pine

JHU/APL

Oct 08, 2020

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CHAPTER

ONE

API REFERENCE

This page contains auto-generated API reference documentation[1].

1.1 pine

1.1.1 Subpackages

pine.backend

Subpackages

pine.backend.admin

This module implements all methods required for user authentication when using PINE's db authentication rather than an external Auth service

Submodules

pine.backend.admin.bp

Module Contents

Functions

get_users()	Get the list of all users' details (id, email, and password hash)
get_user(user_id)	Given a user_id, return the user's details (id, email, and password hash)
update_user_password(user_id)	Change the password hash stored in the database for the given user to a newly calculated password hash derived from
update_user(user_id)	Change the details stored in the database for the given user to those provided in the json body of this request.

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[1] Created with sphinx-autoapi

Table 1 – continued from previous page

add_user()	Add a new user to PINE, with the details provided in the json body of this request (id, email, and password hash).
delete_user(user_id)	Delete the user matching the given user_id
system_export()	Export the contents of the database as a zip file
system_import()	Import the contents of the data provided in the request body to the database
init_app(app)	

pine.backend.admin.bp.**bp**

pine.backend.admin.bp.**get_users**()
Get the list of all users' details (id, email, and password hash) :return: str

pine.backend.admin.bp.**get_user**(*user_id*)
Given a user_id, return the user's details (id, email, and password hash) :param user_id: str :return: str

pine.backend.admin.bp.**update_user_password**(*user_id*)
Change the password hash stored in the database for the given user to a newly calculated password hash derived from the password provided in the json body of this request. :param user_id: :return: Response

pine.backend.admin.bp.**update_user**(*user_id*)
Change the details stored in the database for the given user to those provided in the json body of this request. :param user_id: str :return: Response

pine.backend.admin.bp.**add_user**()
Add a new user to PINE, with the details provided in the json body of this request (id, email, and password hash). This method will calculate and store a password hash based upon the provided password :return: Response

pine.backend.admin.bp.**delete_user**(*user_id*)
Delete the user matching the given user_id :param user_id: str :return: Response

pine.backend.admin.bp.**system_export**()
Export the contents of the database as a zip file :return: Response

pine.backend.admin.bp.**system_import**()
Import the contents of the data provided in the request body to the database :return: Response

pine.backend.admin.bp.**init_app**(*app*)

pine.backend.annotations

This module contains the api methods required to perform and display annotations in the front-end and store the annotations in the backend

Submodules

pine.backend.annotations.bp

Module Contents

Functions

check_document_by_id(doc_id: str)	Verify that a document with the given doc_id exists and that the logged in user has permissions to access the
check_document(doc: dict)	
get_my_annotations_for_document(doc_id)	Get the list of annotations (key, start_index, end_index) produced by the logged in user for the document matching
get_others_annotations_for_document(doc_id)	Get the list of annotations (key, start_index, end_index) produced by all other users, not including the logged in
get_annotations_for_document(doc_id)	Get the list of annotations (key, start_index, end_index) produced by all users for the document matching the
get_current_annotation(doc_id, user_id)	Get all annotations of the provided document created by the given user.
check_overlapping_annotations(collection, ner_annotations)	
set_document_to_annotated_by_user(doc_id, user_id)	Modify the parameter in the database for the document signifying that the given user has annotated the given
_make_annotations(body)	
_add_or_update_annotation(new_annotation)	
save_annotations(doc_id)	Save new NER annotations and labels to the database as an entry for the logged in user, for the document. If there
save_collection_annotations(collection_id: str)	
init_app(app)	

pine.backend.annotations.bp.**logger**

pine.backend.annotations.bp.**CONFIG_ALLOW_OVERLAPPING_NER_ANNOTATIONS = allow_overlapping_ne**

pine.backend.annotations.bp.**bp**

pine.backend.annotations.bp.**check_document_by_id**(*doc_id: str*)
Verify that a document with the given doc_id exists and that the logged in user has permissions to access the document :param doc_id: str :return: dict

pine.backend.annotations.bp.**check_document**(*doc: dict*)

pine.backend.annotations.bp.**get_my_annotations_for_document**(*doc_id*)
Get the list of annotations (key, start_index, end_index) produced by the logged in user for the document matching the provided doc_id. :param doc_id: str :return: Response

pine.backend.annotations.bp.**get_others_annotations_for_document**(*doc_id*)
Get the list of annotations (key, start_index, end_index) produced by all other users, not including the logged in user for the document matching the provided doc_id. :param doc_id: str :return: str

pine.backend.annotations.bp.**get_annotations_for_document**(*doc_id*)
Get the list of annotations (key, start_index, end_index) produced by all users for the document matching the provided doc_id. :param doc_id: str :return: str

pine.backend.annotations.bp.**get_current_annotation**(*doc_id*, *user_id*)
Get all annotations of the provided document created by the given user. :param doc_id: str :param user_id: str :return: List

pine.backend.annotations.bp.**check_overlapping_annotations**(*collection*, *ner_annotations*)

pine.backend.annotations.bp.**set_document_to_annotated_by_user**(*doc_id*, *user_id*)
Modify the parameter in the database for the document signifying that the given user has annotated the given document :param doc_id: str :param user_id: str :return: whether the update succeeded :rtype: bool

pine.backend.annotations.bp.**_make_annotations**(*body*)

pine.backend.annotations.bp.**_add_or_update_annotation**(*new_annotation*)

pine.backend.annotations.bp.**save_annotations**(*doc_id*)
Save new NER annotations and labels to the database as an entry for the logged in user, for the document. If there are already annotations, use a patch request to update with the new annotations. If there are not, use a post request to create a new entry. :param doc_id: str :return: bool

pine.backend.annotations.bp.**save_collection_annotations**(*collection_id: str*)

pine.backend.annotations.bp.**init_app**(*app*)

pine.backend.auth

Submodules

pine.backend.auth.bp

Module Contents

Classes

AuthModule(app, bp)	Initialize self. See help(type(self)) for accurate signature.

Functions

is_flat()
get_logged_in_user()
login_required(view)
admin_required(view)
flask_get_module()
flask_get_flat()
flask_get_can_manage_users()
flask_get_logged_in_user()
flask_get_logged_in_user_details()
flask_get_login_form()
flask_post_logout()
init_app(app)

pine.backend.auth.bp.**CONFIG_AUTH_MODULE_KEY = AUTH_MODULE**

pine.backend.auth.bp.**bp**

pine.backend.auth.bp.**module**

pine.backend.auth.bp.**is_flat**()

pine.backend.auth.bp.**get_logged_in_user**()

pine.backend.auth.bp.**login_required**(*view*)

pine.backend.auth.bp.**admin_required**(*view*)

pine.backend.auth.bp.**flask_get_module**()

pine.backend.auth.bp.**flask_get_flat**() → Response

pine.backend.auth.bp.**flask_get_can_manage_users**() → Response

pine.backend.auth.bp.**flask_get_logged_in_user**() → Response

pine.backend.auth.bp.**flask_get_logged_in_user_details**() → Response

pine.backend.auth.bp.**flask_get_login_form**() → Response

pine.backend.auth.bp.**flask_post_logout**() → Response

class pine.backend.auth.bp.**AuthModule**(*app*, *bp*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

__metaclass__

abstract is_flat(*self*)

abstract can_manage_users(*self*)

abstract get_login_form(*self*)

get_logged_in_user(*self*)

get_logged_in_user_details(*self*)

logout(*self*)

pine.backend.auth.bp.**init_app**(*app*)

pine.backend.auth.eve

Module Contents

Classes

EveUser(data)	Initialize self. See help(type(self)) for accurate signature.
EveModule(app, bp)	

class pine.backend.auth.eve.**EveUser**(*data*)

Bases: *pine.backend.models.AuthUser*

Initialize self. See help(type(self)) for accurate signature.

property id(*self*)

property username(*self*)

property display_name(*self*)

property is_admin(*self*)

get_details(*self*)

class pine.backend.auth.eve.**EveModule**(*app*, *bp*)

Bases: *pine.backend.auth.bp.AuthModule*

is_flat(*self*)

can_manage_users(*self*)

get_logged_in_user_details(*self*)

update_user_details(*self*)

update_user_password(*self*)

get_login_form(*self*)

login(*self*)

get_all_users(*self*)

pine.backend.auth.oauth

Module Contents

Classes

OAuthUser(data)	Initialize self. See help(type(self)) for accurate signature.
OAuthModule(app, bp)	

class pine.backend.auth.oauth.**OAuthUser**(*data*)

Bases: *pine.backend.models.AuthUser*

Initialize self. See help(type(self)) for accurate signature.

property id(*self*)

property username(*self*)

property display_name(*self*)

property is_admin(*self*)

class pine.backend.auth.oauth.**OAuthModule**(*app*, *bp*)

Bases: *pine.backend.auth.bp.AuthModule*

abstract register_oauth(*self*, *oauth*, *app*)

abstract get_login_form_button_text(*self*)

is_flat(*self*)

can_manage_users(*self*)

get_login_form(*self*)

login(*self*)

authorize(*self*)

pine.backend.auth.password

Module Contents

Functions

hash_password(password: str)	
check_password(password: str, hashed_password: str)	

pine.backend.auth.password.**hash_password**(*password: str*) → str

pine.backend.auth.password.**check_password**(*password: str*, *hashed_password: str*)

pine.backend.auth.vegas

Module Contents

Classes

VegasAuthModule(app, bp)	

class pine.backend.auth.vegas.**VegasAuthModule**(*app*, *bp*)

Bases: *pine.backend.auth.oauth.OAuthModule*

register_oauth(*self*, *oauth*, *app*)

get_login_form_button_text(*self*)

Package Contents

Functions

login_required(view)	
admin_required(view)	
get_logged_in_user()	
is_flat()	

pine.backend.auth.**login_required**(*view*)

pine.backend.auth.**admin_required**(*view*)

pine.backend.auth.**module**

pine.backend.auth.**get_logged_in_user**()

pine.backend.auth.**is_flat**()

pine.backend.collections

This module contains the api methods required to interact with, organize, create, and display collections in the front-end and store the collections in the backend

Submodules

pine.backend.collections.bp

Module Contents

Functions

is_cached_last_collection(collection_id)	
update_cached_last_collection(collection_id)	
_collection_user_can_projection()	
_collection_user_can(collection, annotate)	
user_can_annotate(collection)	
user_can_view(collection)	
user_can_add_documents_or_images(collection)	
user_can_modify_document_metadata(collection)	
user_can_annotate_by_id(collection_id)	
user_can_annotate_by_ids(collection_ids)	
user_can_view_by_id(collection_id)	
user_can_add_documents_or_images_by_id(collection_id)	
user_can_modify_document_metadata_by_id(collection_id)	
get_user_collections(archived, page)	Return collections for the logged in user using pagination. Returns all collections if parameter "page" is "all",
get_unarchived_user_collections(page)	Return unarchived user collections for the corresponding page value. Default value returns collections for all
get_archived_user_collections(page)	Return archived user collections for the corresponding page value. Default value returns collections for all
archive_or_unarchive_collection(collection_id, archive)	Set the "archived" boolean flag for the collection matching the provided collection_id.
archive_collection(collection_id)	Archive the collection matching the provided collection id
unarchive_collection(collection_id)	Unarchive the collection matching the provided collection id
get_collection(collection_id)	Return the collection object for the collection matching the provided collection id. This object has the fields:
download_collection(collection_id)	
get_doc_and_overlap_ids(collection_id)	Return lists of ids for overlapping and non-overlapping documents for the collection matching the provided
add_annotator_to_collection(collection_id)	
add_viewer_to_collection(collection_id)	
add_label_to_collection(collection_id)	
get_overlap_ids(collection_id)	Return the list of ids for overlapping documents for the collection matching the provided collection id.
_upload_documents(collection, docs)	

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Table 10 – continued from previous page

create_collection()	Create a new collection based upon the entries provided in the POST request's associated form fields.
_check_collection_and_get_image_dir(collection_id, path)	
get_static_collection_images(collection_id)	
get_collection_images(collection_id)	
get_collection_image(collection_id, path)	
get_collection_image_exists(collection_id, path)	
_path_split(path)	
_safe_path(path)	
get_user_can_add_documents_or_images(collection_id)	
_upload_collection_image_file(collection_id, path, image_file)	
post_collection_image(collection_id, path)	
init_app(app)	

pine.backend.collections.bp.**bp**

pine.backend.collections.bp.**LOGGER**

pine.backend.collections.bp.**DOCUMENTS_PER_TRANSACTION = 500**

pine.backend.collections.bp.**LAST_COLLECTION_FOR_IMAGE**

pine.backend.collections.bp.**is_cached_last_collection**(*collection_id*)

pine.backend.collections.bp.**update_cached_last_collection**(*collection_id*)

pine.backend.collections.bp.**_collection_user_can_projection**()

pine.backend.collections.bp.**_collection_user_can**(*collection*, *annotate*)

pine.backend.collections.bp.**user_can_annotate**(*collection*)

pine.backend.collections.bp.**user_can_view**(*collection*)

pine.backend.collections.bp.**user_can_add_documents_or_images**(*collection*)

pine.backend.collections.bp.**user_can_modify_document_metadata**(*collection*)

pine.backend.collections.bp.**user_can_annotate_by_id**(*collection_id*)

pine.backend.collections.bp.**user_can_annotate_by_ids**(*collection_ids*)

pine.backend.collections.bp.**user_can_view_by_id**(*collection_id*)

pine.backend.collections.bp.**user_can_add_documents_or_images_by_id**(*collection_id*)

pine.backend.collections.bp.**user_can_modify_document_metadata_by_id**(*collection_id*)

pine.backend.collections.bp.**get_user_collections**(*archived*, *page*)
Return collections for the logged in user using pagination. Returns all collections if parameter "page" is "all", or the collections associated with the given page. Can return archived or un-archived collections based upon the "archived" flag. :param archived: Bool :param page: str :return: Response

pine.backend.collections.bp.**get_unarchived_user_collections**(*page*)
Return unarchived user collections for the corresponding page value. Default value returns collections for all pages. :param page: str :return: Response

pine.backend.collections.bp.**get_archived_user_collections**(*page*)
Return archived user collections for the corresponding page value. Default value returns collections for all pages. :param page: str :return: Response

pine.backend.collections.bp.**archive_or_unarchive_collection**(*collection_id*, *archive*)
Set the "archived" boolean flag for the collection matching the provided collection_id. :param collection_id: str :param archive: Bool :return: Response

pine.backend.collections.bp.**archive_collection**(*collection_id*)
Archive the collection matching the provided collection id :param collection_id: str :return: Response

pine.backend.collections.bp.**unarchive_collection**(*collection_id*)
Unarchive the collection matching the provided collection id :param collection_id: str :return: Response

pine.backend.collections.bp.**get_collection**(*collection_id*)
Return the collection object for the collection matching the provided collection id. This object has the fields: 'creator_id', 'annotators', 'viewers', 'labels', 'metadata', 'archived', and 'configuration'. :param collection_id: str :return: Response

pine.backend.collections.bp.**download_collection**(*collection_id*)

pine.backend.collections.bp.**get_doc_and_overlap_ids**(*collection_id*)
Return lists of ids for overlapping and non-overlapping documents for the collection matching the provided collection id. :param collection_id: str :return: tuple

pine.backend.collections.bp.**add_annotator_to_collection**(*collection_id*)

pine.backend.collections.bp.**add_viewer_to_collection**(*collection_id*)

pine.backend.collections.bp.**add_label_to_collection**(*collection_id*)

pine.backend.collections.bp.**get_overlap_ids**(*collection_id*)
Return the list of ids for overlapping documents for the collection matching the provided collection id. :param collection_id: str :return: tuple

pine.backend.collections.bp.**_upload_documents**(*collection*, *docs*)

pine.backend.collections.bp.**create_collection**()
Create a new collection based upon the entries provided in the POST request's associated form fields. These fields include: collection - collection name overlap - ratio of overlapping documents. (0-1) with 0 being no overlap and 1 being every document has overlap, ex:

