

# 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`.

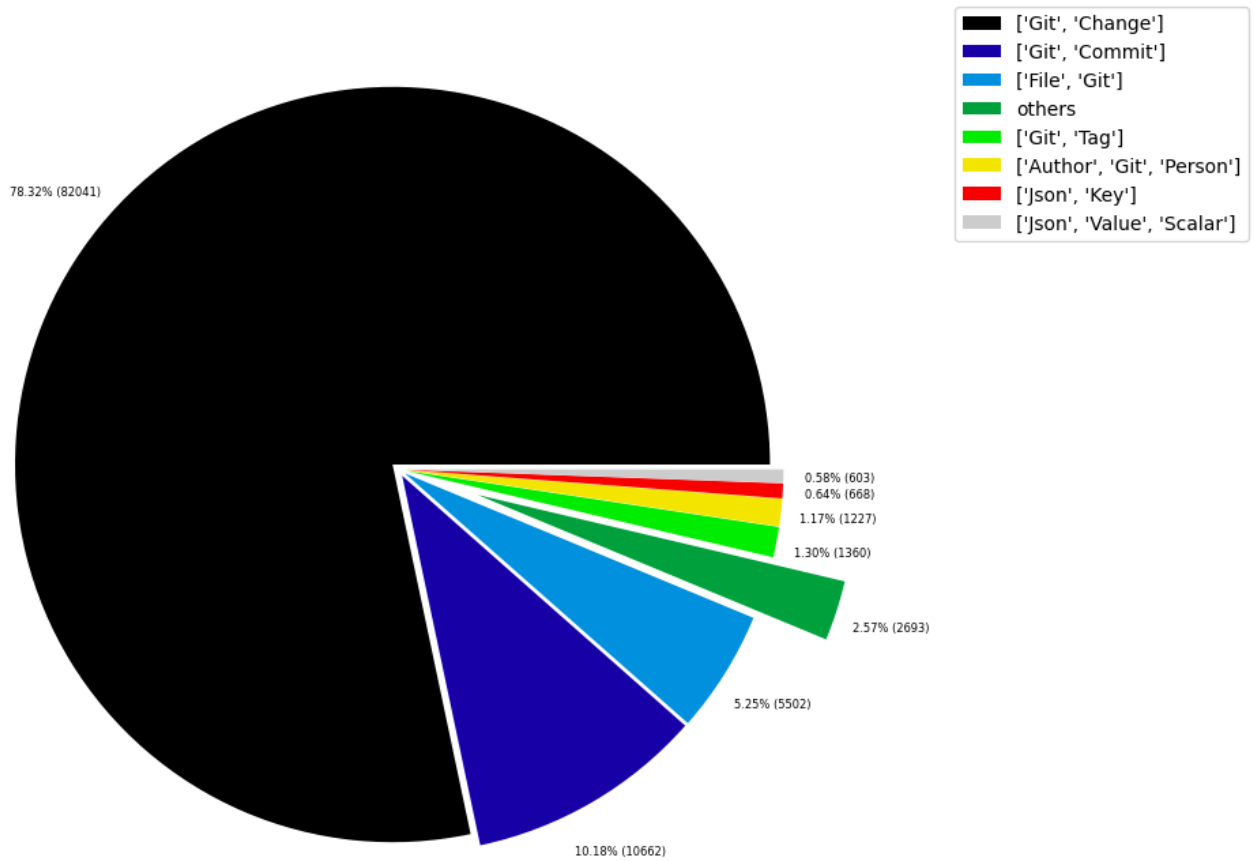
	nodeLabels	nodesWithThatLabels	nodesWithThatLabelsPercent
0	[Git, Change]	82041	78.316278
1	[Git, Commit]	10662	10.177937
2	[File, Git]	5502	5.252205
3	[Git, Tag]	1360	1.298255
4	[Author, Git, Person]	1227	1.171293
5	[Json, Key]	668	0.637672
6	[Json, Value, Scalar]	603	0.575623
7	[Committer, Git, Person]	371	0.354156
8	[NPM, Dependency]	338	0.322655
9	[Type, TS, Primitive]	291	0.277788
10	[Type, TS, Declared]	276	0.263469
11	[TS, ExternalDeclaration]	214	0.204284
12	[Type, TS, Literal]	136	0.129825
13	[Json, Value, Object]	133	0.126962
14	[Type, TS, Union]	119	0.113597
15	[Type, TS, ObjectMember]	101	0.096415
16	[NPM, Script]	91	0.086869
17	[TS, Property]	65	0.062049
18	[TS, Function]	47	0.044866
19	[Type, TS, FunctionParameter]	40	0.038184
20	[Type, Object, TS]	39	0.037229
21	[Git, Branch]	36	0.034366
22	[File, Directory]	34	0.032456
23	[Type, TS, Function]	34	0.032456
24	[TS, Parameter]	33	0.031502
25	[Package, File, Json, NPM]	29	0.027683
26	[TS, Variable]	24	0.022910
27	[TS, ExternalModule]	23	0.021956
28	[Value, TS, Literal]	20	0.019092
29	[JQAssistant, Rule, Concept]	19	0.018137

