Package 'finto'

November 24, 2025

Title Access the 'Finto' API

Version 0.1.1

Date 2025-10-29

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Description Access and retrieve vocabulary data 'Finto' API <https://api.finto.fi/>, which is a centralized service for interoperable thesauri, ontology and classification schemes for different subject areas.

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Encoding UTF-8

Imports tibble, httr, dplyr, jsonlite, tidyr, stringr, purrr

Suggests testthat (>= 3.0.0), rmarkdown, knitr

URL <https://fennicahub.github.io/finto/>

BugReports <https://github.com/fennicahub/finto/issues>

RoxygenNote 7.3.2

Config/testthat/edition 3

VignetteBuilder knitr

Depends R (>= 3.5)

NeedsCompilation no

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Repository CRAN

Date/Publication 2025-11-24 09:30:17 UTC

Contents

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fetch_kanto_info   *Fetch RDF data for a specific concept from the Finto Skosmos API*
                                    using a single asteriID

Description

This function retrieves RDF data for a given concept from the Finto API. The user only needs to
provide the asteriID, which is appended to a fixed base URI.

Usage

```
fetch_kanto_info(asteriID, format = "application/json")
```

Arguments

`asteriID`	The unique identifier to append to the base URI.
`format`	The MIME type of the serialization format (e.g., "application/rdf+xml" or "text/turtle"). Default is "application/json".

Value

A tibble containing the RDF data for the concept.

Examples

```
concept_data <- fetch_kanto_info(asteriID = "000094320")
print(concept_data)
```

---

fetch_profession_hierarchy

Fetch hierarchy of professions from Finto API

Description

This function retrieves broader/narrower relationships and constructs a hierarchical structure.

Usage

```
fetch_profession_hierarchy(concept_uri, vocid = "mts", depth = 3)
```

Arguments

`concept_uri`	The URI of the starting profession (root).
`vocid`	The vocabulary ID (default: "mts").
`depth`	The depth of hierarchy to fetch (default: 3).

Value

A data.frame representing the hierarchy.

Examples

```
hierarchy_df <- fetch_profession_hierarchy("http://urn.fi/URN:NBN:fi:au:mts:m3357")
print(hierarchy_df)
```

`fetch_profession_info`   *Fetch all metadata from Finto Skosmos API*

Description

This function queries the Finto API for a given concept URI and extracts all relevant metadata fields.

Usage

```
fetch_profession_info(concept_uri)
```

Arguments

concept_uri   The URI of the concept to fetch.

Value

A tibble containing the full metadata.

Examples

```
metadata <- fetch_profession_info("http://urn.fi/URN:NBN:fi:au:mts:m3357")
print(metadata)
```

`finto_api_request`   *Helper function to send requests to the Finto Skosmos API*

Description

Helper function to send requests to the Finto Skosmos API

Usage

```
finto_api_request(endpoint, params = list())
```

Arguments

endpoint   API endpoint to request.

params   List of query parameters.

Value

Parsed JSON response from the API.

Examples

```
## Not run:
finto_api_request("vocabularies")

## End(Not run)
```

---

get_alphabetical_index_letters

Get the initial letters of the alphabetical index for labels in a specific vocabulary from the Finto Skosmos API

Description

Get the initial letters of the alphabetical index for labels in a specific vocabulary from the Finto Skosmos API

Usage

```
get_alphabetical_index_letters(vocid, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
lang	The language of labels, e.g., "en" or "fi". Optional.

Value

A tibble containing the initial letters of the alphabetical index.

Examples

```
result <- get_alphabetical_index_letters(vocid = "yso", lang = "fi")
print(result)
```

---

get_broader_concepts *Get broader concepts for a specific concept from the Finto Skosmos API*

Description

Get broader concepts for a specific concept from the Finto Skosmos API

Usage

```
get_broader_concepts(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose broader concepts to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the broader concepts (prefLabel and uri) for the specified concept.

