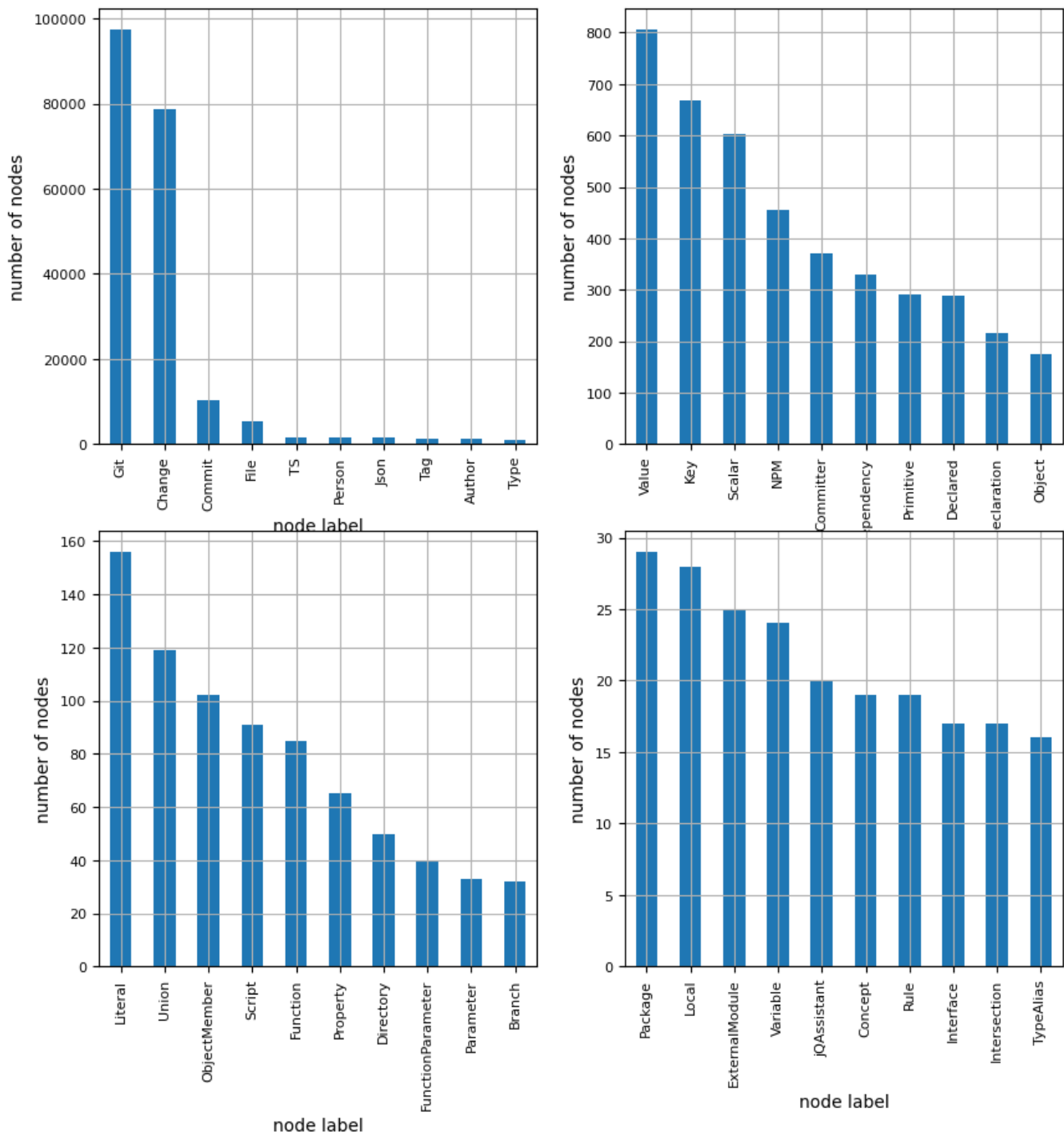
	nodeLabel	nodesWithThatLabel	nodesWithThatLabelPercent
0	Git	97388	96.482034
1	Change	78740	78.007509
2	Commit	10414	10.317122
3	File	5496	5.444873
4	TS	1603	1.588088
5	Person	1568	1.553413
6	Json	1445	1.431558
7	Tag	1230	1.218558
8	Author	1197	1.185865
9	Type	1073	1.063018
10	Value	806	0.798502
11	Key	668	0.661786
12	Scalar	603	0.597391
13	NPM	456	0.451758
14	Committer	371	0.367549
15	Dependency	330	0.326930
16	Primitive	291	0.288293
17	Declared	289	0.286312
18	ExternalDeclaration	215	0.213000
19	Object	175	0.173372
20	Literal	156	0.154549
21	Union	119	0.117893
22	ObjectMember	102	0.101051
23	Script	91	0.090153
24	Function	85	0.084209
25	Property	65	0.064395
26	Directory	50	0.049535
27	FunctionParameter	40	0.039628
28	Parameter	33	0.032693
29	Branch	32	0.031702
30	Package	29	0.028730
31	Local	28	0.027740
32	ExternalModule	25	0.024767
33	Variable	24	0.023777
34	jqAssistant	20	0.019814
35	Concept	19	0.018823
36	Rule	19	0.018823
37	Interface	17	0.016842
38	Intersection	17	0.016842
39	TypeAlias	16	0.015851