.90 - 90% of documents overlap

train_every - automatically train a new classifier after this many documents have been annotated pipelineId - the id value of the classifier pipeline associated with this collection (spacy, opennlp, corenlp) classifierParameters - optional parameters that adjust the configuration of the chosen classifier pipeline. archived - whether or not this collection should be archived. A collection can be created with documents listed in a csv file. Each new line in the csv represents a new document. The data of this csv can be passed to this method through the POST request's FILES field "file". used when creating a collection based on an uploaded csv file:

csvTextCol - column of csv containing the text of the documents (default: 0) csvHasHeader - boolean for whether or not the csv file has a header row (default: False)

A collection can also be created with a number of images through FILES fields "imageFileN" where N is an (ignored) index :return: information about the created collection

pine.backend.collections.bp.**_check_collection_and_get_image_dir**(*collection_id*, *path*)

pine.backend.collections.bp.**get_static_collection_images**(*collection_id*)

pine.backend.collections.bp.**get_collection_images**(*collection_id*)

pine.backend.collections.bp.**get_collection_image**(*collection_id*, *path*)

pine.backend.collections.bp.**get_collection_image_exists**(*collection_id*, *path*)

pine.backend.collections.bp.**_path_split**(*path*)

pine.backend.collections.bp.**_safe_path**(*path*)

pine.backend.collections.bp.**get_user_can_add_documents_or_images**(*collection_id*)

pine.backend.collections.bp.**_upload_collection_image_file**(*collection_id*, *path*, *image_file*)

pine.backend.collections.bp.**post_collection_image**(*collection_id*, *path*)

pine.backend.collections.bp.**init_app**(*app*)

Package Contents

Functions

user_can_annotate(collection)	
user_can_view(collection)	
user_can_add_documents_or_images(collection)	
user_can_modify_document_metadata(collection)	
user_can_annotate_by_id(collection_id)	
user_can_annotate_by_ids(collection_ids)	
user_can_view_by_id(collection_id)	
user_can_add_documents_or_images_by_id(collection_id)	
user_can_modify_document_metadata_by_id(collection_id)	

pine.backend.collections.**user_can_annotate**(*collection*)

pine.backend.collections.**user_can_view**(*collection*)

pine.backend.collections.**user_can_add_documents_or_images**(*collection*)

pine.backend.collections.**user_can_modify_document_metadata**(*collection*)

pine.backend.collections.**user_can_annotate_by_id**(*collection_id*)

pine.backend.collections.**user_can_annotate_by_ids**(*collection_ids*)

pine.backend.collections.**user_can_view_by_id**(*collection_id*)

pine.backend.collections.**user_can_add_documents_or_images_by_id**(*collection_id*)

pine.backend.collections.**user_can_modify_document_metadata_by_id**(*collection_id*)

pine.backend.data

Submodules

pine.backend.data.bp

Module Contents

Functions

init_app(app)	

pine.backend.data.bp.**init_app**(*app*)

pine.backend.data.service

Module Contents

Classes

PerformanceHistory()	Initialize self. See help(type(self)) for accurate signature.

Functions

_standardize_path(path, *additional_paths)	
url(path, *additional_paths)	Returns a complete URL for the given eve-relative path(s).
where_params(where)	Returns a "where" parameters object that can be passed to eve.
params(params)	Returns a parameters object that can be passed to eve.
get(path, **kwargs)	Wraps requests.get for the given eve-relative path.
post(path, **kwargs)	Wraps requests.post for the given eve-relative path.
put(path, **kwargs)	Wraps requests.put for the given eve-relative path.
delete(path, **kwargs)	Wraps requests.delete for the given eve-relative path.
patch(path, **kwargs)	Wraps requests.patch for the given eve-relative path.
get_item_by_id(path, item_id, params={})	Gets a single item by the given ID.
get_all_versions_of_item_by_id(path, item_id, params={})	
get_all(path, params={})	Returns ALL database items, using pagination if needed. This returns the "normal" eve
get_all_items(path, params={})	Returns ALL database items, using pagination if needed.
convert_response(requests_response)	
remove_eve_fields(obj, remove_timestamps=True, remove_versions=True)	
remove_nonupdatable_fields(obj)	

pine.backend.data.service.**logger**

class pine.backend.data.service.**PerformanceHistory**
Bases: object

Initialize self. See help(type(self)) for accurate signature.

pformat(*self*, ***kwargs*)

pprint(*self*)

add(*self*, *rest_type*, *path*, *response*)

pine.backend.data.service.**PERFORMANCE_HISTORY**

pine.backend.data.service.**_standardize_path**(*path*, **additional_paths*)

pine.backend.data.service.**url**(*path*, **additional_paths*)
Returns a complete URL for the given eve-relative path(s).

Parameters

- **path** – str: eve-relative path (e.g. "collections" or ["collections", id])
- **additional_paths** – str[]: any additional paths to append

Returns str url

pine.backend.data.service.**where_params**(*where*)
Returns a "where" parameters object that can be passed to eve.

Eve requires that dict parameters be serialized as JSON.

Parameters **where** – dict: dictionary of "where" params to pass to eve

Returns dict "where" params

pine.backend.data.service.**params**(*params*)
Returns a parameters object that can be passed to eve.

Eve requires that dict parameters be serialized as JSON.

Parameters **where** – dict: dictionary of "where" params to pass to eve

Returns dict "where" params

pine.backend.data.service.**get**(*path*, ***kwargs*)
Wraps requests.get for the given eve-relative path.

Parameters

- **path** – str: eve-relative path (e.g. "collections" or ["collections", id])
- ****kwargs** – dict: any additional arguments to pass to requests.get

Returns requests.Response

pine.backend.data.service.**post**(*path*, ***kwargs*)
Wraps requests.post for the given eve-relative path.

Parameters

- **path** – str: eve-relative path (e.g. "collections" or ["collections", id])
- ****kwargs** – dict: any additional arguments to pass to requests.post

Returns requests.Response

pine.backend.data.service.**put**(*path*, ***kwargs*)
Wraps requests.put for the given eve-relative path.

Parameters

- **path** – str: eve-relative path (e.g. “collections” or [“collections”, id])
- ****kwargs** – dict: any additional arguments to pass to requests.put

Returns requests.Response

pine.backend.data.service.**delete**(*path*, ***kwargs*)
Wraps requests.delete for the given eve-relative path.

Parameters

- **path** – str: eve-relative path (e.g. “collections” or [“collections”, id])
- ****kwargs** – dict: any additional arguments to pass to requests.delete

Returns requests.Response

pine.backend.data.service.**patch**(*path*, ***kwargs*)
Wraps requests.patch for the given eve-relative path.

Parameters

- **path** – str: eve-relative path (e.g. “collections” or [“collections”, id])
- ****kwargs** – dict: any additional arguments to pass to requests.patch

Returns requests.Response

pine.backend.data.service.**get_item_by_id**(*path*, *item_id*, *params={}*)
Gets a single item by the given ID.

Parameters

- **path** – str: eve-relative path (e.g. “collections”)
- **item_id** – str: item ID
- **params** – dict: optional additional parameters to send in with GET

Returns the item as a dict

pine.backend.data.service.**get_all_versions_of_item_by_id**(*path*, *item_id*, *params={}*)

pine.backend.data.service.**get_all**(*path*, *params={}*)
Returns ALL database items, using pagination if needed. This returns the “normal” eve JSON with “_items”, “_meta”, etc.

Parameters

- **path** – str: eve-relative path (e.g. “collections”)
- **params** – dict: optional additional parameters to send in with GET

Returns an eve collections dict with, e.g., _items

pine.backend.data.service.**get_all_items**(*path*, *params={}*)
Returns ALL database items, using pagination if needed.

Parameters

- **path** – str: eve-relative path (e.g. “collections”)
- **params** – dict: optional additional parameters to send in with GET

Returns the items as a list of dicts

pine.backend.data.service.**convert_response**(*requests_response*)

pine.backend.data.service.**remove_eve_fields**(*obj*, *remove_timestamps=True*, *remove_versions=True*)

pine.backend.data.service.**remove_nonupdatable_fields**(*obj*)

pine.backend.data.users

Module Contents

Functions

get_all_users()	
get_user(user_id)	
get_user_by_email(email)	
get_user_details(user_id)	
update_user(user_id: str, details: models.UserDetails)	
print_users_command()	
add_admin_command(username, password)	
set_user_password_by_id(user_id, password)	
set_user_password(username, password)	
reset_user_passwords()	

pine.backend.data.users.**get_all_users**()

pine.backend.data.users.**get_user**(*user_id*)

pine.backend.data.users.**get_user_by_email**(*email*)

pine.backend.data.users.**get_user_details**(*user_id*)

pine.backend.data.users.**update_user**(*user_id: str*, *details: models.UserDetails*)

pine.backend.data.users.**print_users_command**()

pine.backend.data.users.**add_admin_command**(*username*, *password*)

pine.backend.data.users.**set_user_password_by_id**(*user_id*, *password*)

pine.backend.data.users.**set_user_password**(*username*, *password*)

pine.backend.data.users.**reset_user_passwords**()

pine.backend.documents

Submodules

pine.backend.documents.bp

Module Contents

Functions

_document_user_can_projection()	
get_collection_ids_for(document_ids)	
user_can_annotate(document)	
user_can_view(document)	
user_can_modify_metadata(document)	
user_can_annotate_by_id(document_id)	
user_can_annotate_by_ids(document_ids)	
user_can_view_by_id(document_id)	
user_can_modify_metadata_by_id(document_id)	
get_document(doc_id)	
count_documents_in_collection(col_id)	
get_all_documents_in_collection(col_id)	
get_paginated_documents_in_collection(collection_id)	
_check_documents(documents)	
add_document()	
can_annotate_document(doc_id)	
can_modify_metadata(doc_id)	
update_metadata(doc_id)	
init_app(app)	

pine.backend.documents.bp.**bp**

pine.backend.documents.bp.**_document_user_can_projection**()

pine.backend.documents.bp.**get_collection_ids_for**(*document_ids*) → set

pine.backend.documents.bp.**user_can_annotate**(*document*)

pine.backend.documents.bp.**user_can_view**(*document*)

pine.backend.documents.bp.**user_can_modify_metadata**(*document*)

pine.backend.documents.bp.**user_can_annotate_by_id**(*document_id*)

pine.backend.documents.bp.**user_can_annotate_by_ids**(*document_ids*)

pine.backend.documents.bp.**user_can_view_by_id**(*document_id*)

pine.backend.documents.bp.**user_can_modify_metadata_by_id**(*document_id*)

pine.backend.documents.bp.**get_document**(*doc_id*)

pine.backend.documents.bp.**count_documents_in_collection**(*col_id*)

pine.backend.documents.bp.**get_all_documents_in_collection**(*col_id*)

pine.backend.documents.bp.**get_paginated_documents_in_collection**(*collection_id*)

pine.backend.documents.bp.**_check_documents**(*documents*) → dict

pine.backend.documents.bp.**add_document**()

pine.backend.documents.bp.**can_annotate_document**(*doc_id*)

pine.backend.documents.bp.**can_modify_metadata**(*doc_id*)

pine.backend.documents.bp.**update_metadata**(*doc_id*)

pine.backend.documents.bp.**init_app**(*app*)

pine.backend.job_manager

Submodules

pine.backend.job_manager.service

Module Contents

Classes

ServiceManager(default_handler=None)

type default_handler callable

pine.backend.job_manager.service.**config**

pine.backend.job_manager.service.**logger**

class pine.backend.job_manager.service.**ServiceManager**(*default_handler=None*)

Bases: object

r_pool

r_conn

redis_key_prefix

redis_reg_key_prefix

redis_channels_key

redis_channel_ttl_key_prefix

redis_work_queue_key_prefix

redis_work_mutex_key_prefix

redis_handler_mutex_key_prefix

redis_reg_key_ttl

redis_channels_key_ttl

redis_work_queue_key_ttl

redis_work_mutex_key_ttl

redis_handler_mutex_key_ttl

handler_timeout

registration_worker_name = registration_worker

processing_worker_name = processing_worker

channel_worker_name = channel_worker

shutdown_channel = shutdown

registration_channel = registration

reserved_channels

classmethod get_registered_channels(*cls*, *include_ttl=False*)
Get list of registered channels, with registration time if requested. :type include_ttl: bool :rtype: list[str] | dict[str, datetime]

classmethod get_registered_service_details(*cls*, *service_name=None*)
Get registration details of a service. :type service_name: str :rtype: None | dict

classmethod get_registered_services(*cls*, *include_details=True*)
Get list of registered services and registration body if requested. :type include_details: bool :rtype: list[str] | list[dict]

classmethod send_service_request(*cls*, *service_name*, *data*, *job_id=None*, *encoder=None*)
Queue's a job for the requested service. :type service_name: str :type data: dict :type job_id: str :type encoder: json.JSONEncoder :rtype: None | dict

start_listeners(*self*)
Starts all the workers.

stop_listeners(*self*)
Stops all the workers.