Examples

```
conepts <- get_broader_concepts(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p22922", lang = "fi")
print(conepts)
```

---

get_broader_transitive_concepts

Get broader transitive concepts for a specific concept from the Finto Skosmos API

Description

Get broader transitive concepts for a specific concept from the Finto Skosmos API

Usage

```
get_broader_transitive_concepts(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose broader transitive concepts to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the broader transitive concepts (prefLabel and uri) for the specified concept.

Examples

```
concepts <- get_broader_transitive_concepts(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p22922", lang = "fi")
print(concepts)
```

---

get_children_concepts *Get children concepts for a specific concept from the Finto Skosmos API*

Description

Get children concepts for a specific concept from the Finto Skosmos API

Usage

```
get_children_concepts(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose children concepts to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the children concepts (prefLabel, uri, hasChildren) for the specified concept.

Examples

```
children <- get_children_concepts(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p690", lang = "fi")
print(children)
```

---

get_concepts_by_letter

Get concepts starting with a specific letter in the alphabetical index for a given vocabulary

---

Description

Get concepts starting with a specific letter in the alphabetical index for a given vocabulary

Usage

```
get_concepts_by_letter(vocid, letter, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
letter	The initial letter, or "0-9" for numeric or "!*" for special character labels.
lang	The language of labels, e.g., "en" or "fi". Optional.

Value

A tibble containing concepts with labels starting with the given letter.

Examples

```
result <- get_concepts_by_letter(vocid = "yso", letter = "A", lang = "fi")
print(result)
```

---

get_concept_data   *Get RDF data for a specific concept from the Finto Skosmos API*

Description

Get RDF data for a specific concept from the Finto Skosmos API

Usage

```
get_concept_data(uri, format = "application/json")
```

Arguments

uri	The URI of the concept to retrieve data for.
format	The MIME type of the serialization format (e.g., "application/rdf+xml" or "text/turtle"). Default is "application/json".

Value

A tibble containing the RDF data for the concept.

Examples

```
concept_data <- get_concept_data(uri = "http://www.yso.fi/onto/afo/")
print(concept_data)
```

---

get_concept_groups   *Get concept groups for a given vocabulary from the Finto Skosmos API*

Description

Get concept groups for a given vocabulary from the Finto Skosmos API

Usage

```
get_concept_groups(vocid, lang = NULL)
```

Arguments

`vocid`	The vocabulary ID, e.g., "yso".
`lang`	The language of labels, e.g., "en" or "fi". Optional.

Value

A tibble containing concept groups, with fields for URI, prefLabel, and hasMembers.

Examples

```
result <- get_concept_groups(vocid = "yso", lang = "fi")
print(result)
```

`get_concept_labels`	*Get labels for a specific concept from the Finto Skosmos API and return as a tibble*

Description

Get labels for a specific concept from the Finto Skosmos API and return as a tibble

Usage

```
get_concept_labels(uri, lang = NULL)
```

Arguments

`uri`	The URI of the concept to retrieve labels for.
`lang`	The language of labels to retrieve, e.g., "en" or "fi". Optional.

Value

A tibble containing the URI, preferred label (`prefLabel`), alternative labels (`altLabel`), and hidden labels (`hiddenLabel`) for the concept.

Examples

```
labeles <- get_concept_labels(uri = "http://www.yso.fi/onto/koko/p91024",
lang = "fi")
print(labeles)
```

```
get_concept_labels_vocid
```
Get labels for a specific concept from the Finto Skosmos API

Description

Get labels for a specific concept from the Finto Skosmos API

Usage

```
get_concept_labels_vocid(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose labels to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the labels (prefLabel, altLabel, hiddenLabel) for the specified concept.

Examples

```
lables <- get_concept_labels_vocid(vocid = ”yso”,
uri = ”http://www.yso.fi/onto/yso/p22922”, lang = ”fi”)
print(lables)
```

```
get_group_members
```
Get members of a specific concept group from the Finto Skosmos API

Description

Get members of a specific concept group from the Finto Skosmos API

Usage

```
get_group_members(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept group whose members to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing members associated with the specified concept group.

Examples

```
group_members_data <- get_group_members(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p26580", lang = "fi")
print(head(group_members_data))
```

---

get_hierarchy	*Get the hierarchical context for a specific concept from the Finto Skosmos API*

Description

Get the hierarchical context for a specific concept from the Finto Skosmos API

Usage

```
get_hierarchy(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose hierarchical context to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the hierarchical context (broader, narrower, prefLabel, etc.) for the specified concept.