## 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	0.000955
1	[File, TS, Scan]	1	0.000955
2	[TS, Method]	1	0.000955
3	[Repository, File, Git]	1	0.000955
4	[TS, Constructor]	1	0.000955
5	[Value, TS, ObjectMember]	1	0.000955
6	[TS, Class]	1	0.000955
7	[TS, Enum]	2	0.001909
8	[Value, Object, TS]	3	0.002864
9	[Type, TS, Tuple]	3	0.002864
10	[Value, TS, Function]	4	0.003818
11	[TS, TypeParameter]	4	0.003818
12	[Value, TS, Complex]	5	0.004773
13	[NPM, Engine]	6	0.005728
14	[Project, TS]	6	0.005728
15	[File, Local]	6	0.005728
16	[Value, TS, Call]	6	0.005728
17	[Value, TS, Member]	6	0.005728
18	[File, TS, Local, Module]	6	0.005728
19	[Type, TS, TypeParameterReference]	6	0.005728
20	[TS, EnumMember]	8	0.007637
21	[Type, TS, NotIdentified]	11	0.010501
22	[Json, Value, Array]	12	0.011455
23	[Value, TS, Declared]	13	0.012410
24	[TS, TypeAlias]	16	0.015274
25	[File, Directory, Local]	16	0.015274
26	[TS, Interface]	17	0.016228
27	[Type, TS, Intersection]	17	0.016228
28	[jqAssistant, Rule, Concept]	19	0.018137
29	[Value, TS, Literal]	20	0.019092