_start_registration_listener(*self*)
Starts the registration worker. :rtype: bool

_start_processing_listeners(*self*)
Starts the processing workers. :rtype: bool

_start_channel_watchdog(*self*)
Starts the channel watchdog workers in an asyncio-only thread. It monitors the channel TTL's. :rtype: bool

_stop_channel_watchdog(*self*)
Stops the channel watchdog workers in an asyncio-only thread. :rtype: bool

_registration_listener(*self*)
Registration Listener Implementation.

async _channel_watchdog(*self*)
Channel Watchdog Implementation. In asyncio, it monitors the channel-ttl keys and the channels SET to expire registered services as needed. The other functionality is to register new channels as they're added to the pubsub in the processing listener.

static _thread_killer(*thread_id*)

_processing_listener_handler_wrapper(*self*, *job_id*, *job_type*, *job_queue*, *job_data*)

_processing_listener(*self*)
Processing Listener Implementation. Runs a handler when a processing message gets send over an already registered channel.

pine.backend.job_manager.service.**sm**

pine.backend.pineiaa

Subpackages

pine.backend.pineiaa.bratiaa

Submodules

pine.backend.pineiaa.bratiaa.agree

Module Contents

Classes

Document(txt, doc_id)	Initialize self. See help(type(self)) for accurate signature.
F1Agreement(annotators, documents, labels, eval_func=exact_match_instance_evaluation, token_func=None)	Initialize self. See help(type(self)) for accurate signature.

Functions

input_generator(json_list)	
compute_f1(tp, fp, fn)	
compute_f1_agreement(annotators, documents, labels, token_func=None, eval_func=None)	
iaa_report(f1_agreement, precision=3)	

pine.backend.pineiaa.bratiaa.agree.**Annotation**

pine.backend.pineiaa.bratiaa.agree.**AnnFile**

pine.backend.pineiaa.bratiaa.agree.**LOGGER**

class pine.backend.pineiaa.bratiaa.agree.**Document**(*txt*, *doc_id*)

Initialize self. See help(type(self)) for accurate signature.

__slots__ = ['ann_files', 'txt', 'doc_id']

pine.backend.pineiaa.bratiaa.agree.**input_generator**(*json_list*)

pine.backend.pineiaa.bratiaa.agree.**compute_f1**(*tp*, *fp*, *fn*)

class pine.backend.pineiaa.bratiaa.agree.**F1Agreement**(*annotators*, *documents*, *labels*, *eval_func=exact_match_instance_evaluation*, *token_func=None*)

Initialize self. See help(type(self)) for accurate signature.

property annotators(*self*)

property documents(*self*)

property labels(*self*)

_compute_tp_fp_fn(*self*, *documents*)

_increment_counts(*self*, *annotations*, *pair*, *doc*, *kind*)

mean_sd_per_label(*self*)
Mean and standard deviation of all annotator combinations' F1 scores by label.

mean_sd_per_document(*self*)
Mean and standard deviation of all annotator combinations' F1 scores per document.

mean_sd_total(*self*)
Mean and standard deviation of all annotator cominations' F1 scores.

mean_sd_per_label_one_vs_rest(*self*, *annotator*)
Mean and standard deviation of all annotator combinations' F1 scores involving given annotator per label.

mean_sd_total_one_vs_rest(*self*, *annotator*)
Mean and standard deviation of all annotator combinations' F1 scores involving given annotator.

_pairs_involving(*self*, *annotator*)

static _mean_sd(*f1_pairs*)
Mean and standard deviation along first axis.

static print_table(*row_label_header*, *row_labels*, *avg*, *stddev*, *precision=3*)

compute_total_f1_matrix(*self*)
Returns (n x n) matrix, where n is the number of annotators, containing pair-wise total F1 scores between all annotators.

By definition, the matrix is symmetric and F1 = 1 on the main diagonal.

draw_heatmap(*self*, *out_path*)
Draws heatmap based on square matrix of F1 scores.

pine.backend.pineiaa.bratiaa.agree.**compute_f1_agreement**(*annotators*, *documents*, *labels*, *token_func=None*, *eval_func=None*)

pine.backend.pineiaa.bratiaa.agree.**iaa_report**(*f1_agreement*, *precision=3*)

pine.backend.pineiaa.bratiaa.agree_cli

Module Contents

Functions

parse_args()
main()

pine.backend.pineiaa.bratiaa.agree_cli.**parse_args**()

pine.backend.pineiaa.bratiaa.agree_cli.**main**()

pine.backend.pineiaa.bratiaa.evaluation

Functions for computing the difference between two sets of annotations.

Module Contents

Functions

exact_match_instance_evaluation(ann_list_1, ann_list2, tokens=None)	
exact_match_token_evaluation(ann_list_1, ann_list_2, tokens=None)	Annotations are split into token-sized bits before true positives, false positives and false negatives are computed.
counter2list(c)	
_read_token_annotations(ann_list, tokens)	Yields a new annotation for each token overlapping with an annotation. If annotations are overlapping each other,

pine.backend.pineiaa.bratiaa.evaluation.**Annotation**

pine.backend.pineiaa.bratiaa.evaluation.**exact_match_instance_evaluation**(*ann_list_1*, *ann_list2*, *tokens=None*)

pine.backend.pineiaa.bratiaa.evaluation.**exact_match_token_evaluation**(*ann_list_1*, *ann_list_2*, *tokens=None*)

Annotations are split into token-sized bits before true positives, false positives and false negatives are computed.

Sub-token annotations are expanded to full tokens. Long annotations will influence the results more than short annotations. Boundary errors for adjacent annotations with the same label are ignored!

pine.backend.pineiaa.bratiaa.evaluation.**counter2list**(*c*)

pine.backend.pineiaa.bratiaa.evaluation.**_read_token_annotations**(*ann_list*, *tokens*)

Yields a new annotation for each token overlapping with an annotation. If annotations are overlapping each other, there will be multiple annotations for a single token.

pine.backend.pineiaa.bratiaa.iaa_service

Module Contents

Functions

get_items(resource)	
get_all_items(query)	
get_doc_annotations(collection_id, exclude=None)	
fix_num_for_json(number)	
getIAAReportForCollection(collection_id)	

pine.backend.pineiaa.bratiaa.iaa_service.**EVE_HEADERS**

pine.backend.pineiaa.bratiaa.iaa_service.**get_items**(*resource*)

pine.backend.pineiaa.bratiaa.iaa_service.**get_all_items**(*query*)

pine.backend.pineiaa.bratiaa.iaa_service.**get_doc_annotations**(*collection_id*, *exclude=None*)

pine.backend.pineiaa.bratiaa.iaa_service.**fix_num_for_json**(*number*)

pine.backend.pineiaa.bratiaa.iaa_service.**getIAAReportForCollection**(*collection_id*)

pine.backend.pineiaa.bratiaa.utils

Module Contents

Classes

TokenOverlap(text, tokens)	Data structure for quick lookup of tokens overlapping with given span.

Functions

tokenize(text)
read(path, encoding=ENCODING, newline='\r\n', mode='r')

pine.backend.pineiaa.bratiaa.utils.**ENCODING = utf-8**

pine.backend.pineiaa.bratiaa.utils.**TOKEN**

pine.backend.pineiaa.bratiaa.utils.**tokenize**(*text*)

pine.backend.pineiaa.bratiaa.utils.**read**(*path*, *encoding=ENCODING*, *newline='\r\n'*, *mode='r'*)

class pine.backend.pineiaa.bratiaa.utils.**TokenOverlap**(*text*, *tokens*)

Data structure for quick lookup of tokens overlapping with given span. Assumes that the provided list of tokens is sorted by indices!

Initialize self. See help(type(self)) for accurate signature.

static compute_mapping(*text_length*, *tokens*)

overlapping_tokens(*self*, *start*, *end*)

Package Contents

Classes

F1Agreement(annotators, documents, labels, eval_func=exact_match_instance_evaluation, token_func=None)	Initialize self. See help(type(self)) for accurate signature.
Document(txt, doc_id)	Initialize self. See help(type(self)) for accurate signature.

Functions

compute_f1_agreement(annotators, documents, labels, token_func=None, eval_func=None)	
iaa_report(f1_agreement, precision=3)	
input_generator(json_list)	
exact_match_instance_evaluation(ann_list_1, ann_list2, tokens=None)	
exact_match_token_evaluation(ann_list_1, ann_list_2, tokens=None)	Annotations are split into token-sized bits before true positives, false positives and false negatives are computed.
tokenize(text)	

pine.backend.pineiaa.bratiaa.**compute_f1_agreement**(*annotators*, *documents*, *labels*, *token_func=None*, *eval_func=None*)

pine.backend.pineiaa.bratiaa.**iaa_report**(*f1_agreement*, *precision=3*)

pine.backend.pineiaa.bratiaa.**AnnFile**

class pine.backend.pineiaa.bratiaa.**F1Agreement**(*annotators*, *documents*, *labels*, *eval_func=exact_match_instance_evaluation*, *token_func=None*)

Initialize self. See help(type(self)) for accurate signature.

property annotators(*self*)

property documents(*self*)

property labels(*self*)

_compute_tp_fp_fn(*self*, *documents*)

_increment_counts(*self*, *annotations*, *pair*, *doc*, *kind*)

mean_sd_per_label(*self*)
Mean and standard deviation of all annotator combinations' F1 scores by label.

mean_sd_per_document(*self*)
Mean and standard deviation of all annotator combinations' F1 scores per document.

mean_sd_total(*self*)
Mean and standard deviation of all annotator cominations' F1 scores.

mean_sd_per_label_one_vs_rest(*self*, *annotator*)
Mean and standard deviation of all annotator combinations' F1 scores involving given annotator per label.

mean_sd_total_one_vs_rest(*self*, *annotator*)
Mean and standard deviation of all annotator combinations' F1 scores involving given annotator.

_pairs_involving(*self*, *annotator*)

static _mean_sd(*f1_pairs*)
Mean and standard deviation along first axis.

static print_table(*row_label_header*, *row_labels*, *avg*, *stddev*, *precision=3*)

compute_total_f1_matrix(*self*)
Returns (n x n) matrix, where n is the number of annotators, containing pair-wise total F1 scores between all annotators.

By definition, the matrix is symmetric and F1 = 1 on the main diagonal.

draw_heatmap(*self*, *out_path*)
Draws heatmap based on square matrix of F1 scores.

class pine.backend.pineiaa.bratiaa.**Document**(*txt*, *doc_id*)
Initialize self. See help(type(self)) for accurate signature.

__slots__ = ['ann_files', 'txt', 'doc_id']

pine.backend.pineiaa.bratiaa.**input_generator**(*json_list*)

pine.backend.pineiaa.bratiaa.**exact_match_instance_evaluation**(*ann_list_1*, *ann_list2*, *tokens=None*)

pine.backend.pineiaa.bratiaa.**exact_match_token_evaluation**(*ann_list_1*, *ann_list_2*, *tokens=None*)
Annotations are split into token-sized bits before true positives, false positives and false negatives are computed.

Sub-token annotations are expanded to full tokens. Long annotations will influence the results more than short annotations. Boundary errors for adjacent annotations with the same label are ignored!

pine.backend.pineiaa.bratiaa.**Annotation**

pine.backend.pineiaa.bratiaa.**tokenize**(*text*)

Submodules

pine.backend.pineiaa.bp

Module Contents

Functions

get_current_report(collection_id)	
get_iia_report_by_collection_id(collection_id)	
create_iaa_report_by_collection_id(collection_id)	
init_app(app)	

pine.backend.pineiaa.bp.**logger**

pine.backend.pineiaa.bp.**bp**

pine.backend.pineiaa.bp.**get_current_report**(*collection_id*)

pine.backend.pineiaa.bp.**get_iia_report_by_collection_id**(*collection_id*)

pine.backend.pineiaa.bp.**create_iaa_report_by_collection_id**(*collection_id*)

pine.backend.pineiaa.bp.**init_app**(*app*)

pine.backend.pipelines

Submodules

pine.backend.pipelines.bp

Module Contents

Functions

get_pipelines()	
get_pipeline_by_id(pipeline_id)	
_get_collection_classifier(collection_id)	
get_collection_classifier(collection_id)	
_get_classifier_metrics(classifier_id)	
get_metrics()	
get_classifier_metrics(classifier_id)	
_get_classifier(classifier_id)	
_get_next_instance(classifier_id)	
get_next_by_classifier(classifier_id)	
advance_to_next_document_by_classifier(classifier_id, document_id)	
predict()	
test_redis()	
init_app(app)	

pine.backend.pipelines.bp.**logger**

pine.backend.pipelines.bp.**service_manager**

pine.backend.pipelines.bp.**bp**

pine.backend.pipelines.bp.**classifier_dict**

pine.backend.pipelines.bp.**classifier_pipelines**

pine.backend.pipelines.bp.**get_pipelines**()

pine.backend.pipelines.bp.**get_pipeline_by_id**(*pipeline_id*)

pine.backend.pipelines.bp.**_get_collection_classifier**(*collection_id*)

pine.backend.pipelines.bp.**get_collection_classifier**(*collection_id*)

pine.backend.pipelines.bp.**_get_classifier_metrics**(*classifier_id*)

pine.backend.pipelines.bp.**get_metrics**()

pine.backend.pipelines.bp.**get_classifier_metrics**(*classifier_id*)

pine.backend.pipelines.bp.**_get_classifier**(*classifier_id*)

pine.backend.pipelines.bp.**_get_next_instance**(*classifier_id*)

pine.backend.pipelines.bp.**get_next_by_classifier**(*classifier_id*)

pine.backend.pipelines.bp.**advance_to_next_document_by_classifier**(*classifier_id*, *document_id*)

pine.backend.pipelines.bp.**predict**()

pine.backend.pipelines.bp.**test_redis**()

pine.backend.pipelines.bp.**init_app**(*app*)

pine.backend.shared

Submodules

pine.backend.shared.config

Module Contents

Classes

BaseConfig(root_dir=None)	Initialize self. See help(type(self)) for accurate signature.
TestConfig(root_dir=None)	Initialize self. See help(type(self)) for accurate signature.
ConfigBuilder()	Initialize self. See help(type(self)) for accurate signature.