Examples

```
hierarchy <- get_hierarchy(vocid = "yso", uri = "http://www.yso.fi/onto/yso/p24489", lang = "fi")
print(hierarchy)
```

---

get_kanto	*Process and Fetch KANTO Information using a list of author_IDs as column*

Description

This function extracts Asteri IDs from the 'author_ID' column as list, fetches RDF data from the Finto Skosmos API using those IDs, and returns a cleaned tibble with the retrieved metadata and profession labels.

Usage

```
get_kanto(data)
```

Arguments

data   A dataframe containing an 'author_ID' column with values like "(FIN11)000069536".

Value

A tibble with `author_ID`, RDF data, and extracted profession labels.

---

get_label_statistics	*Get label statistics by language in a specific vocabulary from the Finto Skosmos API*

Description

Get label statistics by language in a specific vocabulary from the Finto Skosmos API

Usage

```
get_label_statistics(vocid)
```

Arguments

vocid   The vocabulary ID, e.g., "yso".

Value

A tibble containing the label statistics for each language, with columns for language, literal, property, and label count.

Examples

```
result <- get_label_statistics(vocid = "yso")
print(result)
```

---

get_mappings *Get mappings for a specific concept from the Finto Skosmos API*

Description

Get mappings for a specific concept from the Finto Skosmos API

Usage

```
get_mappings(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose mappings to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing mappings associated with the specified concept.

Examples

```
mappings_data <- get_mappings(vocid = "yso", uri = "http://www.yso.fi/onto/yso/p22922", lang = "fi")
print(mappings_data)
```

---

get_modified_concepts *Get modified concepts in a specific vocabulary from the Finto Skosmos API*

Description

Get modified concepts in a specific vocabulary from the Finto Skosmos API

Usage

```
get_modified_concepts(vocid, lang = NULL, offset = NULL, limit = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
lang	The language of labels, e.g., "en" or "fi". Optional.
offset	Offset for the starting index of the results. Optional.
limit	Maximum number of concepts to return. Optional.

Value

A tibble containing the modified concepts with URI, label, and modification date.

Examples

```
result <- get_modified_concepts(vocid = "yso", lang = "fi", limit = 10)
print(result)
```

---

get_narrower_concepts   *Get narrower concepts for a specific concept from the Finto Skosmos*
                         API

Description

Get narrower concepts for a specific concept from the Finto Skosmos API

Usage

```
get_narrower_concepts(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose narrower concepts to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the narrower concepts (prefLabel and uri) for the specified concept.

Examples

```
narrower_concepts <- get_narrower_concepts(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p690", lang = "fi")
print(narrower_concepts)
```

---

get_narrower_transitive

> *Get narrower transitive concepts for a specific concept from the Finto Skosmos API*

Description

Get narrower transitive concepts for a specific concept from the Finto Skosmos API

Usage

```
get_narrower_transitive(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose narrower transitive hierarchy to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the narrower transitive concepts (prefLabel and uri) for the specified concept.

Examples

```
narrow <- get_narrower_transitive(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p690", lang = "fi")
print(narrow)
```

---

get_new_concepts   *Get new concepts in a specific vocabulary from the Finto Skosmos API*

Description

Get new concepts in a specific vocabulary from the Finto Skosmos API

Usage

```
get_new_concepts(vocid, lang = NULL, offset = NULL, limit = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
lang	The language of labels, e.g., "en" or "fi". Optional.
offset	Offset for the starting index of the results. Optional.
limit	Maximum number of concepts to return. Optional.

Value

A tibble containing the new concepts with URI, label, and creation date.

Examples

```
result <- get_new_concepts(vocid = "yso", lang = "fi", limit = 10)
print(result)
```

---

get_related_concepts   *Get related concepts for a specific concept from the Finto Skosmos*
                        API

Description

Get related concepts for a specific concept from the Finto Skosmos API

Usage

```
get_related_concepts(vocid, uri, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
uri	The URI of the concept whose related concepts to retrieve.
lang	The language code for the labels, e.g., "fi" or "en". Optional.

