

NODES

Neo4j: Topic properties

| topic_id | string, unique, required | Unique idtopic_id |
|-----------------------|--------------------------------------|---|
| mesh_id | string, unique, optional | MeSH unique id |
| mesh_term | string, unique, optional | MeSH preferred term |
| term | string, unique, default=mesh_term | Selected preferred term |
| uri | string, unique, required | URI from MeSH |
| origin | string, default=U* | Selected origin |
| typology | array, default="0"* | Selected typology |
| description | string, optional | Description of topic |
| tracked | boolean, default=False | Indicates if a topic is being tracked (appears as topic in front) |
| supplementary_concept | boolean, required | Indicates if topic is supplementary concept |
| source | string | Source of the topic |
| mesh_active | boolean, required | Whether node is active in MeSH (currently used) |
| last_trend_prob | float, required, default=0.0 | Last probability of being trend |
| last_trend_prob_var | float, required, default=0.0 | Last probability variation of being trend |
| last_sentiment_score | float, required, default=0.0 | Last sentiment score |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |
| | | |

rigin_choices = (U': Universe', 'P': Products', 'T': Pipeline', 'D': 'Disease', 'A': 'Amgen', 'E': 'Other')
typology_choices = (A': 'Anatomy', 'B': 'Organism', 'C': 'Disease', 'D': 'Chemical / Drug', 'E': 'Analytical / Diagnostic /
Therapeutic Techniques / Equipment', 'E': 'Psychiatry / Psychology, 'G': 'Phenomena / Process', 'H': 'Discipline / Occupation',
'I': 'Anthropology / Education / Sociology / Social Phenomena", 'J': 'Technology / Food & Beverage', 'K': 'Humanities', 'L':
Information Science', 'M': 'Psson', 'M': 'Health Care', 'O': 'Other', 'P: 'Product', 'C': 'Keyvord', 'R': 'Pharmacial Action',
'S': 'Molecule', 'T': 'Target', 'V': 'Publication Type', 'X': 'Check Tag', 'Y': 'Subheading', 'Z': 'Geographical Location')

Neo4j: Author properties

| sc_author_id | string, unique, required | Semantic Scholar Author id |
|-------------------|--------------------------------|----------------------------|
| name | string, optional | Name of the author |
| h_index* | integer, required, default=0.0 | H_index |
| num_publications* | integer, required, default=0.0 | Number of publications |
| num_citations* | integer, required, default=0.0 | Number of citations |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

Neo4i: Tweet properties

| Neo4j. Tweet properties | | |
|-------------------------|------------------------------|-----------------------------|
| tweet_id | string, unique, required | String tweet id (timestamp) |
| text | string, optional | Text of the tweet |
| date | date, required | Date of the tweet |
| hashtags | array, required, default=[] | Tweet hashtags |
| sentiment | float, required, default=0.0 | Tweet sentiment |
| rank | float, required, default=0.0 | Calculated tweet rank |
| retweets | integer | Retweet count of the tweet |
| favourites | integer | Like count of the tweet |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

Neo4i: Publication properties

| Neo-j. i ubilication properties | | |
|---------------------------------|--------------------------|----------------------------|
| pmid | string, unique, required | PubMed unique id |
| sc_publication_id | string, unique, required | Semantic Scholar unique id |
| publication_date | date, required | Publication date |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

* origin & typology values must be selected from corresponding choices dictionary ** Works with triggers.

Neo4i: ClinicalTrial properties

| Ne04j. Clinical frial properties | | |
|----------------------------------|--------------------------|-------------------------------------|
| clinicaltrial_id | string, unique, required | Clinical Trials unique id |
| start_date | date, required | Starting date of the clinical trial |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

Neo4i: Product properties

| Neo4j. Froduct properties | | | |
|---------------------------|-------------|--------------------------|-------------------------------|
| ŗ | product_id | string, unique, required | Product unique id |
| ge | neric_name | string, required | Generic name of the product |
| subs | stance_name | string, required | Substance name of the product |
| | version | string, optional | |
| | route | string, optional | |
| | found_in | string, optional | |
| br | and_name | string, optional | |
| pr | oduct_type | string, optional | |
| eff | ective_time | date, optional | |
| C | reated_at | date, automatic** | Indicates date of creation |
| u | pdated_at | date, automatic** | Indicates date of update |
| C | leleted_at | date, automatic** | Indicate date of removal |

Neo4j: TwitterAccount properties

| twitteraccount_id | string, unique, required | Twitter account id |
|-------------------|------------------------------|-----------------------------------|
| screen_name | string, unique, required | Screen name of twitter account |
| name | string, required | Name of the twitter account |
| score | float, required, default=0.0 | Network global influencer score |
| description | string | Description of the account |
| followers | integer | Followers of the account |
| following | integer | Following of the account |
| listed | integer | Listeds of the account |
| favourites | integer | Favourites of the account |
| statuses | integer | Number of statuses of the account |
| expert_score | float | Expert score of the account |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

Neo4j: Organization properties

| organization_id | string, unique, required | Organization Unique ID |
|-----------------|--------------------------|----------------------------|
| name | string, required | Organization name |
| num_cts | integer | Number of clinical trials |
| num_products | integer | Number of products |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

RELATIONSHIPS

| Neo4j. workson properties | | |
|---------------------------|------------------------------|---|
| score | float, required, default=0.0 | Particular score of an organization, author or twitter account related to a topic |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted_at | date, automatic** | Indicate date of removal |

Neo4j: isRelatedTo properties

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|----------------------------------|--------------------------|--|
| source | string, required=True, * | Indicates the origin of the relationship |
| created_at | date, automatic** | Indicates date of creation |
| updated_at | date, automatic** | Indicates date of update |
| deleted at | date automatic** | Indicate date of removal |

^{*} source values must be selected from the following possibilities:

o "DB" if link was found in original DB

o "API" if link has been established through API