

KrishiSagar Supabase Database Documentation

Public Schema Tables

1. users

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	null	Primary key
email	text	false	null	User email (unique)
full_name	text	true	null	User's full name
phone	text	true	null	User's phone number
user_type	text	true	null	Type of user (farmer, expert, etc.)
language_preference	text	true	'en'	User's preferred language
created_at	timestamptz	false	now()	Record creation timestamp
updated_at	timestamptz	false	now()	Record update timestamp

RLS Enabled: true

2. user_roles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
email	text	false	null	User email
user_id	uuid	true	null	Foreign key to users.id
role_type	text	false	null	Type of role
is_primary	boolean	true	false	Indicates if this is the primary role
created_at	timestamptz	false	now()	Record creation timestamp
updated_at	timestamptz	false	now()	Record update timestamp

RLS Enabled: true

3. farmer_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
farm_location	text	true	null	Location of farm
land_area	numeric	true	null	Area of land
crops_grown	text[]	true	null	Array of crops grown
farming_practices	text[]	true	null	Array of farming practices

Column Name	Data Type	Nullable	Default	Description
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

4. store_owner_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
store_name	text	false	'My Agricultural Store'	Name of the store
store_location	text	true	null	Location of the store
gst_number	text	true	null	GST registration number
specializations	text[]	true	null	Array of store specializations
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

5. broker_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
market_name	text	true	null	Name of the market
license_number	text	true	null	Broker license number
specializations	text[]	true	null	Array of broker specializations
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

6. expert_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
expertise	text	true	null	Area of expertise
qualification	text	true	null	Professional qualifications
years_experience	integer	true	null	Years of experience

Column Name	Data Type	Nullable	Default	Description
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

7. student_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
institution	text	true	null	Educational institution
field_of_study	text	true	null	Field of study
graduation_year	integer	true	null	Expected graduation year
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

8. consumer_profiles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	true	null	Foreign key to users.id (unique)
preferences	text	true	null	Consumer preferences
interests	text[]	true	null	Array of interests
created_at	timestampz	false	now()	Record creation timestamp
updated_at	timestampz	false	now()	Record update timestamp

RLS Enabled: true

9. soil_tests

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
date	date	false	null	Test date
location	text	false	null	Test location
ph	numeric	false	null	Soil pH level
nitrogen	integer	false	null	Nitrogen content
phosphorus	integer	false	null	Phosphorus content

Column Name	Data Type	Nullable	Default	Description
potassium	integer	false	null	Potassium content
organic_matter	numeric	false	null	Organic matter percentage
moisture	integer	false	null	Moisture content
notes	text	true	null	Additional notes
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp

RLS Enabled: true

10. soil_recommendations

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
title	text	false	null	Recommendation title
description	text	false	null	Detailed description
crop_types	text[]	false	null	Array of applicable crop types
soil_condition	text	false	null	Soil condition
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp

RLS Enabled: true

11. crop_analyses

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
image_path	text	false	null	Path to crop image
health_status	text	true	null	Health status assessment
disease_detected	text	true	null	Detected disease if any
confidence	numeric	true	null	Confidence level of analysis
recommendations	text[]	true	null	Array of recommendations
nutrient_status	jsonb	true	null	Nutrient status details
created_at	timestamptz	true	CURRENT_TIMESTAMP	Record creation timestamp
updated_at	timestamptz	true	CURRENT_TIMESTAMP	Record update timestamp

RLS Enabled: true

12. crop_analysis_history

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
image_url	text	false	null	URL to the analyzed image
crop_type	text	true	null	Type of crop
health_status	text	true	null	Health status assessment
disease_detected	text	true	null	Detected disease if any
confidence	numeric	true	null	Confidence level of analysis
pests	text[]	true	null	Array of detected pests
recommendations	text[]	true	null	Array of recommendations
nutrient_status	jsonb	true	null	Nutrient status details
raw_analysis	jsonb	true	null	Raw analysis data
created_at	timestampz	true	now()	Record creation timestamp