pine.backend.shared.config.**LOGGER**

class pine.backend.shared.config.**BaseConfig**(*root_dir=None*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

ROOT_DIR

BASE_DIR

BASE_CFG_FILE = config.yaml

BASE_ENV_PREFIX = AL_

DEBUG = True

TESTING = False

LOGGER_NAME

LOGGER_DIR = logs

LOGGER_FILE = debug.log

LOGGER_LEVEL

EVE_HOST = localhost

EVE_PORT = 5001

REDIS_HOST = localhost

REDIS_PORT = 6379

REDIS_USR

REDIS_PWD

REDIS_DBNUM = 0

REDIS_PREFIX = AL:

REDIS_EXPIRE = 3600

SCHEDULER_REGISTRATION_TIMEOUT

SCHEDULER_HANDLER_TIMEOUT

SCHEDULER_QUEUE_TIMEOUT

SERVICE_REGISTRATION_CHANNEL = registration

SERVICE_REGISTRATION_FREQUENCY = 60

SERVICE_LISTENING_FREQUENCY = 1

SERVICE_HANDLER_TIMEOUT = 3600

SERVICE_LIST

DATASETS_LOCAL_DIR = D:\Data\DEEPCATT2_DB_DATA\datasets

MODELS_LOCAL_DIR = D:\\Data\\DEEPCATT2_DB_DATA\\Models

classmethod _get_config_var_paths(*cls*, *root_dict=None*)

classmethod _process_paths(*cls*, *alt_path=None*)

classmethod _process_file_cfg(*cls*)

classmethod _process_env_vars(*cls*)

classmethod as_dict(*cls*)

Return type dict

classmethod as_attr_dict(*cls*)

Return type munch.Munch | dict

static _try_cast(*value*, *_type*, *_default=None*)

static _str2bool(*_str*, *_default=None*)

class pine.backend.shared.config.**TestConfig**(*root_dir=None*)

Bases: *pine.backend.shared.config.BaseConfig*

Initialize self. See help(type(self)) for accurate signature.

class pine.backend.shared.config.**ConfigBuilder**

Bases: object

Initialize self. See help(type(self)) for accurate signature.

__env_cfg_variable = BUILDER_CFG_PROFILE

__current_config_instance

__current_config_instance_name

__current_config_instance_print = False

__arg_parser

static __get_configs()

:rtype list[Callable[..., BaseConfig]]

static get_config_names()

Return type list[str]

classmethod get_arg_parser(*cls*)

Return type ArgumentParser

classmethod init_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

classmethod get_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

Return type *BaseConfig*

classmethod set_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

classmethod __parse_terminal_config(*cls*)

Return type argparse.Namespace

pine.backend.shared.transform

Module Contents

Functions

transform_module_by_config(module_ref, config_ref, config_prefix=None)	Transforms a given module's properties based on ConfigBuilder Values.

pine.backend.shared.transform.**transform_module_by_config**(*module_ref*, *config_ref*, *config_prefix=None*)

Transforms a given module's properties based on ConfigBuilder Values. The prefix can be used to avoid blindy changing values and target a subset of matching values in config_ref. :type module_ref: ModuleType :type config_ref: dict :type config_prefix: str

Submodules

pine.backend.app

Module Contents

Functions

handle_error(e)	
handle_uncaught_exception(e)	
create_app(test_config=None)	

pine.backend.app.**VERSION**

pine.backend.app.**LOGGER**

pine.backend.app.**handle_error**(*e*)

pine.backend.app.**handle_uncaught_exception**(*e*)

pine.backend.app.**create_app**(*test_config=None*)

pine.backend.config

Module Contents

pine.backend.config.**SECRET_KEY = Cq13XII=%**

pine.backend.config.**DEBUG = True**

pine.backend.config.**EVE_SERVER**

pine.backend.config.**REDIS_SERVER**

pine.backend.config.**REDIS_PORT**

pine.backend.config.**AUTH_MODULE**

pine.backend.config.**AUTH_MODULE = vegas**

pine.backend.config.**VEGAS_CLIENT_SECRET**

pine.backend.config.**DOCUMENT_IMAGE_DIR**

pine.backend.cors

Module Contents

Functions

not_found(e)	
init_app(app)	

pine.backend.cors.**not_found**(*e*)

pine.backend.cors.**init_app**(*app*)

pine.backend.log

Module Contents

Classes

Action()	Generic enumeration.

Functions

setup_logging()
get_flask_request_info()
get_flask_logged_in_user()
access_flask_login()
access_flask_logout(user: dict)
access_flask_add_collection(collection: dict)
access_flask_view_document(document: dict)
access_flask_add_document(document: dict)
access_flask_add_documents(documents: typing.List[dict])
access_flask_annotate_document(annotation)
access_flask_annotate_documents(annotations: typing.List[dict])
access(action, user, request_info, message, **extra_info)

pine.backend.log.**CONFIG_FILE_ENV = PINE_LOGGING_CONFIG_FILE**

pine.backend.log.**ACCESS_LOGGER_NAME = pine.access**

pine.backend.log.**ACCESS_LOGGER**

class pine.backend.log.**Action**

Bases: enum.Enum

Generic enumeration.

Derive from this class to define new enumerations.

Create and return a new object. See help(type) for accurate signature.

LOGIN

LOGOUT

CREATE_COLLECTION

VIEW_DOCUMENT

ADD_DOCUMENT

ADD_DOCUMENTS

ANNOTATE_DOCUMENT

ANNOTATE_DOCUMENTS

pine.backend.log.**setup_logging**()

pine.backend.log.**get_flask_request_info**()

pine.backend.log.**get_flask_logged_in_user**()

pine.backend.log.**access_flask_login**()

pine.backend.log.**access_flask_logout**(*user: dict*)

pine.backend.log.**access_flask_add_collection**(*collection: dict*)

pine.backend.log.**access_flask_view_document**(*document: dict*)

pine.backend.log.**access_flask_add_document**(*document: dict*)

pine.backend.log.**access_flask_add_documents**(*documents: typing.List[dict]*)

pine.backend.log.**access_flask_annotate_document**(*annotation*)

pine.backend.log.**access_flask_annotate_documents**(*annotations: typing.List[dict]*)

pine.backend.log.**access**(*action*, *user*, *request_info*, *message*, ***extra_info*)

pine.backend.models

Module Contents

Classes

LoginFormFieldType()	Generic enumeration.
LoginFormField(name: str, display: str, field_type: LoginFormFieldType)	Initialize self. See help(type(self)) for accurate signature.
LoginForm(fields: list, button_text: str)	Initialize self. See help(type(self)) for accurate signature.
AuthUser()	Initialize self. See help(type(self)) for accurate signature.
UserDetails(first_name, last_name, description)	Initialize self. See help(type(self)) for accurate signature.

class pine.backend.models.**LoginFormFieldType**

Bases: enum.Enum

Generic enumeration.

Derive from this class to define new enumerations.

Create and return a new object. See help(type) for accurate signature.

TEXT = text

PASSWORD = password

class pine.backend.models.**LoginFormField**(*name: str*, *display: str*, *field_type: LoginFormFieldType*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

to_dict(*self*)

class pine.backend.models.**LoginForm**(*fields: list*, *button_text: str*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

to_dict(*self*)

class pine.backend.models.**AuthUser**

Bases: object

Initialize self. See help(type(self)) for accurate signature.

property id(*self*)

property username(*self*)

property display_name(*self*)

property is_admin(*self*)

to_dict(*self*)

class pine.backend.models.**UserDetails**(*first_name*, *last_name*, *description*)
Bases: object

Initialize self. See help(type(self)) for accurate signature.

to_dict(*self*)

Package Contents

Functions

create_app(test_config=None)	

pine.backend.**create_app**(*test_config=None*)

pine.backend.**VERSION**

pine.backend.**__version__**

pine.client

PINE client module.

Submodules

pine.client.client

PINE client classes module.

Module Contents

Classes

BaseClient(base_uri: str, name: str = None)	Base class for a client using a REST interface.
EveClient(eve_base_uri: str, mongo_base_uri: str = None, mongo_dbname: str = DEFAULT_DBNAME)	A client to access Eve and, optionally, its underlying MongoDB instance.
PineClient(backend_base_uri: str)	A client to access PINE (more specifically: the backend).
LocalPineClient(backend_base_uri: str, eve_base_uri: str, mongo_base_uri: str = None, mongo_dbname: str = EveClient.DEFAULT_DBNAME)	A client for a local PINE instance, including an :py:class<.EveClient>.

Functions

_standardize_path(path: str, *additional_paths: typing.List[str])	Standardize path(s) into a list of path components.

pine.client.client.**_standardize_path**(*path: str*, **additional_paths: typing.List[str]*) → typing.List[str]

Standardize path(s) into a list of path components.

Parameters

- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components in a list

Returns the standardized path components in a list

Return type list(str)

class pine.client.client.**BaseClient**(*base_uri: str*, *name: str = None*)

Bases: `object`

Base class for a client using a REST interface.

Constructor.

Parameters

- **base_uri** (*str*) – the base URI for the server, e.g. `"http://localhost:5000"`
- **name** (*str, optional*) – optional human-readable name for the server, defaults to None

__metaclass__

base_uri :str

The server's base URI.

Type str

session :requests.Session

The currently open session, or `None`.

Type requests.Session

abstract is_valid(*self*)

Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

uri(*self*, *path: str*, **additional_paths: typing.List[str]*)

Makes a complete URI from the given path(s).

Parameters

- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components

Returns the complete, standardized URI including the base URI, e.g. `"http://localhost:5000/users"`

Return type str

_req(*self*, *method: str*, *path: str*, **additional_paths: typing.List[str]*, ***kwargs*)
Makes a `requests` call, checks for errors, and returns the response.

Parameters

- **method** (*str*) – REST method (`"get"`, `"post"`, etc.)
- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components
- ****kwargs** (*dict*) – any additional kwargs to send to `requests`

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the `requests` `requests.Response` object

Return type requests.Response

get(*self*, *path: str*, **additional_paths: typing.List[str]*, ***kwargs*)
Makes a `requests` `GET` call, checks for errors, and returns the response.

Parameters

- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components
- ****kwargs** (*dict*) – any additional kwargs to send to `requests`

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the `requests` `Response` object

Return type requests.Response

put(*self*, *path: str*, **additional_paths: typing.List[str]*, ***kwargs*)
Makes a `requests` `PUT` call, checks for errors, and returns the response.

Parameters

- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components
- ****kwargs** (*dict*) – any additional kwargs to send to `requests`

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the `requests` `Response` object

Return type requests.Response

patch(*self*, *path: str*, **additional_paths: typing.List[str]*, ***kwargs*)
Makes a `requests` `PATCH` call, checks for errors, and returns the response.

Parameters

- **path** (*str*) – relative path, e.g. `"users"`

- ***additional_paths** (*list(str), optional*) – any additional path components
- ****kwargs** (*dict*) – any additional kwargs to send to `requests`

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the `requests` `Response` object

Return type requests.Response

post(*self*, *path: str*, **additional_paths: typing.List[str]*, ***kwargs*)

Makes a `requests` `POST` call, checks for errors, and returns the response.

Parameters

- **path** (*str*) – relative path, e.g. `"users"`
- ***additional_paths** (*list(str), optional*) – any additional path components
- ****kwargs** (*dict*) – any additional kwargs to send to `requests`

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the `requests` `Response` object

Return type requests.Response

class pine.client.client.**EveClient**(*eve_base_uri: str*, *mongo_base_uri: str = None*, *mongo_dbname: str = DEFAULT_DBNAME*)

Bases: *pine.client.client.BaseClient*

A client to access Eve and, optionally, its underlying MongoDB instance.

Constructor.

Parameters

- **eve_base_uri** (*str*) – the base URI for the eve server, e.g. `"http://localhost:5001"`
- **mongo_base_uri** (*str, optional*) – the base URI for the mongodb server, e.g. `"mongodb://localhost:27018"`, defaults to `None`
- **mongo_dbname** (*str, optional*) – the DB name that PINE uses, defaults to `"pmap_nlp"`

DEFAULT_DBNAME :str = pmap_nlp

The default DB name used by PINE.

Type str

mongo_base_uri :str

The base URI for the MongoDB server.

Type str

mongo :pymongo.MongoClient

The `pymongo.mongo_client.MongoClient` instance.

Type pymongo.mongo_client.MongoClient

mongo_db :pymongo.database.Database

The `pymongo.database.Database` instance.

Type pymongo.database.Database

is_valid(*self*)
Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

ping(*self*)
Pings the eve server and returns the result.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server (probably `"pong"`)

about(*self*)
Returns the 'about' dict from the server.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server

Return type dict

get_resource(*self*, *resource: str*, *resource_id: str*)
Gets a resource from eve by its ID.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON object response from the server

Return type dict

_add_or_replace_resource(*self*, *resource: str*, *obj: dict*, *valid_fn: typing.Callable[[dict, typing.Callable[[str], None]], bool] = None*)
Adds or replaces the given resource.

Parameters

- **resource** (*str*) – the resource type, e.g. `"users"`
- **obj** (*dict*) – the resource object
- **valid_fn** (*function, optional*) – a function to validate the resource object, defaults to `None`

Raises

- ***exceptions.PineClientValueException*** – if a valid_fn is passed in and the object fails
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the ID of the added/replaced resource

Return type str

_add_resources(*self*, *resource: str*, *objs: typing.List[dict]*, *valid_fn: typing.Callable[[dict, typing.Callable[[str], None]], bool] = None*, *replace_if_exists: bool = False*)
Tries to add all the resource objects at once, optionally falling back to individual replacement if that fails.

Parameters

- **resource** (*str*) – the resource type, e.g. `"users"`

- **objs** (*list(dict)*) – the resource objects
- **valid_fn** (*function, optional*) – a function to validate the resource object, defaults to `None`
- **replace_if_exists** (*bool, optional*) – whether to replace the resource with the given value if it already exists on the server, defaults to `False`

Raises

- ***exceptions.PineClientValueException*** – if a valid_fn is passed in and any of the objects fails
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the IDs of the added resources

Return type list(str)

add_users(*self*, *users: typing.List[dict]*, *replace_if_exists=False*)

Adds the given users.