## Chart 1c - Highest node count by label

Shows the 40 labels with the highest number of nodes.

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## Node count by label



## Relationship Types

Table 2a - Highest relationship count by type

Lists the 30 relationship types with the highest number of occurrences. The whole table can be found in the CSV report `Relationship_type_count`.

Total number of relationships: 301100

	relationshipType	nodesWithThatRelationshipType	nodesWithThatRelationshipTypePercent
0	CONTAINS_CHANGE	78740	26.150780
1	MODIFIES	78740	26.150780
2	UPDATES	52079	17.296247
3	COMMITTED	20828	6.917303
4	CREATES	18719	6.216871
5	HAS_PARENT	11447	3.801727
6	DELETES	10930	3.630023
7	HAS_COMMIT	10414	3.458652
8	HAS_FILE	5403	1.794420
9	RENAMES	2988	0.992361
10	HAS_NEW_NAME	1685	0.559615
11	HAS_TAG	1230	0.408502
12	ON_COMMIT	1230	0.408502
13	HAS_AUTHOR	1197	0.397542
14	DEPENDS_ON	959	0.318499
15	HAS_KEY	668	0.221853
16	HAS_VALUE	668	0.221853
17	CONTAINS	594	0.197277
18	HAS_COMMITTER	371	0.123215
19	OF_TYPE	337	0.111923
20	EXPORTS	276	0.091664
21	REFERENCES	197	0.065427
22	DECLARES	186	0.061773
23	DECLARES_DEV_DEPENDENCY	169	0.056128
24	DECLARES_DEPENDENCY	161	0.053471
25	HAS_MEMBER	102	0.033876
26	HAS_TYPE_ARGUMENT	94	0.031219
27	DECLARES_SCRIPT	91	0.030223
28	RETURNS	82	0.027233
29	HAS_PARAMETER	73	0.024244

## Chart 2a - Highest relationship count by type

Values under 0.5% will be grouped into "others" to get a cleaner plot. The group "others" is then broken down in the second chart.

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Relationship types (more than 0.5% overall)