## 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)

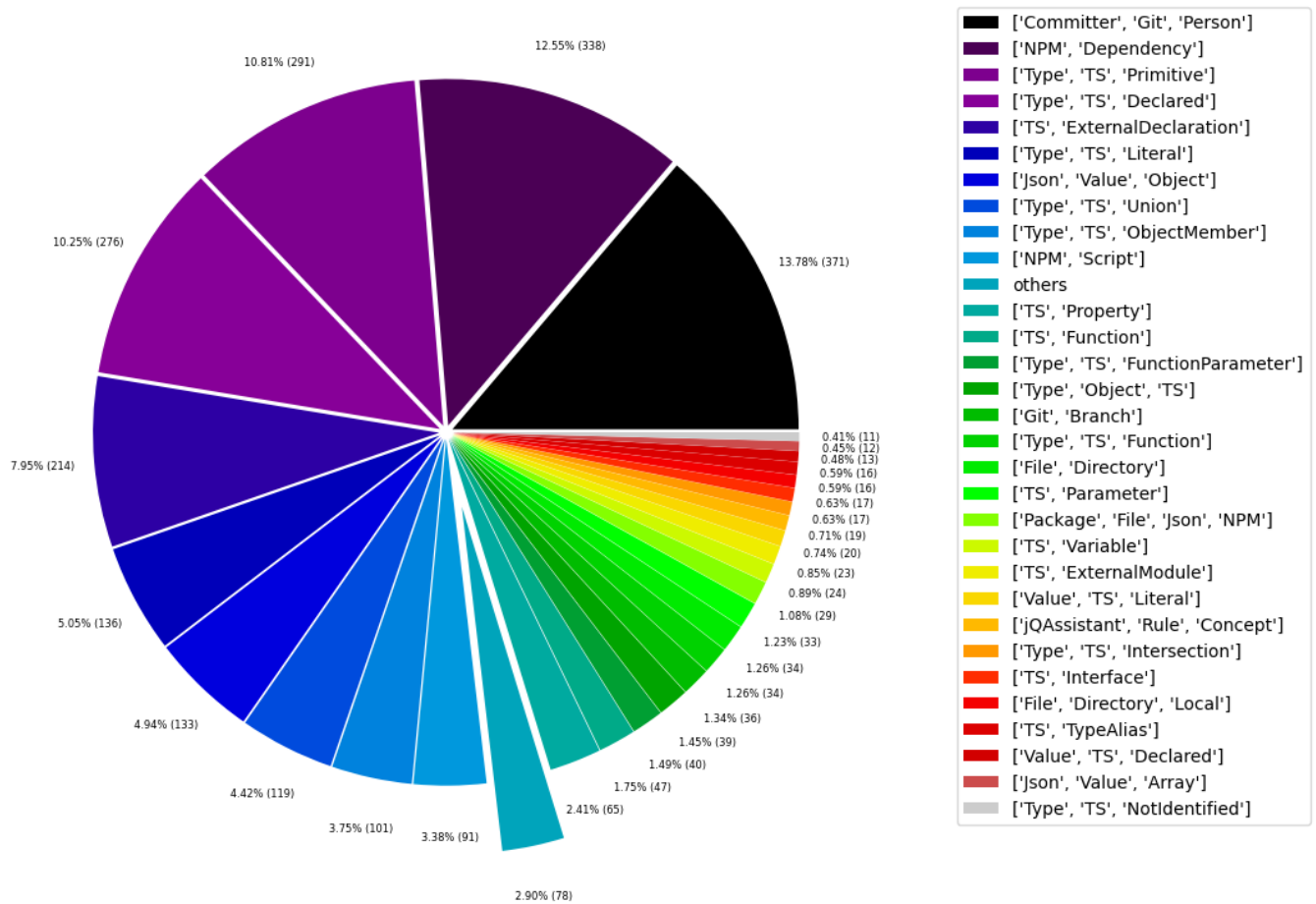


Table 1c - Highest node count by single label

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.

