Package 'sensortowerR'

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Title A Wrapper for the 'Sensor Tower' API

Version 0.1.0

Description Provides functions to access and process data from the 'Sensor Tower' API, including top charts, app intelligence, and more.

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R topics documented:

st_app_info *Fetch Unified App Information from Sensor Tower*

Description

This function retrieves information about apps from the Sensor Tower API based on a search term. It targets the '/v1/app_store/search_entities' endpoint and fetches app IDs and names for unified app entities.

Usage

```
st_app_info(
  term,
  app_store = "unified",
  entity_type = "app",
  limit = 100,
  auth_token = Sys.getenv("SENSORTOWER_AUTH_TOKEN"),
  return_all_fields = FALSE
)
```

Arguments

term	Character string. The search term for the app or publisher.
app_store	Character string. The app store to search. Defaults to "unified".
entity_type	Character string. The type of entity to search for. Defaults to "app".
limit	Numeric. The maximum number of results to return. Defaults to 100.
auth_token	Character string. Your Sensor Tower API authentication token.
return_all_fields	Boolean. If TRUE, returns all available fields from the API response. Defaults to FALSE, which returns only 'unified_app_id' and 'unified_app_name'.

Value

A [tibble][tibble::tibble] with app information. If 'return_all_fields' is FALSE (default), it contains 'unified_app_id' and 'unified_app_name'. If TRUE, it contains the full, unfiltered data, and if a 'categories' field is returned by the API, it will be supplemented with a 'category_details' list-column containing the mapped category names.

Examples

```
## Not run:
# Ensure the SENSORTOWER_AUTH_TOKEN environment variable is set
# Sys.setenv(SENSORTOWER_AUTH_TOKEN = "your_auth_token_here")

# Fetch unified app info for "Clash of Clans"
app_info <- st_app_info(term = "Clash of Clans")
print(app_info)

# Fetch publisher info
# publisher_info <- st_app_info(
#   term = "Supercell", entity_type = "publisher"
```

```
# )
# print(publisher_info) # Note: returned columns might differ

## End(Not run)
```

`st_categories` *List Available Sensor Tower Categories*

Description

Returns a tibble of app categories recognized by the Sensor Tower API, mapping category IDs to category names for different platforms (iOS/Android). Useful for finding valid inputs for the ‘category‘ parameter in other functions.

Usage

```
st_categories(platform = NULL)
```

Arguments

`platform`	Optional character string. Filter results for a specific platform ("ios" or "android"). If NULL (default), returns categories for both platforms.

Value

A tibble with columns ‘platform‘ (character, "ios" or "android"), ‘category_id‘ (character, e.g., "6014"), and ‘category_name‘ (character, e.g., "Games").

Examples

```
## Not run:
# Get all categories
all_cats <- st_categories() # Updated example call
print(head(all_cats))

# Get only iOS categories
ios_cats <- st_categories(platform = "ios") # Updated example call
print(head(ios_cats))

# Find the ID for Android "Music & Audio"
subset(st_categories("android"), category_name == "Music & Audio")

## End(Not run)
```

st_metrics *Fetch Sensor Tower Metrics for a Unified App*

Description

Retrieves daily sales estimates and active user metrics for a specified unified application ID from the Sensor Tower API over a given date range. It combines these metrics into a single tibble.

Usage

```
st_metrics(
  unified_app_id,
  start_date,
  end_date,
  auth_token = Sys.getenv("SENSORTOWER_AUTH_TOKEN")
)
```

Arguments

unified_app_id	Character string. The unified app ID for which to fetch metrics (required).
start_date	Date object or character string (YYYY-MM-DD). The start date for data collection (required).
end_date	Date object or character string (YYYY-MM-DD). The end date for data collection (required).
auth_token	Character string. Your Sensor Tower API authentication token. Defaults to the value stored in the 'SENSORTOWER_AUTH_TOKEN' environment variable.