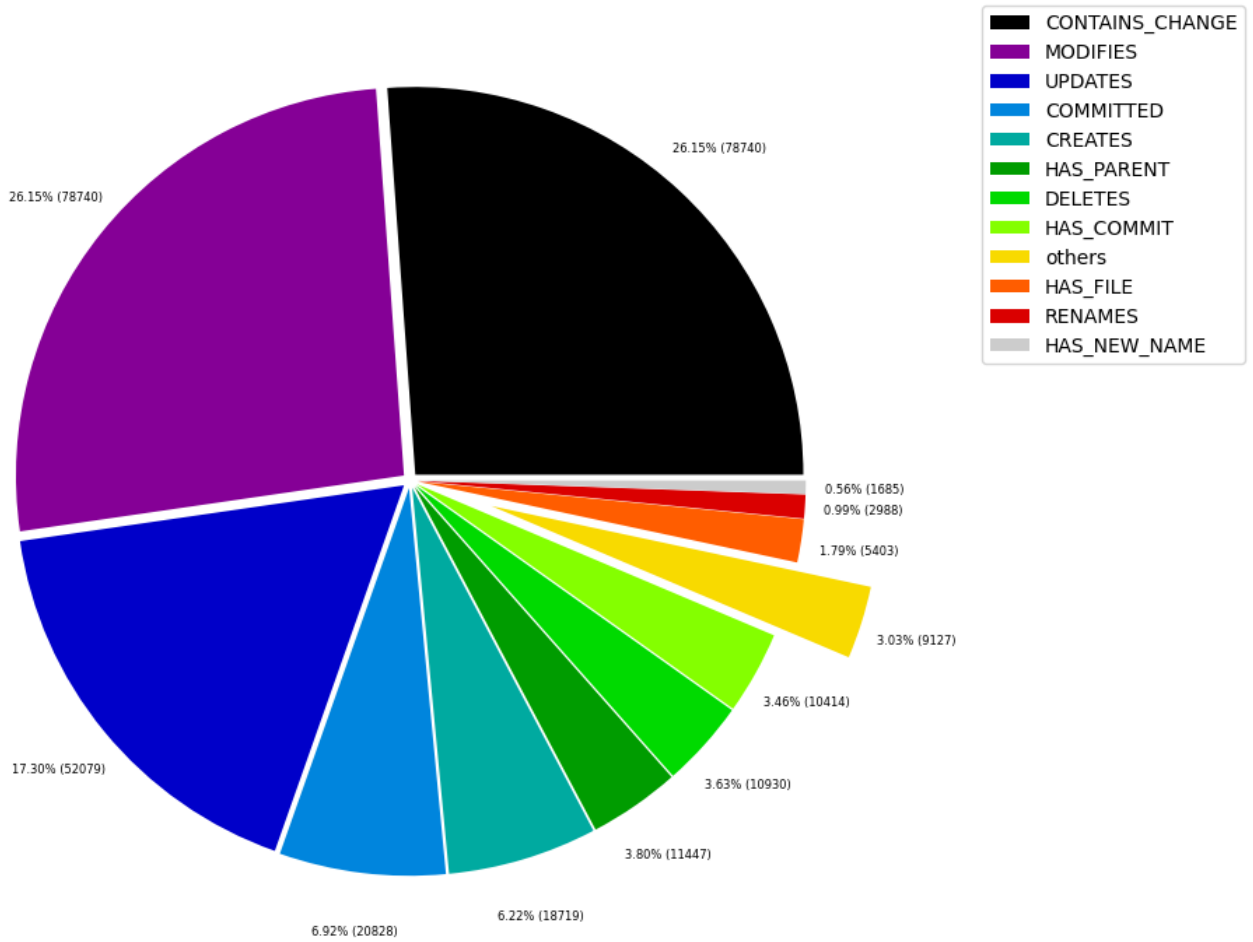


Table 2b - Lowest relationship count by type

Lists the 30 relationships type with the lowest number of occurrences up to 0.5% of the total node count. This is essentially breaking down the "others" slice from the chart above.