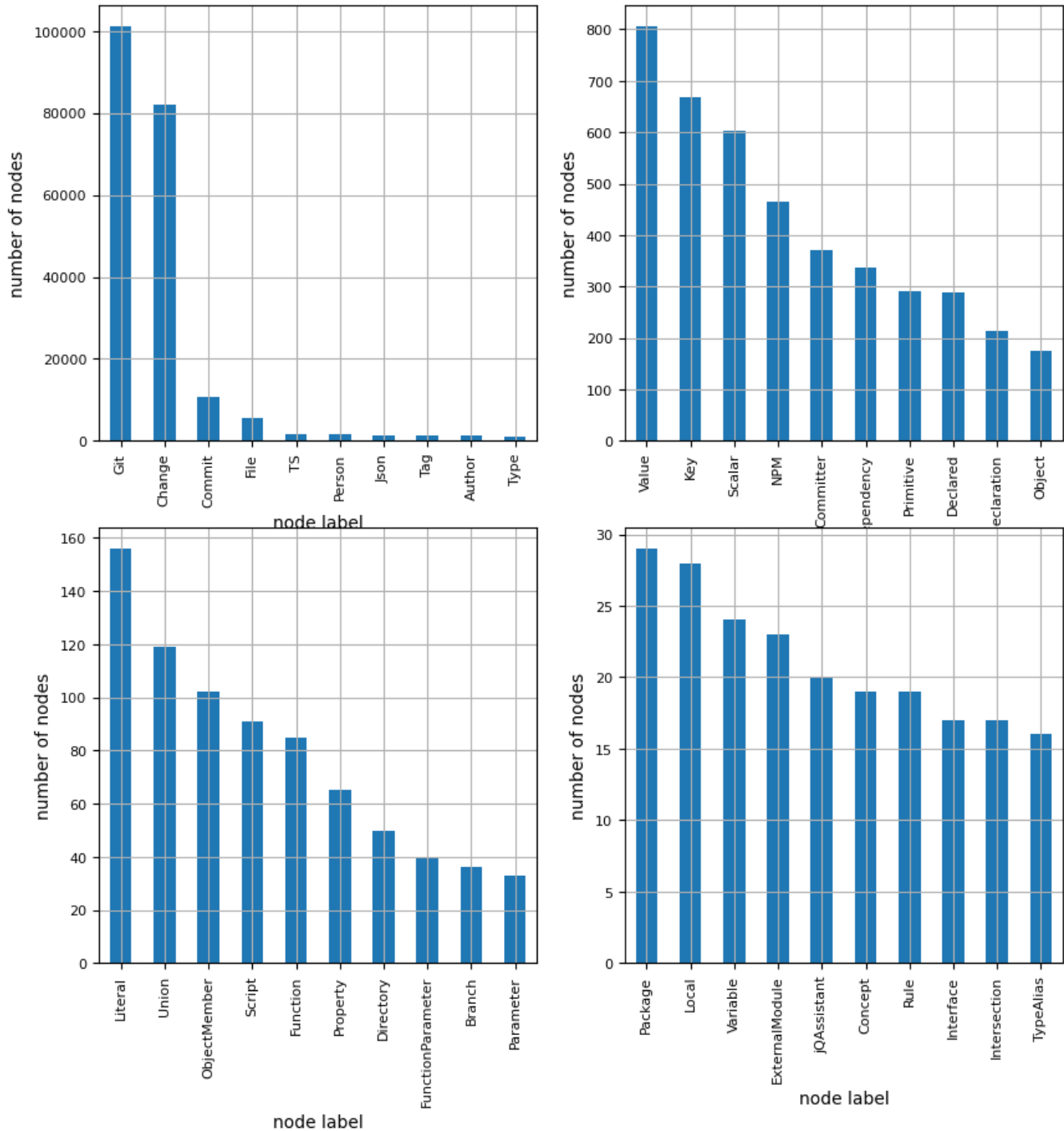
	nodeLabel	nodesWithThatLabel	nodesWithThatLabelPercent
0	Git	101200	96.605445
1	Change	82041	78.316278
2	Commit	10662	10.177937
3	File	5595	5.340983
4	TS	1600	1.527359
5	Person	1598	1.525450
6	Json	1445	1.379396
7	Tag	1360	1.298255
8	Author	1227	1.171293
9	Type	1073	1.024285
10	Value	806	0.769407
11	Key	668	0.637672
12	Scalar	603	0.575623
13	NPM	464	0.442934
14	Committer	371	0.354156
15	Dependency	338	0.322655
16	Primitive	291	0.277788
17	Declared	289	0.275879
18	ExternalDeclaration	214	0.204284
19	Object	175	0.167055
20	Literal	156	0.148917
21	Union	119	0.113597
22	ObjectMember	102	0.097369
23	Script	91	0.086869
24	Function	85	0.081141
25	Property	65	0.062049
26	Directory	50	0.047730
27	FunctionParameter	40	0.038184
28	Branch	36	0.034366
29	Parameter	33	0.031502
30	Package	29	0.027683
31	Local	28	0.026729
32	Variable	24	0.022910
33	ExternalModule	23	0.021956
34	jqAssistant	20	0.019092
35	Concept	19	0.018137
36	Rule	19	0.018137
37	Interface	17	0.016228
38	Intersection	17	0.016228
39	TypeAlias	16	0.015274