Value

A [tibble][tibble::tibble] containing combined sales and usage metrics. Columns are: 'unified_app_id', 'date' (Date object), 'country' (character), 'revenue' (numeric, from unified_revenue), 'downloads' (numeric, from unified_units), 'active_users' (numeric, sum of platform users). Returns an empty tibble with the correct structure if no data is found or an unrecoverable error occurs.

API Endpoints Used

- 'GET /v1/unified/sales_report_estimates' - 'GET /v1/unified/usage/active_users' *(Verification needed for exact parameters used by these endpoints)*

Examples

```
## Not run:
# Ensure SENSORTOWER_AUTH_TOKEN is set in your environment
# Sys.setenv(SENSORTOWER_AUTH_TOKEN = "your_secure_auth_token_here")

# Define the unified app ID (use a real, valid ID)
unified_app_id <- "YOUR_VALID_UNIFIED_APP_ID"

# Define the date range
start_date <- Sys.Date() - 30
end_date <- Sys.Date() - 1
```

```
# Fetch the metrics
metrics <- st_metrics(
  unified_app_id = unified_app_id,
  start_date = start_date,
  end_date = end_date
)

# View the metrics
print(metrics)
head(metrics)

## End(Not run)
```

`st_publisher_apps` *Get All Apps from a Publisher*

Description

Retrieves a list of apps associated with a specified unified publisher ID from the Sensor Tower API. Targets the '/v1/unified/publishers/apps' endpoint.

Usage

```
st_publisher_apps(
  publisher_id,
  auth_token = Sys.getenv("SENSORTOWER_AUTH_TOKEN")
)
```

Arguments

`publisher_id`	Character. The Unified Publisher ID from Sensor Tower for which to retrieve associated apps.
`auth_token`	Character. Your Sensor Tower API authentication token. Defaults to the value stored in the 'SENSORTOWER_AUTH_TOKEN' environment variable.

Value

A [tibble][tibble::tibble] containing details of the apps associated with the publisher. The exact columns depend on the API response but often include app IDs, names, platform, etc. Returns an empty tibble if the publisher ID is invalid, has no apps, or an error occurs.

API Endpoint Used

- 'GET /v1/unified/publishers/apps'

Examples

```
## Not run:
# Ensure SENSORTOWER_AUTH_TOKEN is set in your environment
# Sys.setenv(SENSORTOWER_AUTH_TOKEN = "your_secure_auth_token_here")

# Define the publisher ID (use a real ID)
publisher_id <- "YOUR_PUBLISHER_ID_HERE"

# Fetch the publisher's apps
apps_list <- st_publisher_apps(publisher_id = publisher_id)

# View the results
print(apps_list)

## End(Not run)
```

---

st_top_active_users *Fetch Top Apps by Active User Estimates*

Description

Retrieves top apps from Sensor Tower based on Daily Active Users (DAU), Weekly Active Users (WAU), or Monthly Active Users (MAU). Allows comparison using absolute values, delta, or transformed delta. Targets the '/v1/os/top_and_trending/active_users' endpoint.

Usage

```
st_top_active_users(
  os,
  comparison_attribute,
  time_range,
  measure,
  date,
  regions,
  category = NULL,
  limit = 25,
  offset = NULL,
  device_type = NULL,
  custom_fields_filter_id = NULL,
  custom_tags_mode = NULL,
  data_model = "DM_2025_Q2",
  auth_token = NULL,
  base_url = "https://api.sensortower.com",
  enrich_response = TRUE
)
```

Arguments

os	Required. Character string. Operating System. Must be one of "ios", "android", or "unified".

`comparison_attribute`
: Required. Character string. Comparison attribute type. Must be one of "absolute", "delta", or "transformed_delta".

`time_range`
: Required. Character string. Time granularity (e.g., "month", "quarter"). Note: API docs state "week" is *not* available when ‘measure‘ is "MAU".

`measure`
: Required. Character string. Metric to measure. Must be one of "DAU", "WAU", or "MAU".