Value

A tibble containing the related concepts (prefLabel and uri) for the specified concept.

Examples

```
related <- get_related_concepts(vocid = "yso",
uri = "http://www.yso.fi/onto/yso/p24489", lang = "fi")
print(related)
```

---

get_top_concepts | *Get top concepts of a specific vocabulary from the Finto Skosmos API*

Description

Get top concepts of a specific vocabulary from the Finto Skosmos API

Usage

```
get_top_concepts(vocid, lang = NULL, scheme = NULL)
```

Arguments

vocid   The vocabulary ID, e.g., "yso".

lang   The language of labels to retrieve, e.g., "en" or "fi". Optional.

scheme   The concept scheme to retrieve top concepts from. Optional.

Value

A tibble containing the URI, label, topConceptOf, notation, and hasChildren for each top concept.

Examples

```
result <- get_top_concepts(vocid = "yso", lang = "fi")
print(result)
```

---

get_types | *Get information about the types (classes) of objects in all vocabularies from the Finto Skosmos API*

Description

Get information about the types (classes) of objects in all vocabularies from the Finto Skosmos API

Usage

```
get_types(lang = NULL)
```

Arguments

lang   The language of labels to retrieve, e.g., "en" or "fi". Optional.

Value

A tibble containing the URI, label, and superclass for each type.

Examples

```
result <- get_types(lang = "fi")
print(result)
```

---

get_vocabularies	*Get available vocabularies from the Finto Skosmos API*

Description

Get available vocabularies from the Finto Skosmos API

Usage

```
get_vocabularies(lang = "fi")
```

Arguments

lang	Language of labels, e.g., "en" or "fi" (default is "fi")

Value

A data frame with the vocabulary details: uri, id, and title

Examples

```
result <- get_vocabularies(lang = "fi")
print(result)
```

---

get_vocabulary_data	*Get and structure RDF data of the whole vocabulary or a specific concept from the Finto Skosmos API*

Description

Get and structure RDF data of the whole vocabulary or a specific concept from the Finto Skosmos API

Usage

```
get_vocabulary_data(
  vocid,
  format = "application/rdf+xml",
  uri = NULL,
  lang = NULL
)
```

Arguments

`vocid`	The vocabulary ID, e.g., "yso".
`format`	The MIME type of the serialization format, e.g., "application/rdf+xml". Default is "application/rdf+xml".
`uri`	The URI of a specific concept to retrieve data for. If NULL, retrieves data for the entire vocabulary. Optional.
`lang`	The RDF language code for the requested resource, e.g., "fi" or "en". Optional.

Value

A character string containing the raw RDF response.

Examples

```
rdf_xml_data <- get_vocabulary_data(
  vocid = "yso",
  uri = "http://www.w3.org/2004/02/skos/core#Concept",
  format = "application/rdf+xml"
)
cat(rdf_xml_data)

turtle_data <- get_vocabulary_data(
  vocid = "yso",
  format = "text/turtle"
)
cat(turtle_data)  # Print the Turtle data
```

`get_vocabulary_info`	*Get general information about a specific vocabulary from the Finto Skosmos API*

Description

Get general information about a specific vocabulary from the Finto Skosmos API

Usage

```
get_vocabulary_info(vocid, lang = NULL)
```

Arguments

`vocid`	The vocabulary ID, e.g., "yso".
`lang`	The language of labels to retrieve, e.g., "en" or "fi". Optional.

Value

A list containing the vocabulary details such as URI, title, languages, and concept schemes.