Parameters

- **users** (*list(dict)*) – the user objects
- **replace_if_exists** (*bool, optional*) – whether to replace the resource with the given value if it already exists on the server, defaults to `False`

Raises

- ***exceptions.PineClientValueException*** – if any of the user objects are not valid, see *models.is_valid_eve_user()*
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the IDs of the added users

Return type list(str)

get_users(*self*)

Gets all users.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns all the users

Return type list(dict)

add_pipelines(*self*, *pipelines: typing.List[dict]*, *replace_if_exists=False*)

Adds the given pipelines.

Parameters

- **pipelines** (*list(dict)*) – the pipeline objects
- **replace_if_exists** (*bool, optional*) – whether to replace the resource with the given value if it already exists on the server, defaults to `False`

Raises

- ***exceptions.PineClientValueException*** – if any of the pipeline objects are not valid, see *models.is_valid_eve_pipeline()*
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the IDs of the added pipelines

Return type list(str)

class pine.client.client.**PineClient**(*backend_base_uri: str*)

Bases: *pine.client.client.BaseClient*

A client to access PINE (more specifically: the backend).

Constructor.

Parameters **backend_base_uri** (*str*) – the base URI for the backend server, e.g. `"http://localhost:5000"`

is_valid(*self*)

Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

ping(*self*)

Pings the backend server and returns the result.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server (probably `"pong"`)

about(*self*)

Returns the 'about' dict from the server.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server

Return type dict

get_logged_in_user(*self*)

Returns the currently logged in user, or None if not logged in.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns currently logged in user, or None if not logged in

Return type dict

get_my_user_id(*self*)

Returns the ID of the logged in user, or None if not logged in.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the ID of the logged in user, or None if not logged in

Return type str

is_logged_in(*self*)

Returns whether the user is currently logged in or not.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns whether the user is currently logged in or not

Return type bool

_check_login (*self*)
Checks whether user is logged in and raises an *exceptions.PineClientAuthException* if not.

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

get_auth_module (*self*)
Returns the PINE authentication module, e.g. `"eve"`.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the PINE authentication module, e.g. `"eve"`

Return type str

login_eve (*self*, *username: str*, *password: str*)
Logs in using eve credentials, and returns whether it was successful.

Parameters

- **username** (*str*) – username
- **password** (*str*) – password

Raises

- ***exceptions.PineClientAuthException*** – if auth module is not eve or login was not successful
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns whether the login was successful

Return type bool

logout (*self*)
Logs out the current user.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

get_pipelines (*self*)
Returns all pipelines accessible to logged in user.

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns all pipelines accessible to logged in user

Return type list(dict)

collection_builder (*self*, ***kwargs: dict*)
Makes and returns a new *models.CollectionBuilder* with the logged in user.

Parameters ****kwargs** (*dict*) – any additional args to pass in to the constructor

Returns a new *models.CollectionBuilder* with the logged in user

Return type *models.CollectionBuilder*

create_collection(*self*, *builder: models.CollectionBuilder*)
Creates a collection using the current value of the given builder and returns its ID.

Parameters **builder** (models.CollectionBuilder) – collection builder

Raises

- ***exceptions.PineClientValueException*** – if the given collection is not valid, see *models.is_valid_collection()*
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the created collection's ID

Return type str

get_collection_documents(*self*, *collection_id: str*, *truncate: bool*, *truncate_length: int = 30*)
Returns all the documents in the given collection.

Parameters

- **collection_id** (*str*) – the ID of the collection
- **truncate** (*bool*) – whether to truncate the document text (a good idea unless you need it)
- **truncate_length** (*int, optional*) – how many characters of the text you want if truncated, defaults to 30

Returns all the documents in the given collection

Return type list(dict)

add_document(*self*, *document: dict = {}*, *creator_id: str = None*, *collection_id: str = None*, *overlap: int = None*, *text: str = None*, *metadata: dict = None*)
Adds a new document to a collection and returns its ID.

Will use the logged in user ID for the creator_id if none is given. Although all the parameters are optional, you must provide values either in the document or through the kwargs in order to make a valid document.

Parameters

- **document** (*dict, optional*) – optional document dict, will be overridden with any kwargs, defaults to {}
- **creator_id** (*str, optional*) – optional creator_id for the document, defaults to None (not set)
- **collection_id** (*str, optional*) – optional collection_id for the document, defaults to None (not set)
- **overlap** (*int, optional*) – optional overlap for the document, defaults to None (not set)
- **text** (*str, optional*) – optional text for the document, defaults to None (not set)
- **metadata** (*dict, optional*) – optional metadata for the document, defaults to None (not set)

Raises

- ***exceptions.PineClientValueException*** – if the given document parameters are not valid, see *models.is_valid_eve_document()*
- ***exceptions.PineClientAuthException*** – if not logged in

- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the created document's ID

Return type str

add_documents(*self*, *documents: typing.List[dict]*, *creator_id: str = None*, *collection_id: str = None*)

Adds multiple documents at once and returns their IDs.

Will use the logged in user ID for the creator_id if none is given.

Parameters

- **documents** (*list(dict)*) – the documents to add
- **creator_id** (*str, optional*) – optional creator_id to set in the documents, defaults to None (not set)
- **collection_id** (*str, optional*) – optional collection_id to set in the documents, defaults to None (not set)

Raises

- **exceptions.PineClientValueException** – if any of the given documents are not valid, see *models.is_valid_eve_document()*
- **exceptions.PineClientAuthException** – if not logged in
- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the created documents' IDs

Return type list(str)

annotate_document(*self*, *document_id: str*, *doc_annotations: typing.List[str]*, *ner_annotations: typing.List[typing.Union[dict, list, tuple]]*)

Annotates the given document with the given values.

Parameters

- **document_id** (*str*) – the document ID to annotate
- **doc_annotations** (*list(str)*) – document annotations/labels
- **ner_annotations** (*list*) – NER annotations, where each annotation is either a list or a dict

Raises

- **exceptions.PineClientValueException** – if any of the given annotations are not valid, see *models.is_valid_annotation()*
- **exceptions.PineClientAuthException** – if not logged in
- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the annotation ID

Return type str

annotate_collection_documents(*self*, *collection_id: str*, *document_annotations: dict*, *skip_document_updates=False*)

Annotates documents in a collection.

Parameters

- **collection_id** (*str*) – the ID of the collection containing the documents to annotate
- **document_annotations** (*dict*) – a dict containing "ner" list and "doc" list

- **skip_document_updates** (*bool*) – whether to skip updating the document "has_annotated" map, defaults to `False`. This should only be `True` if you properly set the "has_annotated" map when you created the document.

Raises

- ***exceptions.PineClientValueException*** – if any of the given annotations are not valid, see *models.is_valid_doc_annotations()*
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the annotation IDs

Return type list(str)

list_collections(*self*, *include_archived: bool = False*)

Returns a list of user's collections.

Parameters **include_archived** (*bool*) – whether to include archived collections, defaults to `False`

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns user's collections

Return type list(dict)

download_collection_data(*self*, *collection_id: str*, *include_collection_metadata: bool = True*, *include_document_metadata: bool = True*, *include_document_text: bool = True*, *include_annotations: bool = True*, *include_annotation_latest_version_only: bool = True*)

Downloads collection data.

Parameters

- **collection_id** (*str*) – the ID of the collection for which to download data
- **include_collection_metadata** (*bool*) – whether to include collection metadata, defaults to `True`
- **include_document_metadata** (*bool*) – whether to include document metadata, defaults to `True`
- **include_document_text** (*bool*) – whether to include document text, defaults to `True`
- **include_annotations** (*bool*) – whether to include annotations, defaults to `True`
- **include_annotation_latest_version_only** (*bool*) – whether to include only the latest version of annotations (`True`) or all versions (`False`), defaults to `True`

Raises

- ***exceptions.PineClientValueException*** – if given empty collection ID
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error, such as if the collection doesn't exist

Returns collection data

Return type dict

class pine.client.client.**LocalPineClient**(*backend_base_uri: str*, *eve_base_uri: str*, *mongo_base_uri: str = None*, *mongo_dbname: str = EveClient.DEFAULT_DBNAME*)

Bases: *pine.client.client.PineClient*

A client for a local PINE instance, including an :py:class<.EveClient>.

Constructor.

Parameters

- **backend_base_uri** (*str*) – the base URI for the backend server, e.g. `"http://localhost:5000"`
- **eve_base_uri** (*str*) – the base URI for the eve server, e.g. `"http://localhost:5001"`
- **mongo_base_uri** (*str, optional*) – the base URI for the mongodb server, e.g. `"mongodb://localhost:27018"`, defaults to `None`
- **mongo_dbname** (*str, optional*) – the DB name that PINE uses, defaults to `"pmap_nlp"`

eve :EveClient
The local *EveClient* instance.

Type *EveClient*

is_valid(*self*)
Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

pine.client.exceptions

PINE client exceptions module.

Module Contents

exception pine.client.exceptions.**PineClientException**(*message: str*, *cause: Exception = None*)

Bases: `Exception`

Base class for PINE client exceptions.

Constructor.

Parameters

- **message** (*str*) – the message
- **cause** (*Exception, optional*) – optional cause, defaults to `None`

message
The message.

Type str

exception pine.client.exceptions.**PineClientHttpException**(*method: str*, *path: str*, *resp: requests.Response*)

Bases: *pine.client.exceptions.PineClientException*

A PINE client exception caused by an underlying HTTP exception.

Constructor.

Parameters

- **method** (*str*) – the REST method ("get", "post", etc.)
- **path** (*str*) – the human-readable path that caused the exception
- **resp** (*requests.Response*) – the Response with the error info

resp

The Response with the error info

Type requests.Response

exception pine.client.exceptions.**PineClientValueException**(*obj: dict*, *obj_type: str*)

Bases: *pine.client.exceptions.PineClientException*

A PINE client exception caused by passing invalid data.

Constructor.

Parameters

- **obj** (*dict*) – the error data
- **obj_type** (*str*) – human-readable type of object

exception pine.client.exceptions.**PineClientAuthException**(*message: str*, *cause: Exception = None*)

Bases: *pine.client.exceptions.PineClientException*

Base class for PINE client exceptions.

Constructor.

Parameters

- **message** (*str*) – the message
- **cause** (*Exception, optional*) – optional cause, defaults to None

pine.client.log

Module Contents

Functions

setup_logging()	Sets up logging, if configured to do so.

pine.client.log.**CONFIG_FILE_ENV :str = PINE_LOGGING_CONFIG_FILE**

The environment variable that optionally contains the file to use for logging configuration.

Type str

pine.client.log.**setup_logging**()

Sets up logging, if configured to do so.

The environment variable named by *CONFIG_FILE_ENV* is checked and, if present, is passed to `logging.config.dictConfig()`.

pine.client.models

Module Contents

Classes

CollectionBuilder(collection: dict = None, creator_id: str = None, viewers: typing.List[str] = None, annotators: typing.List[str] = None, labels: typing.List[str] = None, title: str = None, description: str = None, allow_overlapping_ner_annotations: bool = None, pipelineId: str = None, overlap: float = None, train_every: int = None, classifierParameters: dict = None, document_csv_file: str = None, document_csv_file_has_header: bool = None, document_csv_file_text_column: int = None, image_files: typing.List[str] = None)	A class that can build the form and files fields that are necessary to create a collection.

Functions

_check_field_required_bool(obj: dict, field: str)	Checks that the given field is in the object and is a bool.
_check_field_int(obj: dict, field: str)	Checks that if the given field is in the object, that it is an int.
_check_field_required_int(obj: dict, field: str)	Checks that the given field is in the object and is an int.
_check_field_float(obj: dict, field: str)	Checks that if the given field is in the object, that it is a float.
_check_field_required_float(obj: dict, field: str)	Checks that the given field is in the object and is a float.
_check_field_string(obj: dict, field: str)	Checks that if the given field is in the object, that it is a string.
_check_field_required_string(obj: dict, field: str)	Checks that the given field is in the object and is a string.
_check_field_string_list(obj: dict, field: str, min_length: int = 0)	Checks that if the given field is in the object, that it is a string list.
_check_field_required_string_list(obj: dict, field: str, min_length: int = 0)	Checks that the given field is in the object and is a string list.
_check_field_dict(obj: dict, field: str)	Checks that if the given field is in the object, that it is a dict.
_check_field_required_dict(obj: dict, field: str)	Checks that the given field is in the object and is a dict.
_check_field_bool(obj: dict, field: str)	Checks that if the given field is in the object, that it is a bool.
is_valid_eve_user(user: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given user object is valid.
is_valid_eve_pipeline(pipeline: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given pipeline object is valid.

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is_valid_eve_collection(collection: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given collection object is valid.
is_valid_collection(form: dict, files: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given form and files parameters are valid for creating a collection.
is_valid_eve_document(document: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given document object is valid.
is_valid_doc_annotation(ann: typing.Any, error_callback: typing.Callable[[str], None] = None)	Checks whether the given annotation is a valid document label/annotation.
is_valid_ner_annotation(ann: typing.Any, error_callback: typing.Callable[[str], None] = None)	Checks whether the given annotation is a valid document NER annotation.
is_valid_annotation(body: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given body is valid to create an annotation.
is_valid_doc_annotations(doc_annotations: dict, error_callback: typing.Callable[[str], None] = None)	Checks whether the given document annotations are valid.
remove_eve_fields(obj: dict, remove_timestamps: bool = True, remove_versions: bool = True)	Removes fields inserted by eve from the given object.
remove_nonupdatable_fields(obj: dict)	Removes all non-updatable fields from the given object.

pine.client.models.**ID_FIELD :str = _id**
The field used to store database ID.

Type str

pine.client.models.**ITEMS_FIELD :str = _items**
The field used to access the items in a multi-item database response.