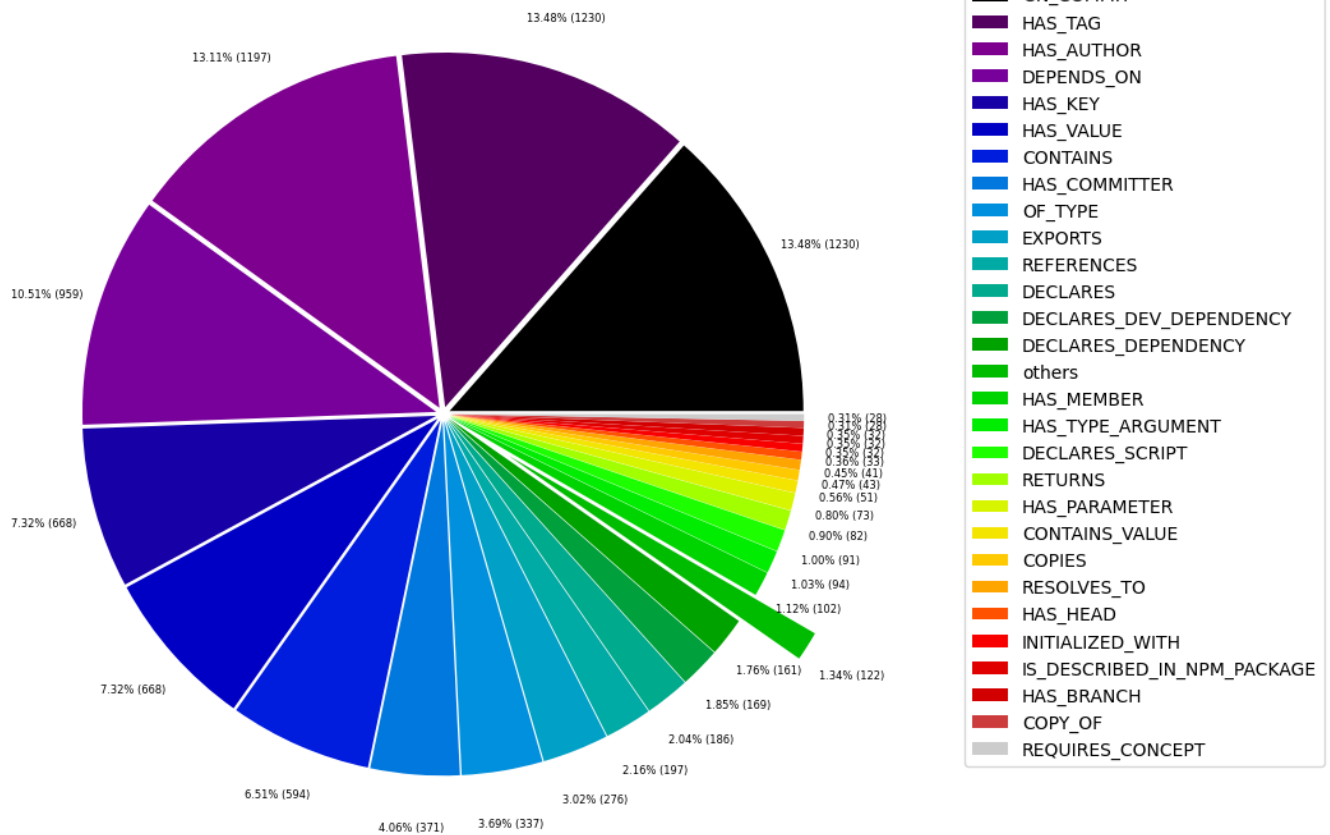
	relationshipType	nodesWithThatRelationshipType	nodesWithThatRelationshipTypePercent
0	PROVIDED_BY_NPM_DEPENDENCY	1	0.000332
1	IS_IMPLEMENTED_IN	2	0.000664
2	CONSTRAINED_BY	4	0.001328
3	REFERENCED_PROJECTS	5	0.001661
4	CONTAINS_PROJECT	6	0.001993
5	DECLARES_ENGINE	6	0.001993
6	EXTENDS	6	0.001993
7	HAS_ARGUMENT	6	0.001993
8	CALLS	6	0.001993
9	HAS_NPM_PACKAGE	6	0.001993
10	HAS_ROOT	6	0.001993
11	MEMBER	6	0.001993
12	PARENT	6	0.001993
13	HAS_CONFIG	6	0.001993
14	SIMILAR	6	0.001993
15	INCLUDES_CONCEPT	19	0.006310
16	USES	25	0.008303
17	REQUIRES_CONCEPT	28	0.009299
18	COPY_OF	28	0.009299
19	INITIALIZED_WITH	32	0.010628
20	HAS_BRANCH	32	0.010628
21	IS_DESCRIBED_IN_NPM_PACKAGE	32	0.010628
22	HAS_HEAD	33	0.010960
23	RESOLVES_TO	41	0.013617
24	COPIES	43	0.014281
25	CONTAINS_VALUE	51	0.016938
26	HAS_PARAMETER	73	0.024244
27	RETURNS	82	0.027233
28	DECLARES_SCRIPT	91	0.030223
29	HAS_TYPE_ARGUMENT	94	0.031219

## Chart 2b - Lowest relationship count by type

Shows the lowest (less than 0.5% overall) relationship types. This plot breaks down the "others" slice of the pie chart above. Values under 0.01% will be grouped into "others" to get a cleaner plot.