RLS Enabled: true

13. farm_locations

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
name	text	false	null	Location name
coordinates	text	true	null	Geographic coordinates
area	numeric	true	null	Area size
created_at	timestampz	true	now()	Record creation timestamp
updated_at	timestampz	true	now()	Record update timestamp

RLS Enabled: true

14. crop_rotation_plans

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
name	text	false	null	Plan name
location	text	false	null	Farm location
start_date	date	false	null	Start date of rotation plan
created_at	timestampz	true	now()	Record creation timestamp
updated_at	timestampz	true	now()	Record update timestamp

RLS Enabled: true

15. crop_cycles

Primary key:

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
plan_id	uuid	false	null	Foreign key to crop_rotation_plans.id
season_name	text	false	null	Name of season
crop_family	text	false	null	Crop family
crop_name	text	false	null	Specific crop name
start_date	date	false	null	Start date of cycle
end_date	date	false	null	End date of cycle
notes	text	true	null	Additional notes
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp

RLS Enabled: true

16. krishigram_posts

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
user_id	uuid	false	null	Foreign key to auth.users.id
content	text	false	null	Post content
media_url	text	true	null	URL to media content
media_type	text	true	null	Type of media (image/video)
location	text	true	null	Location of post
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp
type	text	false	null	Post type (post/reel/story)
tags	text[]	true	null	Array of post tags

RLS Enabled: true

17. krishigram_comments

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
post_id	uuid	false	null	Foreign key to krishigram_posts.id
user_id	uuid	false	null	Foreign key to auth.users.id
content	text	false	null	Comment content
created_at	timestamptz	true	now()	Record creation timestamp

Column Name	Data Type	Nullable	Default	Description
updated_at	timestampz	true	now()	Record update timestamp

RLS Enabled: true

18. krishigram_likes

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
post_id	uuid	true	null	Foreign key to krishigram_posts.id
comment_id	uuid	true	null	Foreign key to krishigram_comments.id
user_id	uuid	false	null	Foreign key to auth.users.id
created_at	timestampz	true	now()	Record creation timestamp

RLS Enabled: true

19. krishigram_groups

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
name	text	false	null	Group name
description	text	true	null	Group description
created_by	uuid	false	null	Foreign key to auth.users.id
created_at	timestampz	true	now()	Record creation timestamp
updated_at	timestampz	true	now()	Record update timestamp
cover_image_url	text	true	null	URL to cover image
members_count	integer	true	0	Count of members
is_private	boolean	true	false	Privacy setting

RLS Enabled: true

20. krishigram_group_members

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
group_id	uuid	false	null	Foreign key to krishigram_groups.id
user_id	uuid	false	null	Foreign key to auth.users.id
role	text	false	null	Role in group (member/moderator/admin)
joined_at	timestampz	true	now()	Join timestamp

RLS Enabled: true

21. krishigram_group_posts

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
group_id	uuid	false	null	Foreign key to krishigram_groups.id
post_id	uuid	false	null	Foreign key to krishigram_posts.id
created_at	timestampz	true	now()	Record creation timestamp

RLS Enabled: true

22. krishigram_followers

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
follower_id	uuid	false	null	Foreign key to auth.users.id
following_id	uuid	false	null	Foreign key to auth.users.id
created_at	timestampz	true	now()	Record creation timestamp

RLS Enabled: true

23. market_sales

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
sale_number	text	false	null	Unique sale identifier
sale_date	date	false	CURRENT_DATE	Date of sale
farmer_id	uuid	true	null	Foreign key to auth.users.id
farmer_name	text	false	null	Name of farmer
farmer_mobile	text	true	null	Farmer's mobile number
crop_type	text	false	null	Type of crop sold
quantity	numeric	false	null	Quantity sold
unit	text	false	'kg'	Unit of measurement
rate_per_unit	numeric	false	null	Price per unit
total_amount	numeric	false	null	Total sale amount
commission_percentage	numeric	false	2.5	Commission percentage
commission_amount	numeric	false	null	Commission amount
net_amount	numeric	false	null	Net amount after commission
market_name	text	false	null	Name of market
payment_method	text	false	'cash'	Method of payment
payment_status	text	false	'completed'	Status of payment