Examples

```
result <- get_vocabulary_info(vocid = "yso", lang = "fi")
print(result)
```

---

get_vocabulary_statistics

Get vocabulary statistics as a single tibble containing concepts, sub-types, and concept groups

---

Description

Get vocabulary statistics as a single tibble containing concepts, subtypes, and concept groups

Usage

```
get_vocabulary_statistics(vocid, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
lang	The language of labels, e.g., "en" or "fi". Optional.

Value

A tibble containing counts of concepts, subtypes, and concept groups, with each entry in one row.

Examples

```
result <- get_vocabulary_statistics(vocid = "yso", lang = "fi")
print(result)
```

---

get_vocabulary_types   *Get type information for a Finto vocabulary*

Description

This function retrieves information about the types (classes) of objects in a given Finto/Skosmos vocabulary, using the /types endpoint.

Usage

```
get_vocabulary_types(vocid, lang = NULL)
```

Arguments

vocid	A Skosmos vocabulary identifier, e.g. ″yso″.
lang	Optional language code for labels, e.g. ″fi″ or ″en″. If NULL (default), the API's default language is used.

Value

A tibble with one row per type, typically containing columns uri, label, and (optionally) superclass.

Examples

```
types <- get_vocabulary_types("yso", lang = "fi")
print(types)
```

---

lookup_concept_by_label

Look up concepts by label in a specific vocabulary from the Finto Skosmos API

Description

Look up concepts by label in a specific vocabulary from the Finto Skosmos API

Usage

```
lookup_concept_by_label(vocid, label, lang = NULL)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
label	The label to look up, e.g., "cat".
lang	The search language, e.g., "en" or "fi". Optional.

Value

A tibble containing the best matching concept(s) with fields like uri, type, prefLabel, and altLabel.

Examples

```
result <- lookup_concept_by_label(vocid = "yso", label = "cat", lang = "en")
print(result)
```

search_concepts *Search for concepts in the Finto Skosmos API by query term with additional parameters*

Description

Search for concepts in the Finto Skosmos API by query term with additional parameters

Usage

```
search_concepts(
  query,
  lang = NULL,
  labellang = NULL,
  vocab = NULL,
  type = NULL,
  parent = NULL,
  group = NULL,
  maxhits = NULL,
  offset = NULL,
  fields = NULL,
  unique = NULL
)
```

Arguments

query	The term to search for, e.g., "sibelius".
lang	Language of labels to match, e.g., "en" or "fi". Optional.
labellang	Language of labels to return, e.g., "en" or "fi". Optional.
vocab	Vocabulary or vocabularies to limit search to, e.g., "yso". Optional.
type	Limit search to concepts of the given type(s), e.g., "skos:Concept". Optional.
parent	Limit search to concepts which have the given concept as a parent. Optional.
group	Limit search to concepts in a specific group. Optional.
maxhits	Maximum number of results to return (default is 191 as per the screenshot). Optional.
offset	Offset to start in the result set, useful for paging. Optional.
fields	Extra fields to include in the results (space-separated list). Optional.
unique	Boolean flag to return each concept only once. Optional.

Value

A data frame containing search results with columns: uri, type, prefLabel, altLabel, hiddenLabel, lang, and vocab.

Examples

```
concepts <- search_concepts(query = "sibelius", lang = "fi")
print(concepts)
```

---

search_vocabulary_concepts

Search for concepts and collections in a specific vocabulary from the Finto Skosmos API

Description

Search for concepts and collections in a specific vocabulary from the Finto Skosmos API

Usage

```
search_vocabulary_concepts(
  vocid,
  query,
  lang = NULL,
  type = NULL,
  maxhits = NULL,
  offset = NULL
)
```

Arguments

vocid	The vocabulary ID, e.g., "yso".
query	The search term, e.g., "cat*".
lang	The language of labels to match, e.g., "en" or "fi". Optional.
type	Limit search to concepts of a given type, e.g., "skos:Concept". Optional.
maxhits	Maximum number of results to return. Optional.
offset	Offset where to start in the result set, useful for paging. Optional.

Value

A tibble containing the search results with fields such as uri, type, prefLabel, and altLabel.

Examples

```
search_results <- search_vocabulary_concepts(vocid = "yso", query = "cat", lang = "en")
print(search_results)
```

Index