Type str

pine.client.models.**_check_field_required_bool**(*obj: dict*, *field: str*) → bool
Checks that the given field is in the object and is a bool.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns whether the given field is in the object and is a bool

Return type bool

pine.client.models.**_check_field_int**(*obj: dict*, *field: str*) → bool
Checks that if the given field is in the object, that it is an int.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns if the given field is in the object, that it is an int

Return type bool

pine.client.models.**_check_field_required_int**(*obj: dict*, *field: str*) → bool
Checks that the given field is in the object and is an int.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns whether the given field is in the object and is an int

Return type bool

pine.client.models.**_check_field_float**(*obj: dict*, *field: str*) → bool
Checks that if the given field is in the object, that it is a float.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns if the given field is in the object, that it is a float

Return type bool

pine.client.models.**_check_field_required_float**(*obj: dict*, *field: str*) → bool
Checks that the given field is in the object and is a float.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns whether the given field is in the object and is a float

Return type bool

pine.client.models.**_check_field_string**(*obj: dict*, *field: str*) → bool
Checks that if the given field is in the object, that it is a string.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns if the given field is in the object, that it is a string

Return type bool

pine.client.models.**_check_field_required_string**(*obj: dict*, *field: str*) → bool
Checks that the given field is in the object and is a string.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns whether the given field is in the object and is a string

Return type bool

pine.client.models.**_check_field_string_list**(*obj: dict*, *field: str*, *min_length: int = 0*) → bool
Checks that if the given field is in the object, that it is a string list.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check
- **min_length** (*int, optional*) – the minimum length of the list (if > 0), defaults to 0

Returns if the given field is in the object, that it is a string list

Return type bool

pine.client.models.**_check_field_required_string_list**(*obj: dict*, *field: str*, *min_length: int = 0*) → bool

Checks that the given field is in the object and is a string list.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check
- **min_length** (*int, optional*) – the minimum length of the list (if > 0), defaults to 0

Returns if the given field is in the object, that it is a string list

Return type bool

pine.client.models.**_check_field_dict**(*obj: dict*, *field: str*) → bool

Checks that if the given field is in the object, that it is a dict.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns if the given field is in the object, that it is a dict

Return type bool

pine.client.models.**_check_field_required_dict**(*obj: dict*, *field: str*) → bool

Checks that the given field is in the object and is a dict.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns whether the given field is in the object and is a dict

Return type bool

pine.client.models.**_check_field_bool**(*obj: dict*, *field: str*) → bool

Checks that if the given field is in the object, that it is a bool.

Parameters

- **obj** (*dict*) – the object to check
- **field** (*str*) – the field to check

Returns if the given field is in the object, that it is a bool

Return type bool

pine.client.models.**is_valid_eve_user**(*user: dict*, *error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given user object is valid.

A valid user object has an `_id`, `firstname`, and `lastname` that are non-empty string fields. If `email`, `description`, or `passwdhash` are present, they are string fields. If `role` is present, it is a list of strings that are either `administrator` or `user`.

Parameters

- **user** (*dict*) – user object

- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to `None`

Returns whether the given user object is valid

Return type bool

`pine.client.models.`**is_valid_eve_pipeline**(*pipeline: dict, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given pipeline object is valid.

A valid pipeline has an `_id`, `title`, and `name` that are non-empty string fields. If `description` is provided, it is a string field. If `parameters` are provided, it is a dict field.

Parameters

- **pipeline** (*dict*) – pipeline object
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to `None`

Returns whether the given pipeline object is valid

Return type bool

`pine.client.models.`**is_valid_eve_collection**(*collection: dict, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given collection object is valid.

A valid collection has a `creator_id` that is a non-empty string field. It has a `labels` that is a non-empty list of strings. If `annotators` or `viewers` are provided, they are lists of strings. If `metadata` or `configuration` are provided, they are dicts. If `archived` is provided, it is a bool.

Parameters

- **collection** (*dict*) – collection object
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to `None`

Returns whether the given collection object is valid

Return type bool

`pine.client.models.`**is_valid_collection**(*form: dict, files: dict, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given form and files parameters are valid for creating a collection.

A valid form has a `collection` that is a dict field and is valid via *is_valid_eve_collection()*. Additionally, the collection has string `title` and `description` fields in its `metadata`. It also has at least one element for `labels`, `viewers`, and `annotators`, and the `creator_id` must be in both `viewers` and `annotators`.

The form also has `overlap` as a float field between 0 and 1 (inclusive), `train_every` as an int field that is at least 5, and `pipelineId` as a string field.

If files are provided, file `file` and any files starting with `imageFile` are checked. If a file `file` is provided, the form must also have a boolean `csvHasHeader` field and an int `csvTextCol` field.

Parameters

- **form** (*dict*) – form data to send to backend
- **files** (*dict*) – file data to send to backend

- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given form and files parameters are valid for creating a collection

Return type bool

pine.client.models.**is_valid_eve_document**(*document: dict, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given document object is valid.

A valid document has a creator_id and collection_id that are non-empty string fields. Optionally, it may have an int overlap field, string text``field, and dict ``metadata and has_annotated fields.

Parameters

- **document** (*dict*) – document object
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given document object is valid

Return type bool

pine.client.models.**is_valid_doc_annotation**(*ann: typing.Any, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given annotation is a valid document label/annotation.

This means that it is a non-empty string.

Parameters

- **ann** – annotation
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given annotation is a valid document label/annotation

Return type bool

pine.client.models.**is_valid_ner_annotation**(*ann: typing.Any, error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given annotation is a valid document NER annotation.

Valid NER annotations take one of two forms: a dict or a list/tuple of size 3.

A valid NER dict has the following fields:

- start: an int that is >= 0
- end: an int that is >= 0
- label: a non-empty str

A valid NER list/tuple has the following elements:

- element 0: an int that is >= 0
- element 1: an int that is >= 0
- element 2: a non-empty str

Parameters

- **ann** – annotation

- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given annotation is a valid document label/annotation

Return type bool

pine.client.models.**is_valid_annotation**(*body: dict*, *error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given body is valid to create an annotation.

A valid body is a dict with two fields:

- doc: a list of valid doc annotations (see *is_valid_doc_annotation()*)
- ner: a list of valid NER annotations (see *is_valid_ner_annotation()*)

Parameters

- **body** (*dict*) – annotation body
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given body is valid to create an annotation

Return type bool

pine.client.models.**is_valid_doc_annotations**(*doc_annotations: dict*, *error_callback: typing.Callable[[str], None] = None*) → bool

Checks whether the given document annotations are valid.

A valid document annotations object is a dict, where the keys are str document IDs, and the values are valid annotation bodies (see *is_valid_annotation()*).

Parameters

- **doc_annotations** – document annotations
- **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the given body is valid to create an annotation

Return type bool

class pine.client.models.**CollectionBuilder**(*collection: dict = None*, *creator_id: str = None*, *viewers: typing.List[str] = None*, *annotators: typing.List[str] = None*, *labels: typing.List[str] = None*, *title: str = None*, *description: str = None*, *allow_overlapping_ner_annotations: bool = None*, *pipelineId: str = None*, *overlap: float = None*, *train_every: int = None*, *classifierParameters: dict = None*, *document_csv_file: str = None*, *document_csv_file_has_header: bool = None*, *document_csv_file_text_column: int = None*, *image_files: typing.List[str] = None*)

Bases: object

A class that can build the form and files fields that are necessary to create a collection.

Constructor.

Parameters

- **collection** (*dict, optional*) – starting parameters for the collection, defaults to None (not set)
- **creator_id** (*str, optional*) – user ID for the creator, see *creator_id()*, defaults to None (not set)
- **viewers** (*list(str), optional*) – viewer IDs for the collection, see *viewer()*, defaults to None (not set)
- **annotators** (*list(str), optional*) – annotator IDs for the collection, see *annotator()*, defaults to None (not set)
- **labels** (*list(str), optional*) – labels for the collection, see *label()*, defaults to None (not set)
- **title** (*str, optional*) – metadata title, see *title()*, defaults to None (not set)
- **description** (*str, optional*) – metadata description, see *description()*, defaults to None (not set)
- **allow_overlapping_ner_annotations** (*bool*) – optional configuration for allowing overlapping NER annotations, see *allow_overlapping_ner_annotations()*, defaults to None (not set)
- **pipelineId** (*str, optional*) – the ID of the pipeline from which to create the classifier, see *classifier()*, defaults to None (not set)
- **overlap** (*float, optional*) – the classifier overlap, see *classifier()*, defaults to None (not set)
- **train_every** (*int, optional*) – train the model after this many documents are annotated, see *classifier()*, defaults to None (not set)
- **classifierParameters** (*dict, optional*) – any parameters to pass to the classifier, see *classifier()*, defaults to None (not set)
- **document_csv_file** (*str, optional*) – the filename of the local document CSV file, see document_csv_File(), defaults to None (not set)
- **document_csv_file_has_header** (*bool, optional*) – whether the document CSV file has a header, see document_csv_File(), defaults to None (not set)
- **document_csv_file_text_column** (*int, optional*) – if the document CSV file has headers, the document text can be found in this column index (the others are used for document metadata), see document_csv_File(), defaults to None (not set)
- **image_files** (*list(str)*) – any image files to add to the collection, see *image_file()*, defaults to None (not set)

form
The form data.

Type dict

files
The files data.

Type dict

property collection(*self*)
Returns the collection information from the form.

Returns collection information from the form

Return type dict

property form_json (*self*)
Returns the form where the values have been JSON-encoded.

Returns the form where the values have been JSON-encoded

Return type dict

creator_id (*self*, *user_id: str*)
Sets the creator_id to the given, and adds to viewers and annotators.

Parameters **user_id** (*str*) – the user ID to use for the creator_id

Returns self

Return type *models.CollectionBuilder*

viewer (*self*, *user_id: str*)
Adds the given user to the list of viewers.

Parameters **user_id** (*str*) – the user ID to add as a viewer

Returns self

Return type *models.CollectionBuilder*

annotator (*self*, *user_id: str*)
Adds the given user to the list of annotators.

Parameters **user_id** (*str*) – the user ID to add as an annotator

Returns self

Return type *models.CollectionBuilder*

label (*self*, *label: str*)
Adds the given label to the collection.

Parameters **label** (*str*) – label to add

Returns self

Return type *models.CollectionBuilder*

metadata (*self*, *key: str*, *value: typing.Any*)
Adds the given metadata key/value to the collection.

Parameters

- **key** (*str*) – metadata key
- **value** – metadata value

Returns self

Return type *models.CollectionBuilder*

title (*self*, *title: str*)
Sets the metadata title to the given.

Parameters **title** (*str*) – collection title

Returns self

Return type *models.CollectionBuilder*

description (*self*, *description: str*)
Sets the metadata description to the given.

Parameters **description** (*str*) – collection description

Returns self

Return type *models.CollectionBuilder*

configuration(*self*, *key: str*, *value: typing.Any*)
Adds the given configuration key/value to the collection.

Parameters

- **key** (*str*) – configuration key
- **value** – configuration value

Returns self

Return type *models.CollectionBuilder*

allow_overlapping_ner_annotations(*self*, *allow_overlapping_ner_annotations: bool*)
Sets the configuration value for allow_overlapping_ner_annotations to the given.

Parameters **allow_overlapping_ner_annotations** (*bool*) – whether to allow overlapping NER annotations

Returns self

Return type *models.CollectionBuilder*

classifier(*self*, *pipelineId: str*, *overlap: float = 0*, *train_every: int = 100*, *classifierParameters: dict = {}*)
Sets classifier information for the created collection.

Parameters

- **pipelineId** (*str*) – the ID of the pipeline from which to create the classifier
- **overlap** (*float, optional*) – the classifier overlap, defaults to *0*
- **train_every** (*int, optional*) – train the model after this many documents are annotated, defaults to *100*
- **classifierParameters** (*dict, optional*) – any parameters to pass to the classifier, defaults to { }

Returns self

Return type *models.CollectionBuilder*

document_csv_file(*self*, *csv_filename: str*, *has_header: bool*, *text_column: int*)
Sets the CSV file used to create documents to the given.

May raise an Exception if there is a problem opening the indicated file.

Parameters

- **csv_filename** (*str*) – the filename of the local CSV file
- **has_header** (*bool*) – whether the CSV file has a header
- **text_column** (*int*) – if the CSV file has headers, the document text can be found in this column index (the others are used for document metadata)

Returns self

Return type *models.CollectionBuilder*

image_file(*self*, *image_filename: str*)
Adds the given image file to the collection.

May raise an Exception if there is a problem opening the indicated file.

Parameters **image_filename** (*str*) – the filename of the local image file

Returns self

Return type *models.CollectionBuilder*

is_valid(*self*, *error_callback: typing.Callable[[str], None] = None*)
Checks whether the currently set values are valid or not.

See *is_valid_collection()*.

Parameters **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the currently set values are valid or not

Return type bool

pine.client.models.**remove_eve_fields**(*obj: dict*, *remove_timestamps: bool = True*, *remove_versions: bool = True*)
Removes fields inserted by eve from the given object.

Parameters

- **obj** (*dict*) – the object
- **remove_timestamps** (*bool*) – whether to remove the timestamp fields, defaults to True
- **remove_versions** (*bool*) – whether to remove the version fields, defaults to True

pine.client.models.**remove_nonupdatable_fields**(*obj: dict*)
Removes all non-updatable fields from the given object.

These fields would cause a PUT/PATCH to be rejected because they are not user-modifiable.

Parameters **obj** (*dict*) – the object

pine.client.password

Module Contents

Functions

hash_password(password: str)	Hashes the given password for use in user object.
check_password(password: str, hashed_password: str)	Checks the given password against the given hash.

pine.client.password.**hash_password**(*password: str*) → str
Hashes the given password for use in user object.

Parameters **password** (*str*) – password

Returns hashed password

Return type str

pine.client.password.**check_password**(*password: str*, *hashed_password: str*) → str

Checks the given password against the given hash.

Parameters

- **password** (*str*) – password to check
- **hashed_password** (*str*) – hashed password to check against

Returns whether the password matches the hash

Return type bool

Package Contents

Classes

PineClient(backend_base_uri: str)	A client to access PINE (more specifically: the backend).
LocalPineClient(backend_base_uri: str, eve_base_uri: str, mongo_base_uri: str = None, mongo_dbname: str = EveClient.DEFAULT_DBNAME)	A client for a local PINE instance, including an :py:class<.EveClient>.
CollectionBuilder(collection: dict = None, creator_id: str = None, viewers: typing.List[str] = None, annotators: typing.List[str] = None, labels: typing.List[str] = None, title: str = None, description: str = None, allow_overlapping_ner_annotations: bool = None, pipelineId: str = None, overlap: float = None, train_every: int = None, classifierParameters: dict = None, document_csv_file: str = None, document_csv_file_has_header: bool = None, document_csv_file_text_column: int = None, image_files: typing.List[str] = None)	A class that can build the form and files fields that are necessary to create a collection.