`date`
: Required. Character string or Date object. Start date for the query in "YYYY-MM-DD" format.

`regions`
: Required. Character vector or comma-separated string. Region codes (e.g., ‘"US"‘, ‘c("US", "GB")‘, ‘"WW"‘) to filter results.

`category`
: Optional. Character string or numeric. The ID of the category to filter by. Use ‘st_categories()‘ to find valid IDs.

`limit`
: Optional. Integer. Maximum number of apps to return per call. Defaults to 25.

`offset`
: Optional. Integer. Number of apps to skip for pagination. Useful for retrieving results beyond the ‘limit‘. Defaults to NULL.

`device_type`
: Optional. Character string. For ‘os = "ios"‘ or ‘os = "unified"‘: "iphone", "ipad", or "total". Defaults to ‘"total"‘ if ‘os‘ is "ios" or "unified". Leave blank for ‘os = "android"‘.

`custom_fields_filter_id`
: Optional. Character string. ID of a Sensor Tower custom field filter to apply.

`custom_tags_mode`
: Optional. Character string. Required if ‘os‘ is ’unified’ and ‘custom_fields_filter_id‘ is provided.

`data_model`
: Optional. Character string. The data model to use for the query. Defaults to "DM_2025_Q2".

`auth_token`
: Optional. Character string. Your Sensor Tower API authentication token.

`base_url`
: Optional. Character string. The base URL for the Sensor Tower API. Defaults to ‘"https://api.sensortower.com"‘.

`enrich_response`
: Optional. Logical. If ‘TRUE‘ (default), the function will automatically enrich the response with app metadata like names by unnesting the ‘entities‘ column from the API response.

Value

A [tibble][tibble::tibble] (data frame) with top app estimates. If ‘enrich_response‘ is ‘TRUE‘, it includes app metadata like ‘app.name‘.

API Endpoint Used

‘GET /v1/os/top_and_trending/active_users‘

Common Issues (HTTP 422 Error)

An HTTP 422 "Unprocessable Entity" error often indicates invalid parameters or combinations.

Examples

```
## Not run:
# Ensure SENSORTOWER_AUTH_TOKEN environment variable is set
# Sys.setenv(SENSORTOWER_AUTH_TOKEN = "YOUR_TOKEN_HERE")

# Example 1: Top iOS Social apps by MAU
top_ios_social_mau <- st_top_active_users(
  os = "ios",
  comparison_attribute = "absolute",
  time_range = "month",
  measure = "MAU",
  date = "2023-10-01",
  category = 6016,
  regions = c("US", "GB"),
  limit = 10
)
print(top_ios_social_mau)

## End(Not run)
```

`st_top_sales` *Fetch Top Apps by Downloads and Revenue Estimates*

Description

Retrieves top apps from Sensor Tower based on download ("units") or revenue estimates for a specific OS, category, region, and time period. Allows comparison using absolute values, delta, or transformed delta. Targets the '/v1/os/sales_report_estimates_comparison_attributes' endpoint.

Usage

```
st_top_sales(
  os,
  comparison_attribute,
  time_range,
  measure,
  date,
  category,
  regions,
  end_date = NULL,
  limit = 25,
  offset = NULL,
  device_type = NULL,
  custom_fields_filter_id = NULL,
  custom_tags_mode = NULL,
  auth_token = NULL,
  base_url = "https://api.sensortower.com",
  enrich_response = TRUE
)
```