<Figure size 640x480 with 0 Axes>

Relationship types (less than 0.5% overall)



## Node labels with their relationships

Table 3a - Highest relationship count by node labels and relationship type

Lists the 30 node labels and their relationship types with the highest number of occurrences.

	sourceLabels	relationType	targetLabels	numberOfRelationships	numberOfNodesWithSameLabelsAsSource	numberOfNodes'
0	[Git, Change]	MODIFIES	[File, Git]	78740	78740	
1	[Git, Commit]	CONTAINS_CHANGE	[Git, Change]	78740	10414	
2	[Git, Change]	UPDATES	[File, Git]	52079	78740	
3	[Git, Change]	CREATES	[File, Git]	18719	78740	
4	[Git, Commit]	HAS_PARENT	[Git, Commit]	11447	10414	
5	[Git, Change]	DELETES	[File, Git]	10930	78740	
6	[Repository, File, Git]	HAS_COMMIT	[Git, Commit]	10414	1	
7	[Author, Git, Person]	COMMITTED	[Git, Commit]	10414	1197	
8	[Committer, Git, Person]	COMMITTED	[Git, Commit]	10414	371	
9	[Repository, File, Git]	HAS_FILE	[File, Git]	5403	1	
10	[Git, Change]	RENAMES	[File, Git]	2988	78740	
11	[File, Git]	HAS_NEW_NAME	[File, Git]	1685	5403	
12	[Repository, File, Git]	HAS_TAG	[Git, Tag]	1230	1	
13	[Git, Tag]	ON_COMMIT	[Git, Commit]	1230	1230	
14	[Repository, File, Git]	HAS_AUTHOR	[Author, Git, Person]	1197	1	
15	[Json, Value, Object]	HAS_KEY	[Json, Key]	668	133	
16	[Json, Key]	HAS_VALUE	[Json, Value, Scalar]	552	668	
17	[Repository, File, Git]	HAS_COMMITTER	[Committer, Git, Person]	371	1	
18	[TS, Function]	DEPENDS_ON	[TS, ExternalDeclaration]	285	47	
19	[TS, ExternalModule]	EXPORTS	[TS, ExternalDeclaration]	215	25	
20	[File, TS, Local, Module, Mark4ModuleWeaklyCon...]	DEPENDS_ON	[TS, ExternalDeclaration]	192	2	
21	[Package, File, Json, NPM]	DECLARES_DEV_DEPENDENCY	[NPM, Dependency]	169	29	
22	[Package, File, Json, NPM]	DECLARES_DEPENDENCY	[NPM, Dependency]	161	29	
23	[Type, TS, Union]	CONTAINS	[Type, TS, Primitive]	147	119	
24	[Type, TS, Declared]	REFERENCES	[TS, ExternalDeclaration]	142	276	
25	[TS, Function]	DEPENDS_ON	[TS, ExternalModule]	131	47	
26	[Type, TS, Union]	CONTAINS	[Type, TS, Literal]	119	119	
27	[Json, Key]	HAS_VALUE	[Json, Value, Object]	104	668	
28	[Type, Object, TS]	HAS_MEMBER	[Type, TS, ObjectMember]	101	39	
29	[Package, File, Json, NPM]	DECLARES_SCRIPT	[NPM, Script]	91	29	

## Graph Density

total\_number\_of\_nodes (vertices): 100939

total\_number\_of\_relationships (edges): 301100

-> total directed graph density: 2.955269300430424e-05

-> total directed graph density in percent: 0.002955269300430424