Column Name	Data Type	Nullable	Default	Description
notes	text	true	null	Additional notes
broker_id	uuid	false	null	Foreign key to auth.users.id
is_canceled	boolean	true	false	Cancellation status
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp
transaction_number	text	true	null	Transaction reference number
transaction_date	date	true	null	Date of transaction
subtotal	numeric	true	0	Subtotal amount
tax_amount	numeric	true	0	Tax amount

RLS Enabled: true

24. farmer_sales

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
farmer_id	uuid	false	null	Foreign key to auth.users.id
sale_id	uuid	false	null	Foreign key to market_sales.id
broker_id	uuid	false	null	Foreign key to auth.users.id
broker_name	text	false	null	Name of broker
amount	numeric	false	null	Sale amount
net_amount	numeric	false	null	Net amount received
sale_date	date	false	null	Date of sale
crop_type	text	false	null	Type of crop
quantity	numeric	false	null	Quantity sold
unit	text	false	null	Unit of measurement
market_name	text	false	null	Name of market
status	text	false	'completed'	Status of sale
created_at	timestamptz	true	now()	Record creation timestamp
updated_at	timestamptz	true	now()	Record update timestamp

RLS Enabled: true

25. sale_items

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	uuid_generate_v4()	Primary key
sale_id	uuid	false	null	Foreign key to market_sales.id
crop_name	text	false	null	Name of crop

Column Name	Data Type	Nullable	Default	Description
quantity	numeric	false	null	Quantity sold
unit	text	false	null	Unit of measurement
price_per_unit	numeric	false	null	Price per unit
total_amount	numeric	false	null	Total amount
grade	text	true	null	Crop grade
created_at	timestamptz	true	now()	Record creation timestamp

RLS Enabled: true

Auth Schema Tables

The auth schema contains tables that manage user authentication, sessions, identities, and multi-factor authentication.

1. users

Primary key: `id`

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	null	Primary key
instance_id	uuid	true	null	Instance identifier
email	character varying	true	null	User email address
phone	text	true	null	User phone number
encrypted_password	character varying	true	null	Encrypted password
role	character varying	true	null	User role
aud	character varying	true	null	Audience
is_anonymous	boolean	false	false	Whether user is anonymous
is_sso_user	boolean	false	false	Whether user is using SSO
confirmed_at	timestamp with time zone	true	null	When user was confirmed
email_confirmed_at	timestamp with time zone	true	null	When email was confirmed
phone_confirmed_at	timestamp with time zone	true	null	When phone was confirmed
last_sign_in_at	timestamp with time zone	true	null	Last sign-in timestamp
recovery_token	character varying	true	null	Password recovery token
confirmation_token	character varying	true	null	Email confirmation token
raw_app_meta_data	jsonb	true	null	Application metadata
raw_user_meta_data	jsonb	true	null	User metadata
created_at	timestamp with time zone	true	null	Creation timestamp
updated_at	timestamp with time zone	true	null	Update timestamp
deleted_at	timestamp with time zone	true	null	Deletion timestamp

2. identities

Primary key: `id`

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
user_id	uuid	false	null	Foreign key to users.id
provider_id	text	false	null	Provider identifier
provider	text	false	null	Authentication provider
identity_data	jsonb	false	null	Identity data from provider
email	text	true	null	User email
created_at	timestamp with time zone	true	null	Creation timestamp
updated_at	timestamp with time zone	true	null	Update timestamp
last_sign_in_at	timestamp with time zone	true	null	Last sign-in timestamp

3. sessions

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	null	Primary key
user_id	uuid	false	null	Foreign key to users.id
created_at	timestamp with time zone	true	null	Creation timestamp
updated_at	timestamp with time zone	true	null	Update timestamp
factor_id	uuid	true	null	MFA factor ID
not_after	timestamp with time zone	true	null	Expiration timestamp
refreshed_at	timestamp without time zone	true	null	When session was refreshed
user_agent	text	true	null	User agent information
ip	inet	true	null	IP address
tag	text	true	null	Session tag