Functions

setup_logging()	Sets up logging, if configured to do so.

class pine.client.**PineClient**(*backend_base_uri: str*)

Bases: *pine.client.client.BaseClient*

A client to access PINE (more specifically: the backend).

Constructor.

Parameters **backend_base_uri** (*str*) – the base URI for the backend server, e.g. `"http://localhost:5000"`

is_valid(*self*)

Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

ping(*self*)

Pings the backend server and returns the result.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server (probably `"pong"`)

about (*self*)
Returns the 'about' dict from the server.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the JSON response from the server

Return type dict

get_logged_in_user (*self*)
Returns the currently logged in user, or None if not logged in.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns currently logged in user, or None if not logged in

Return type dict

get_my_user_id (*self*)
Returns the ID of the logged in user, or None if not logged in.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the ID of the logged in user, or None if not logged in

Return type str

is_logged_in (*self*)
Returns whether the user is currently logged in or not.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns whether the user is currently logged in or not

Return type bool

_check_login (*self*)
Checks whether user is logged in and raises an *exceptions.PineClientAuthException* if not.

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

get_auth_module (*self*)
Returns the PINE authentication module, e.g. `"eve"`.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the PINE authentication module, e.g. `"eve"`

Return type str

login_eve (*self*, *username: str*, *password: str*)
Logs in using eve credentials, and returns whether it was successful.

Parameters

- **username** (*str*) – username
- **password** (*str*) – password

Raises

- ***exceptions.PineClientAuthException*** – if auth module is not eve or login was not successful
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns whether the login was successful

Return type bool

logout (*self*)
Logs out the current user.

Raises ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

get_pipelines (*self*)
Returns all pipelines accessible to logged in user.

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns all pipelines accessible to logged in user

Return type list(dict)

collection_builder (*self*, ***kwargs: dict*)
Makes and returns a new *models.CollectionBuilder* with the logged in user.

Parameters ****kwargs** (*dict*) – any additional args to pass in to the constructor

Returns a new *models.CollectionBuilder* with the logged in user

Return type *models.CollectionBuilder*

create_collection (*self*, *builder: models.CollectionBuilder*)
Creates a collection using the current value of the given builder and returns its ID.

Parameters **builder** (models.CollectionBuilder) – collection builder

Raises

- ***exceptions.PineClientValueException*** – if the given collection is not valid, see *models.is_valid_collection()*
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the created collection's ID

Return type str

get_collection_documents (*self*, *collection_id: str*, *truncate: bool*, *truncate_length: int = 30*)
Returns all the documents in the given collection.

Parameters

- **collection_id** (*str*) – the ID of the collection

- **truncate** (*bool*) – whether to truncate the document text (a good idea unless you need it)
- **truncate_length** (*int, optional*) – how many characters of the text you want if truncated, defaults to 30

Returns all the documents in the given collection

Return type list(dict)

add_document(*self*, *document: dict = {}*, *creator_id: str = None*, *collection_id: str = None*, *overlap: int = None*, *text: str = None*, *metadata: dict = None*)

Adds a new document to a collection and returns its ID.

Will use the logged in user ID for the creator_id if none is given. Although all the parameters are optional, you must provide values either in the document or through the kwargs in order to make a valid document.

Parameters

- **document** (*dict, optional*) – optional document dict, will be overridden with any kwargs, defaults to {}
- **creator_id** (*str, optional*) – optional creator_id for the document, defaults to None (not set)
- **collection_id** (*str, optional*) – optional collection_id for the document, defaults to None (not set)
- **overlap** (*int, optional*) – optional overlap for the document, defaults to None (not set)
- **text** (*str, optional*) – optional text for the document, defaults to None (not set)
- **metadata** (*dict, optional*) – optional metadata for the document, defaults to None (not set)

Raises

- ***exceptions.PineClientValueException*** – if the given document parameters are not valid, see *models.is_valid_eve_document()*
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns the created document's ID

Return type str

add_documents(*self*, *documents: typing.List[dict]*, *creator_id: str = None*, *collection_id: str = None*)

Adds multiple documents at once and returns their IDs.

Will use the logged in user ID for the creator_id if none is given.

Parameters

- **documents** (*list(dict)*) – the documents to add
- **creator_id** (*str, optional*) – optional creator_id to set in the documents, defaults to None (not set)
- **collection_id** (*str, optional*) – optional collection_id to set in the documents, defaults to None (not set)

Raises

- **exceptions.PineClientValueException** – if any of the given documents are not valid, see *models.is_valid_eve_document()*
- **exceptions.PineClientAuthException** – if not logged in
- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the created documents' IDs

Return type list(str)

annotate_document(*self*, *document_id: str*, *doc_annotations: typing.List[str]*, *ner_annotations: typing.List[typing.Union[dict, list, tuple]]*)

Annotates the given document with the given values.

Parameters

- **document_id** (*str*) – the document ID to annotate
- **doc_annotations** (*list(str)*) – document annotations/labels
- **ner_annotations** (*list*) – NER annotations, where each annotation is either a list or a dict

Raises

- **exceptions.PineClientValueException** – if any of the given annotations are not valid, see *models.is_valid_annotation()*
- **exceptions.PineClientAuthException** – if not logged in
- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the annotation ID

Return type str

annotate_collection_documents(*self*, *collection_id: str*, *document_annotations: dict*, *skip_document_updates=False*)

Annotates documents in a collection.

Parameters

- **collection_id** (*str*) – the ID of the collection containing the documents to annotate
- **document_annotations** (*dict*) – a dict containing "ner" list and "doc" list
- **skip_document_updates** (*bool*) – whether to skip updating the document "has_annotated" map, defaults to `False`. This should only be `True` if you properly set the "has_annotated" map when you created the document.

Raises

- **exceptions.PineClientValueException** – if any of the given annotations are not valid, see *models.is_valid_doc_annotations()*
- **exceptions.PineClientAuthException** – if not logged in
- **exceptions.PineClientHttpException** – if the HTTP request returns an error

Returns the annotation IDs

Return type list(str)

list_collections(*self*, *include_archived: bool = False*)

Returns a list of user's collections.

Parameters **include_archived** (*bool*) – whether to include archived collections, defaults to `False`

Raises

- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error

Returns user's collections

Return type list(dict)

download_collection_data(*self*, *collection_id: str*, *include_collection_metadata: bool = True*, *include_document_metadata: bool = True*, *include_document_text: bool = True*, *include_annotations: bool = True*, *include_annotation_latest_version_only: bool = True*)

Downloads collection data.

Parameters

- **collection_id** (*str*) – the ID of the collection for which to download data
- **include_collection_metadata** (*bool*) – whether to include collection metadata, defaults to `True`
- **include_document_metadata** (*bool*) – whether to include document metadata, defaults to `True`
- **include_document_text** (*bool*) – whether to include document text, defaults to `True`
- **include_annotations** (*bool*) – whether to include annotations, defaults to `True`
- **include_annotation_latest_version_only** (*bool*) – whether to include only the latest version of annotations (`True`) or all versions (`False`), defaults to `True`

Raises

- ***exceptions.PineClientValueException*** – if given empty collection ID
- ***exceptions.PineClientAuthException*** – if not logged in
- ***exceptions.PineClientHttpException*** – if the HTTP request returns an error, such as if the collection doesn't exist

Returns collection data

Return type dict

class pine.client.**LocalPineClient**(*backend_base_uri: str*, *eve_base_uri: str*, *mongo_base_uri: str = None*, *mongo_dbname: str = EveClient.DEFAULT_DBNAME*)

Bases: *pine.client.client.PineClient*

A client for a local PINE instance, including an :py:class<.EveClient>.

Constructor.

Parameters

- **backend_base_uri** (*str*) – the base URI for the backend server, e.g. `"http://localhost:5000"`
- **eve_base_uri** (*str*) – the base URI for the eve server, e.g. `"http://localhost:5001"`

- **mongo_base_uri** (*str, optional*) – the base URI for the mongodb server, e.g. "mongodb://localhost:27018", defaults to None
- **mongo_dbname** (*str, optional*) – the DB name that PINE uses, defaults to "pmap_nlp"

eve :EveClient
The local EveClient instance.

Type *EveClient*

is_valid(*self*)
Returns whether this client and its connection(s) are valid.

Returns whether this client and its connection(s) are valid

Return type bool

pine.client.**setup_logging**()
Sets up logging, if configured to do so.

The environment variable named by CONFIG_FILE_ENV is checked and, if present, is passed to logging.config.dictConfig().

class pine.client.**CollectionBuilder**(*collection: dict = None, creator_id: str = None, viewers: typing.List[str] = None, annotators: typing.List[str] = None, labels: typing.List[str] = None, title: str = None, description: str = None, allow_overlapping_ner_annotations: bool = None, pipelineId: str = None, overlap: float = None, train_every: int = None, classifierParameters: dict = None, document_csv_file: str = None, document_csv_file_has_header: bool = None, document_csv_file_text_column: int = None, image_files: typing.List[str] = None*)
Bases: object

A class that can build the form and files fields that are necessary to create a collection.

Constructor.

Parameters

- **collection** (*dict, optional*) – starting parameters for the collection, defaults to None (not set)
- **creator_id** (*str, optional*) – user ID for the creator, see *creator_id()*, defaults to None (not set)
- **viewers** (*list(str), optional*) – viewer IDs for the collection, see *viewer()*, defaults to None (not set)
- **annotators** (*list(str), optional*) – annotator IDs for the collection, see *annotator()*, defaults to None (not set)
- **labels** (*list(str), optional*) – labels for the collection, see *label()*, defaults to None (not set)
- **title** (*str, optional*) – metadata title, see *title()*, defaults to None (not set)
- **description** (*str, optional*) – metadata description, see *description()*, defaults to None (not set)

- **allow_overlapping_ner_annotations** (*bool*) – optional configuration for allowing overlapping NER annotations, see *allow_overlapping_ner_annotations()*, defaults to None (not set)
- **pipelineId** (*str, optional*) – the ID of the pipeline from which to create the classifier, see *classifier()*, defaults to None (not set)
- **overlap** (*float, optional*) – the classifier overlap, see *classifier()*, defaults to None (not set)
- **train_every** (*int, optional*) – train the model after this many documents are annotated, see *classifier()*, defaults to None (not set)
- **classifierParameters** (*dict, optional*) – any parameters to pass to the classifier, see *classifier()*, defaults to None (not set)
- **document_csv_file** (*str, optional*) – the filename of the local document CSV file, see document_csv_File(), defaults to None (not set)
- **document_csv_file_has_header** (*bool, optional*) – whether the document CSV file has a header, see document_csv_File(), defaults to None (not set)
- **document_csv_file_text_column** (*int, optional*) – if the document CSV file has headers, the document text can be found in this column index (the others are used for document metadata), see document_csv_File(), defaults to None (not set)
- **image_files** (*list(str)*) – any image files to add to the collection, see *image_file()*, defaults to None (not set)

form
The form data.

Type dict

files
The files data.

Type dict

property collection(*self*)
Returns the collection information from the form.

Returns collection information from the form

Return type dict

property form_json(*self*)
Returns the form where the values have been JSON-encoded.

Returns the form where the values have been JSON-encoded

Return type dict

creator_id(*self*, *user_id: str*)
Sets the creator_id to the given, and adds to viewers and annotators.

Parameters **user_id** (*str*) – the user ID to use for the creator_id

Returns self

Return type *models.CollectionBuilder*

viewer(*self*, *user_id: str*)
Adds the given user to the list of viewers.

Parameters **user_id** (*str*) – the user ID to add as a viewer

Returns self

Return type *models.CollectionBuilder*

annotator (*self*, *user_id: str*)
Adds the given user to the list of annotators.

Parameters **user_id** (*str*) – the user ID to add as an annotator

Returns self

Return type *models.CollectionBuilder*

label (*self*, *label: str*)
Adds the given label to the collection.

Parameters **label** (*str*) – label to add

Returns self

Return type *models.CollectionBuilder*

metadata (*self*, *key: str*, *value: typing.Any*)
Adds the given metadata key/value to the collection.

Parameters

- **key** (*str*) – metadata key
- **value** – metadata value

Returns self

Return type *models.CollectionBuilder*

title (*self*, *title: str*)
Sets the metadata title to the given.

Parameters **title** (*str*) – collection title

Returns self

Return type *models.CollectionBuilder*

description (*self*, *description: str*)
Sets the metadata description to the given.

Parameters **description** (*str*) – collection description

Returns self

Return type *models.CollectionBuilder*

configuration (*self*, *key: str*, *value: typing.Any*)
Adds the given configuration key/value to the collection.

Parameters

- **key** (*str*) – configuration key
- **value** – configuration value

Returns self

Return type *models.CollectionBuilder*

allow_overlapping_ner_annotations (*self*, *allow_overlapping_ner_annotations: bool*)
Sets the configuration value for allow_overlapping_ner_annotations to the given.

Parameters **allow_overlapping_ner_annotations** (*bool*) – whether to allow overlapping NER annotations

Returns self

Return type *models.CollectionBuilder*

classifier(*self*, *pipelineId: str*, *overlap: float = 0*, *train_every: int = 100*, *classifierParameters: dict = {}*)

Sets classifier information for the created collection.

Parameters

- **pipelineId** (*str*) – the ID of the pipeline from which to create the classifier
- **overlap** (*float, optional*) – the classifier overlap, defaults to *0*
- **train_every** (*int, optional*) – train the model after this many documents are annotated, defaults to *100*
- **classifierParameters** (*dict, optional*) – any parameters to pass to the classifier, defaults to { }

Returns self

Return type *models.CollectionBuilder*

document_csv_file(*self*, *csv_filename: str*, *has_header: bool*, *text_column: int*)

Sets the CSV file used to create documents to the given.

May raise an Exception if there is a problem opening the indicated file.

Parameters

- **csv_filename** (*str*) – the filename of the local CSV file
- **has_header** (*bool*) – whether the CSV file has a header
- **text_column** (*int*) – if the CSV file has headers, the document text can be found in this column index (the others are used for document metadata)

Returns self

Return type *models.CollectionBuilder*

image_file(*self*, *image_filename: str*)

Adds the given image file to the collection.

May raise an Exception if there is a problem opening the indicated file.

Parameters **image_filename** (*str*) – the filename of the local image file

Returns self

Return type *models.CollectionBuilder*

is_valid(*self*, *error_callback: typing.Callable[[str], None] = None*)

Checks whether the currently set values are valid or not.