## 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: 312919

	relationshipType	nodesWithThatRelationshipType	nodesWithThatRelationshipTypePercent
0	CONTAINS_CHANGE	82041	26.217967
1	MODIFIES	82041	26.217967
2	UPDATES	53762	17.180804
3	COMMITTED	21324	6.814543
4	CREATES	19709	6.298435
5	DELETES	11770	3.761357
6	HAS_PARENT	11710	3.742182
7	HAS_COMMIT	10662	3.407272
8	HAS_FILE	5502	1.758282
9	RENAMES	3200	1.022629
10	HAS_NEW_NAME	1727	0.551900
11	HAS_TAG	1360	0.434617
12	ON_COMMIT	1360	0.434617
13	HAS_AUTHOR	1227	0.392114
14	DEPENDS_ON	961	0.307108
15	HAS_KEY	668	0.213474
16	HAS_VALUE	668	0.213474
17	CONTAINS	594	0.189825
18	HAS_COMMITTER	371	0.118561
19	OF_TYPE	337	0.107696
20	EXPORTS	283	0.090439
21	REFERENCES	197	0.062956
22	DECLARES	186	0.059440
23	DECLARES_DEV_DEPENDENCY	169	0.054008
24	DECLARES_DEPENDENCY	161	0.051451
25	HAS_MEMBER	102	0.032596
26	HAS_TYPE_ARGUMENT	94	0.030040
27	DECLARES_SCRIPT	91	0.029081
28	RETURNS	82	0.026205
29	HAS_PARAMETER	73	0.023329