Arguments

os	Required. Character string. Operating System. Must be one of "ios", "android", or "unified".
comparison_attribute	Required. Character string. Comparison attribute type. Must be one of "absolute", "delta", or "transformed_delta".
time_range	Required. Character string. Time granularity. Must be one of "day", "week", "month", or "quarter".
measure	Required. Character string. Metric to measure. Must be one of "units" (downloads) or "revenue".
date	Required. Character string or Date object. Start date for the query in "YYYY-MM-DD" format. The API automatically adjusts this to the beginning of the specified ‘time_range‘.
category	Required. Character string or numeric. The ID of the category to filter by (e.g., iOS Games is 6000 or "6000", Android Finance might be "FINANCE"). Use ‘st_categories()‘ to find valid IDs.
regions	Required. Character vector or comma-separated string. Region codes (e.g., ‘"US"‘, ‘c("US", "GB")‘, ‘"WW"‘) to filter results. This parameter is typically mandatory for this endpoint. Use ‘get_countries()‘ to find valid codes.
end_date	Optional. Character string or Date object. End date for the query in "YYYY-MM-DD" format, inclusive. If provided, allows aggregation over multiple periods defined by ‘time_range‘. Auto-adjusts to the end of the period. Defaults to NULL.
limit	Optional. Integer. Maximum number of apps to return per call. Defaults to 25. Maximum allowed by API is 2000.
offset	Optional. Integer. Number of apps to skip for pagination. Useful for retrieving results beyond the ‘limit‘. Defaults to NULL.
device_type	Optional. Character string. For ‘os = "ios"‘ or ‘os = "unified"‘: "iphone", "ipad", or "total". Defaults to ‘"total"‘ if ‘os‘ is "ios" or "unified" and this argument is not provided. Leave blank/NULL for ‘os = "android"‘.
custom_fields_filter_id	Optional. Character string. ID of a Sensor Tower custom field filter to apply. Requires ‘custom_tags_mode‘ if ‘os‘ is ’unified’. Defaults to NULL.
custom_tags_mode	Optional. Character string. Required if ‘os‘ is ’unified’ and ‘custom_fields_filter_id‘ is provided. Typically set to "include_unified_apps". Defaults to NULL.
auth_token	Optional. Character string. Your Sensor Tower API authentication token. It is strongly recommended to set the ‘SENSORTOWER_AUTH_TOKEN‘ environment variable instead of passing this argument directly for security.
base_url	Optional. Character string. The base URL for the Sensor Tower API. Defaults to ‘"https://api.sensortower.com"‘.
enrich_response	Optional. Logical. If ‘TRUE‘ (default), the function will automatically enrich the response with app metadata like names by unnesting the ‘entities‘ column from the API response.

Value

A [tibble][tibble::tibble] (data frame) containing the requested top app estimates. If ‘enrich_response‘ is ‘TRUE‘, it includes app metadata like ‘app.name‘. Returns an empty tibble if the API call is successful but returns no data or if an error occurs.

API Endpoint Used

‘GET /v1/os/sales_report_estimates_comparison_attributes‘

Common Issues (HTTP 422 Error)

An HTTP 422 "Unprocessable Entity" error often indicates invalid parameters or combinations (e.g., invalid ‘category‘ ID, ‘regions‘ code, missing ‘device_type‘ for iOS/Unified, missing ‘custom_tags_mode‘ when using filters with Unified OS). Consult API docs and check console warnings for the response body.

Examples

```
## Not run:
# Ensure SENSORTOWER_AUTH_TOKEN environment variable is set
# Sys.setenv(SENSORTOWER_AUTH_TOKEN = "YOUR_TOKEN_HERE")

# Get top 10 iOS Games by absolute downloads for the month of Oct 2023 in US
top_ios_games_dl <- st_top_sales(
  os = "ios",
  comparison_attribute = "absolute",
  time_range = "month",
  measure = "units",
  date = "2023-10-01",
  category = 6000,      # iOS Games category ID
  regions = "US",       # Region is required
  limit = 10
)

print(top_ios_games_dl)

# Get top 5 Android Finance apps by revenue delta for Q4 2023 worldwide
top_android_finance_rev <- st_top_sales(
  os = "android",
  comparison_attribute = "delta",
  time_range = "quarter",
  measure = "revenue",
  date = "2023-10-01",
  category = "FINANCE",    # Android Category ID might be a string
  regions = "WW",          # Worldwide region code is required
  limit = 5
)
print(top_android_finance_rev)

## End(Not run)
```

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