See *is_valid_collection()*.

Parameters **error_callback** (*function, optional*) – optional callback that is called with any error messages, defaults to None

Returns whether the currently set values are valid or not

Return type bool

pine.pipelines

Subpackages

pine.pipelines.app

Subpackages

pine.pipelines.app.listener

Submodules

pine.pipelines.app.listener.main

Module Contents

Functions

backoff_hdlr(details)	
setup_logging()	
run()	

pine.pipelines.app.listener.main.**backoff_hdlr**(*details*)

pine.pipelines.app.listener.main.**setup_logging**()

pine.pipelines.app.listener.main.**run**()

pine.pipelines.app.listener.service_listener

Module Contents

Classes

ServiceRegistration(name, version, channel, framework, framework_types)	Initialize self. See help(type(self)) for accurate signature.
ServiceListener(services=None)	**type services** list[ServiceRegistration]

pine.pipelines.app.listener.service_listener.**config**

pine.pipelines.app.listener.service_listener.**logger**

class pine.pipelines.app.listener.service_listener.**ServiceRegistration**(*name*, *version*, *channel*, *framework*, *framework_types*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

classmethod from_registration_format(*cls*, ***kwargs*)

to_registration_format(*self*)

class pine.pipelines.app.listener.service_listener.**ServiceListener**(*services=None*)

Bases: object

r_pool

r_conn

registration_poll

listener_poll

processor_poll

processing_limit

processing_queue_key

processing_queue_key_timeout

processing_lock_key

processing_lock_key_timeout

preprocessing_lock_key

preprocessing_lock_key_timeout

preprocessing_worker_lock_key

preprocessing_worker_lock_key_timeout

registration_channel

classmethod publish_response(*cls*, *channel*, *data*)

Return type bool

start_workers(*self*)

stop_workers(*self*)

pre_process_message(*self*, *message_channel*, *message_data*)

Return type bool | dict

static process_message(*job_details*)

_start_registration_task(*self*)

_start_channel_task(*self*)

_start_listener_task(*self*)

_start_queue_processor_task(*self*)

pine.pipelines.shared

Submodules

pine.pipelines.shared.config

Module Contents

Classes

BaseConfig(root_dir=None)	Initialize self. See help(type(self)) for accurate signature.
TestConfig(root_dir=None)	Initialize self. See help(type(self)) for accurate signature.
ConfigBuilder()	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.shared.config.**LOGGER**

class pine.pipelines.shared.config.**BaseConfig**(*root_dir=None*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

ROOT_DIR

BASE_DIR

BASE_CFG_FILE = config.yaml

BASE_ENV_PREFIX = AL_

DEBUG = True

TESTING = False

LOGGER_NAME

LOGGER_DIR = logs

LOGGER_FILE = debug.log

LOGGER_LEVEL

PIPELINE = opennlp

EVE_HOST = localhost

EVE_PORT = 5001

REDIS_HOST = localhost

REDIS_PORT = 6379

REDIS_USR

REDIS_PWD

REDIS_DBNUM = 0

REDIS_PREFIX = AL:

REDIS_EXPIRE = 3600

SCHEDULER_REGISTRATION_TIMEOUT

SCHEDULER_HANDLER_TIMEOUT

SCHEDULER_QUEUE_TIMEOUT

SERVICE_REGISTRATION_CHANNEL = registration

SERVICE_REGISTRATION_FREQUENCY = 60

SERVICE_LISTENING_FREQUENCY = 1

SERVICE_HANDLER_TIMEOUT = 60

SERVICE_LIST

MODELS_DIR

classmethod _get_config_var_paths(*cls*, *root_dict=None*)

classmethod _process_paths(*cls*, *alt_path=None*)

classmethod _process_file_cfg(*cls*)

classmethod _process_env_vars(*cls*)

classmethod as_dict(*cls*)

Return type dict

classmethod as_attr_dict(*cls*)

Return type munch.Munch | dict

static _try_cast(*value*, *_type*, *_default=None*)

static _str2bool(*_str*, *_default=None*)

class pine.pipelines.shared.config.**TestConfig**(*root_dir=None*)

Bases: *pine.pipelines.shared.config.BaseConfig*

Initialize self. See help(type(self)) for accurate signature.

class pine.pipelines.shared.config.**ConfigBuilder**

Bases: object

Initialize self. See help(type(self)) for accurate signature.

__env_cfg_variable = BUILDER_CFG_PROFILE

__current_config_instance

__current_config_instance_name

__current_config_instance_print = False

__arg_parser

static __get_configs()

:rtype list[Callable[..., BaseConfig]]

static get_config_names()

Return type list[str]

classmethod get_arg_parser(*cls*)

Return type ArgumentParser

classmethod init_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

classmethod get_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

Return type *BaseConfig*

classmethod set_config(*cls*, *config_name=None*, *config_base=None*, *enable_terminal=True*, *as_attr_dict=True*)

classmethod __parse_terminal_config(*cls*)

Return type argparse.Namespace

pine.pipelines.shared.transform

Module Contents

Functions

transform_module_by_config(module_ref, config_ref, config_prefix=None)	Transforms a given module's properties based on ConfigBuilder Values.

pine.pipelines.shared.transform.**transform_module_by_config**(*module_ref*, *config_ref*, *config_prefix=None*)

Transforms a given module's properties based on ConfigBuilder Values. The prefix can be used to avoid blindy changing values and target a subset of matching values in config_ref. :type module_ref: ModuleType :type config_ref: dict :type config_prefix: str

Submodules

pine.pipelines.EveClient

Module Contents

Classes

EveClient(entry_point='{}:{}'.format(config.EVE_HOST,config.EVE_PORT))	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.EveClient.**logger**

pine.pipelines.EveClient.**config**

class pine.pipelines.EveClient.**EveClient**(*entry_point='{}:{}'.format(config.EVE_HOST, config.EVE_PORT)*)

Bases: object

Initialize self. See help(type(self)) for accurate signature.

eve_headers

add(*self*, *resource*, *add_object*)

get_obj(*self*, *resource*, *id*)

get_all_items(*self*, *resource*)

get_all_ids(*self*, *resource*)

get_items(*self*, *resource*)

get_documents(*self*, *collection_id*)

get_docs_with_annotations(*self*, *collection_id*, *doc_map*)

update(*self*, *resource*, *id*, *etag*, *update_obj*)

pine.pipelines.NERWrapper

Module Contents

Classes

NERWrapper(classifier_type, model_dir='models', entry_point='localhost:5000')	Initialize self. See help(type(self)) for accurate signature.

class pine.pipelines.NERWrapper.**NERWrapper**(*classifier_type*, *model_dir='models'*, *entry_point='localhost:5000'*)

Initialize self. See help(type(self)) for accurate signature.

eve_headers

load_classifier(*self*, *classifier_id*)

predict(*self*, *classifier_id*, *documents*, *document_ids*)

update_model(*self*, *classifier_id*)

update(*self*, *resource*, *id*, *etag*, *update_obj*)

get_obj(*self*, *resource*, *id*)

get_all_items(*self*, *resource*)

get_all_ids(*self*, *resource*)

get_items(*self*, *resource*)

pine.pipelines.NERWrapper.**parser**

pine.pipelines.NER_API

Module Contents

Classes

ner_api()	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.NER_API.**logger**

pine.pipelines.NER_API.**config**

class pine.pipelines.NER_API.**ner_api**
Bases: object

Initialize self. See help(type(self)) for accurate signature.

perform_fold(*self*, *model*, *train_data*, *test_data*, *pipeline_parameters*)

perform_five_fold(*self*, *model*, *documents*, *annotations*, *doc_ids*, *pipeline_parameters*)

get_document_ranking(*self*, *model*, *doc_map*, *doc_ids*)

get_classifier_pipeline_metrics_objs(*self*, *classifier_id*)

train_model(*self*, *custom_filename*, *classifier_id*, *pipeline_name*)

predict(*self*, *classifier_id*, *pipeline_name*, *documents*, *document_ids*)

pine.pipelines.RankingFunctions

Module Contents

Functions

rank(results, metric)	if metric == 'lc': return least_confidence(results)
least_confidence(results)	
least_confidence_squared(results)	
least_confidence_squared_by_entity(results)	
largest_margin(results)	
entropy_rank(results, N=None)	
random_rank(results)	
most_of_least_popular(results)	

pine.pipelines.RankingFunctions.**rank**(*results*, *metric*)
if metric == 'lc': return least_confidence(results) if metric == 'ma': return largest_margin(results) if metric == 'en': return entropy_rank(results) if metric == 'lcs': return least_confidence_squared(results) if metric == 'lce': return least_confidence_squared_by_entity(results) if metric == 'ra': return random_rank(results) if metric == 'mlp': return most_of_least_popular(results) return -1

#Dictionary method is inefficient as it runs every method before returning one

pine.pipelines.RankingFunctions.**least_confidence**(*results*)

pine.pipelines.RankingFunctions.**least_confidence_squared**(*results*)

pine.pipelines.RankingFunctions.**least_confidence_squared_by_entity**(*results*)

pine.pipelines.RankingFunctions.**largest_margin**(*results*)

pine.pipelines.RankingFunctions.**entropy_rank**(*results*, *N=None*)

pine.pipelines.RankingFunctions.**random_rank**(*results*)

pine.pipelines.RankingFunctions.**most_of_least_popular**(*results*)

pine.pipelines.corenlp_NER_pipeline

Module Contents

Classes

corenlp_NER(java_dir=None, ner_path=None, load_model=None, tmp_dir=None)	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.corenlp_NER_pipeline.**config**

pine.pipelines.corenlp_NER_pipeline.**logger**

class pine.pipelines.corenlp_NER_pipeline.**corenlp_NER**(*java_dir=None*, *ner_path=None*, *load_model=None*, *tmp_dir=None*)

Bases: *pine.pipelines.pipeline.Pipeline*

Initialize self. See help(type(self)) for accurate signature.

__jar =

__jdk_dir =

__train_file =

__test_file =

__model =

__temp_dir

__crf

__props

__id

fit(*self*, *X*, *y*, *params=None*)

predict(*self*, *X*, *Xid*)

predict_proba(*self*, *X*, *Xid*, *get_all_labels=False*, *include_other=False*)

next_example(*self*, *X*, *Xid*)

get_id(*self*)

format_data(*self*, *X*, *y*)

save_model(*self*, *model_name*)

load_model(*self*, *model_name*)

tokenize(*self*, *input_text*)

evaluate(*self*, *X*, *y*, *Xid*, *verbose=False*)

evaluate_orig(*self*, *X*, *y*, *Xid*)

pine.pipelines.opennlp_NER_pipeline

Module Contents

Classes

opennlp_NER(java_dir=None, tmp_dir=None)	ner_path=None,	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.opennlp_NER_pipeline.**config**

pine.pipelines.opennlp_NER_pipeline.**logger**

class pine.pipelines.opennlp_NER_pipeline.**opennlp_NER**(*java_dir=None*, *ner_path=None*, *tmp_dir=None*)

Bases: *pine.pipelines.pipeline.Pipeline*

Initialize self. See help(type(self)) for accurate signature.

__jar =

__jdk_dir =

__temp_dir

__train_file =

__test_file =

__model

__nameFinder

__id

fit(*self*, *X*, *y*, *params*)

predict(*self*, *X*, *Xid*)

predict_proba(*self*, *X*, *Xid*, *get_all_labels=False*, *include_other=False*)

next_example(*self*, *X*, *Xid*)

save_model(*self*, *model_name*)

load_model(*self*, *model_name*)

find_all_init(*self*)

find_all(*self*, *tokens*)

get_id(*self*)

format_data(*self*, *X*, *y*)

convert_ann_collection_to_per_token(*self*, *annotations*, *tokens*)

evaluate(*self*, *X*, *y*, *Xid*)

evaluate_orig(*self*, *X*, *y*, *Xid*)

pine.pipelines.pipeline

Module Contents

Classes

Pipeline()	Initialize self. See help(type(self)) for accurate signature.

class pine.pipelines.pipeline.**Pipeline**
Bases: object

Initialize self. See help(type(self)) for accurate signature.

abstract fit(*self*, *X*, *y*)

abstract predict(*self*, *X*, *Xid*)

abstract predict_proba(*self*, *X*, *Xid*)

abstract next_example(*self*, *X*, *Xid*)

abstract save_model(*self*, *model_name*)

abstract load_model(*self*, *model_name*)

pine.pipelines.pmap_ner

Module Contents

Classes

NER(lib=None, **kwargs)	Initialize self. See help(type(self)) for accurate signature.

pine.pipelines.pmap_ner.**logger**

class pine.pipelines.pmap_ner.**NER**(*lib=None*, ***kwargs*)
Bases: *pine.pipelines.pipeline.Pipeline*

Initialize self. See help(type(self)) for accurate signature.

__lib =

pipeline

__SUPPORTED_PIPELINES = ['spacy', 'corenlp', 'opennlp']

pipe_init(*self*, *x*, ***kwargs*)

fit(*self*, *X*, *y*, *kwargs*)

predict(*self*, *X*, *Xid*)

predict_proba (*self*, *X*, *Xid*, ***kwargs*)

evaluate (*self*, *X*, *y*, *Xid*, ***kwargs*)

next_example (*self*, *X*, *Xid*)

save_model (*self*, *model_path*)

load_model (*self*, *model_name*)

pine.pipelines.run_service

pine.pipelines.spacy_NER_pipeline

For more details, see the documentation: * Training: https://spacy.io/usage/training * NER: https://spacy.io/usage/linguistic-features#named-entities

Compatible with: spaCy v2.0.0+

Module Contents

Classes

spacy_NER(model_path=None)	Initialize self. See help(type(self)) for accurate signature.

class pine.pipelines.spacy_NER_pipeline.**spacy_NER** (*model_path=None*)

Bases: *pine.pipelines.pipeline.Pipeline*

Initialize self. See help(type(self)) for accurate signature.

__nlp = []

__ner = []

__optimizer = []

fit (*self*, *X*, *y*, *params=None*)

evaluate (*self*, *X*, *y*, *Xid*)

predict (*self*, *X*, *Xid*)

predict_proba (*self*, *X*, *Xid*)

next_example (*self*, *X*, *Xid*)

format_data (*self*, *X*, *y*)

add_label (*self*, *entity*)

save_model (*self*, *model_path*)

load_model (*self*, *model_path*)

CHAPTER

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