## 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)

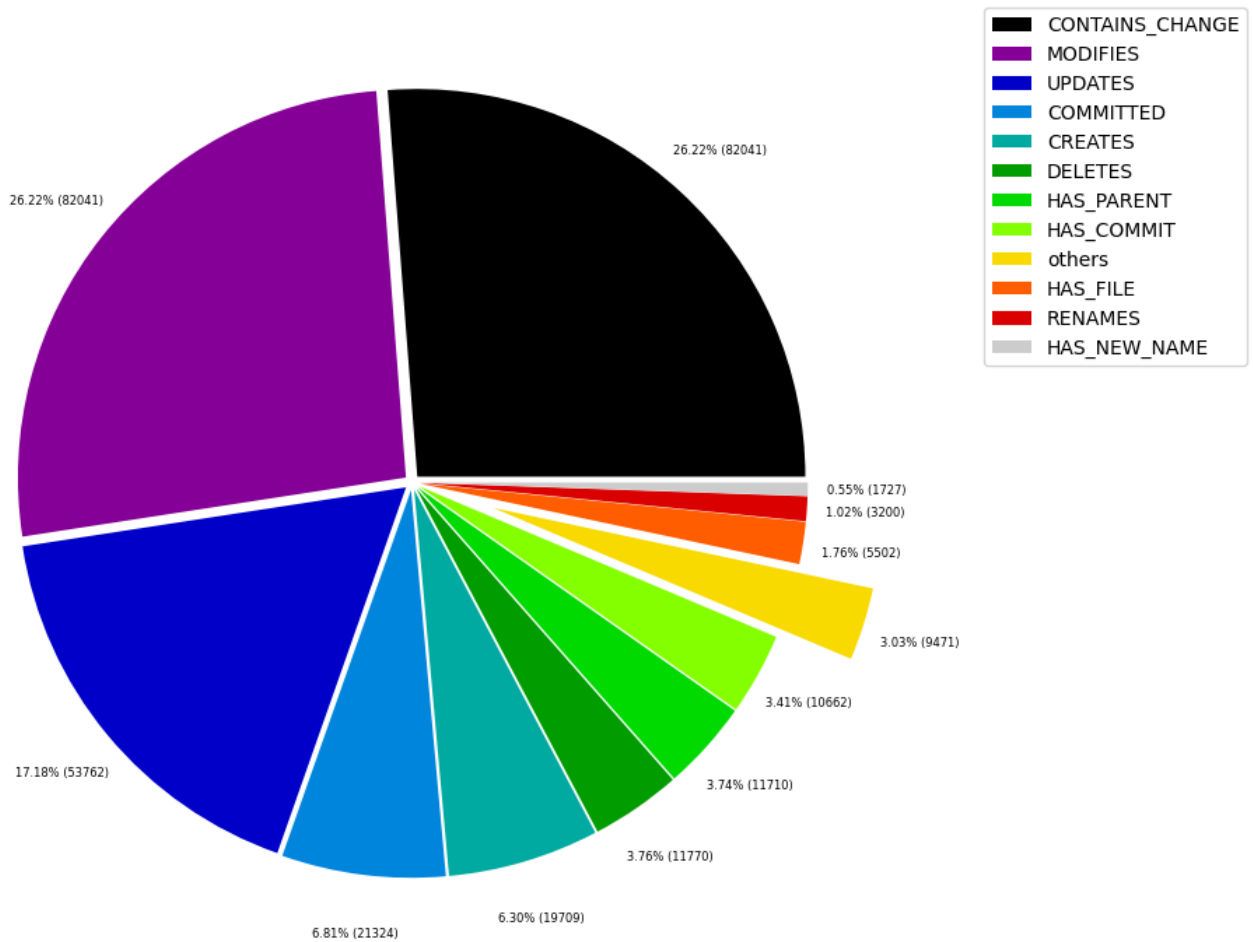


Table 2b - Lowest relationship count by type

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.

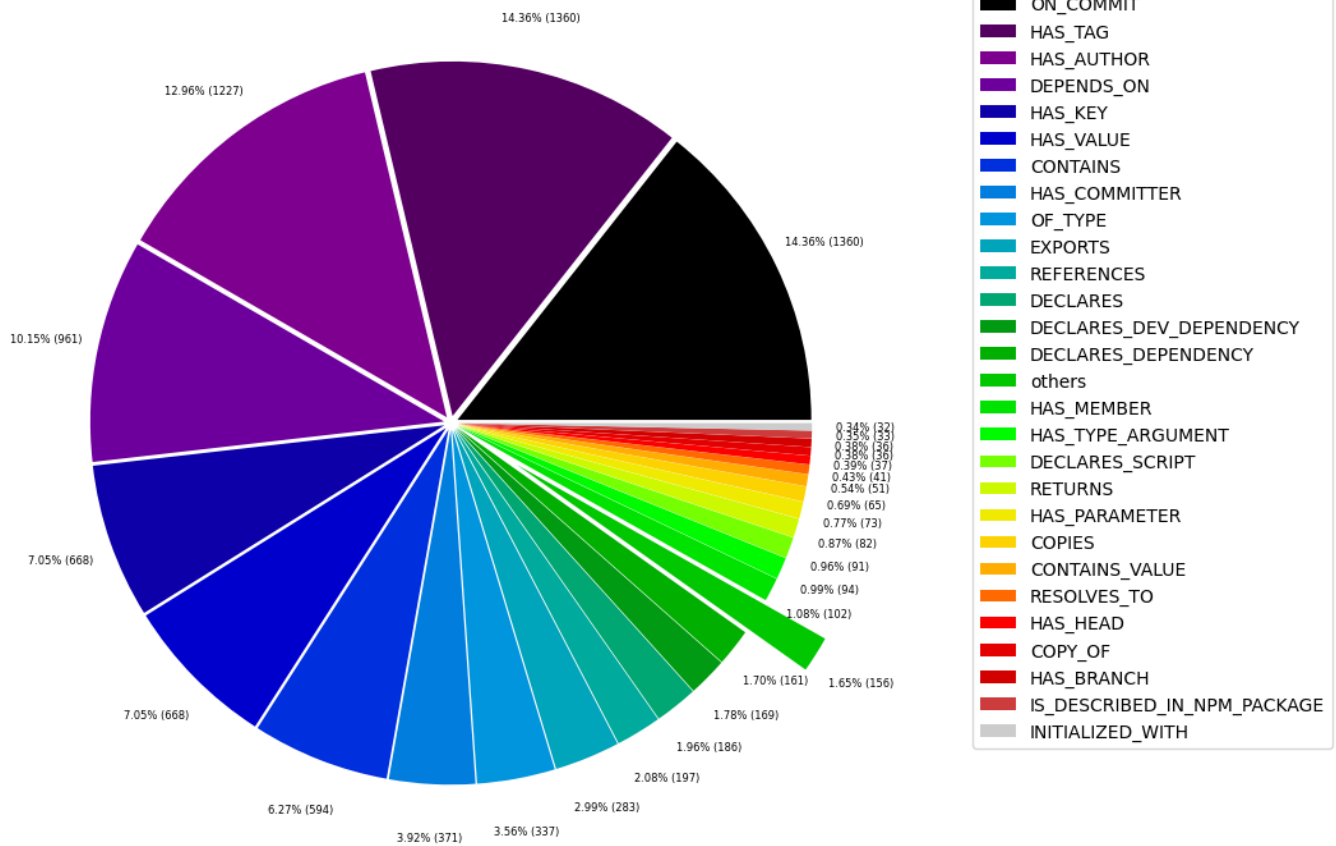
	relationshipType	nodesWithThatRelationshipType	nodesWithThatRelationshipTypePercent
0	PROVIDED_BY_NPM_DEPENDENCY	1	0.000320
1	IS_IMPLEMENTED_IN	2	0.000639
2	CONSTRAINED_BY	4	0.001278
3	REFERENCED_PROJECTS	5	0.001598
4	CONTAINS_PROJECT	6	0.001917
5	DECLARES_ENGINE	6	0.001917
6	EXTENDS	6	0.001917
7	HAS_ARGUMENT	6	0.001917
8	CALLS	6	0.001917
9	HAS_NPM_PACKAGE	6	0.001917
10	HAS_ROOT	6	0.001917
11	MEMBER	6	0.001917
12	PARENT	6	0.001917
13	HAS_CONFIG	6	0.001917
14	SIMILAR	6	0.001917
15	DECLARES_PEER_DEPENDENCY	8	0.002557
16	INCLUDES_CONCEPT	19	0.006072
17	USES	23	0.007350
18	REQUIRES_CONCEPT	28	0.008948
19	INITIALIZED_WITH	32	0.010226
20	IS_DESCRIBED_IN_NPM_PACKAGE	33	0.010546
21	HAS_BRANCH	36	0.011505
22	COPY_OF	36	0.011505
23	HAS_HEAD	37	0.011824
24	RESOLVES_TO	41	0.013102
25	CONTAINS_VALUE	51	0.016298
26	COPIES	65	0.020772
27	HAS_PARAMETER	73	0.023329
28	RETURNS	82	0.026205
29	DECLARES_SCRIPT	91	0.029081

## 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]	82041	82041	
1	[Git, Commit]	CONTAINS_CHANGE	[Git, Change]	82041	10662	
2	[Git, Change]	UPDATES	[File, Git]	53762	82041	
3	[Git, Change]	CREATES	[File, Git]	19709	82041	
4	[Git, Change]	DELETES	[File, Git]	11770	82041	
5	[Git, Commit]	HAS_PARENT	[Git, Commit]	11710	10662	
6	[Repository, File, Git]	HAS_COMMIT	[Git, Commit]	10662	1	
7	[Author, Git, Person]	COMMITTED	[Git, Commit]	10662	1227	
8	[Committer, Git, Person]	COMMITTED	[Git, Commit]	10662	371	
9	[Repository, File, Git]	HAS_FILE	[File, Git]	5502	1	
10	[Git, Change]	RENAMES	[File, Git]	3200	82041	
11	[File, Git]	HAS_NEW_NAME	[File, Git]	1727	5502	
12	[Repository, File, Git]	HAS_TAG	[Git, Tag]	1360	1	
13	[Git, Tag]	ON_COMMIT	[Git, Commit]	1360	1360	
14	[Repository, File, Git]	HAS_AUTHOR	[Author, Git, Person]	1227	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]	289	47	
19	[File, TS, Local, Module, Mark4ModuleWeaklyCon...]	DEPENDS_ON	[TS, ExternalDeclaration]	232	4	
20	[TS, ExternalModule]	EXPORTS	[TS, ExternalDeclaration]	214	23	
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]	132	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): 104756

total\_number\_of\_relationships (edges): 312919

-> total directed graph density: 2.851532104427449e-05

-> total directed graph density in percent: 0.002851532104427449