4. refresh_tokens

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	bigint	false	nextval sequence	Primary key
instance_id	uuid	true	null	Instance identifier
token	character varying	true	null	Refresh token
user_id	character varying	true	null	User identifier
revoked	boolean	true	null	Whether token is revoked
created_at	timestamp with time zone	true	null	Creation timestamp
updated_at	timestamp with time zone	true	null	Update timestamp
parent	character varying	true	null	Parent token
session_id	uuid	true	null	Session identifier

5. mfa_factors

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	null	Primary key
user_id	uuid	false	null	Foreign key to users.id
friendly_name	text	true	null	Display name for factor
factor_type	USER-DEFINED	false	null	Type of MFA factor
status	USER-DEFINED	false	null	Status of factor
secret	text	true	null	Secret for TOTP
phone	text	true	null	Phone number for SMS
created_at	timestamp with time zone	false	null	Creation timestamp
updated_at	timestamp with time zone	false	null	Update timestamp
last_challenged_at	timestamp with time zone	true	null	Last verification attempt

Storage Schema Tables

The storage schema contains tables for file storage management, including buckets, objects, and multipart uploads.

1. buckets

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	text	false	null	Primary key
name	text	false	null	Bucket name
owner	uuid	true	null	Owner user ID
owner_id	text	true	null	Alternative owner ID
created_at	timestamp with time zone	true	now()	Creation timestamp
updated_at	timestamp with time zone	true	now()	Update timestamp
public	boolean	true	false	Whether bucket is public
avif_autodetection	boolean	true	false	Enable AVIF detection
file_size_limit	bigint	true	null	Maximum file size
allowed_mime_types	ARRAY	true	null	Allowed file types

2. objects

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
bucket_id	text	true	null	Foreign key to buckets.id
name	text	true	null	Object name/path
owner	uuid	true	null	Owner user ID
owner_id	text	true	null	Alternative owner ID

Column Name	Data Type	Nullable	Default	Description
created_at	timestamp with time zone	true	now()	Creation timestamp
updated_at	timestamp with time zone	true	now()	Update timestamp
last_accessed_at	timestamp with time zone	true	now()	Last access timestamp
metadata	jsonb	true	null	Object metadata
path_tokens	ARRAY	true	null	Path segments
version	text	true	null	Object version
user_metadata	jsonb	true	null	User-defined metadata

3. s3_multipart_uploads

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	text	false	null	Primary key
bucket_id	text	false	null	Foreign key to buckets.id
key	text	false	null	Object key
upload_signature	text	false	null	Upload signature
version	text	false	null	Upload version
in_progress_size	bigint	false	0	Current upload size
owner_id	text	true	null	Owner identifier
created_at	timestamp with time zone	false	now()	Creation timestamp
user_metadata	jsonb	true	null	User-defined metadata

4. s3_multipart_uploads_parts

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
upload_id	text	false	null	Foreign key to s3_multipart_uploads.id
bucket_id	text	false	null	Bucket identifier
key	text	false	null	Object key
part_number	integer	false	null	Part sequence number
size	bigint	false	0	Part size in bytes
etag	text	false	null	ETag hash
version	text	false	null	Part version
owner_id	text	true	null	Owner identifier
created_at	timestamp with time zone	false	now()	Creation timestamp

Realtime Schema Tables

The realtime schema contains tables that manage the real-time messaging and subscription system for database changes.

1. subscription

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	bigint	false	null	Primary key
subscription_id	uuid	false	null	Unique subscription identifier
entity	regclass	false	null	Table being subscribed to
filters	ARRAY	false	'{}'	Array of filters for events
claims	jsonb	false	null	JWT claims of subscriber
claims_role	regrole	false	null	Role from JWT claims
created_at	timestamp without time zone	false	timezone('utc':::text, now())	Creation timestamp

2. messages

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
topic	text	false	null	Message topic
event	text	true	null	Event type
payload	jsonb	true	null	Message content
extension	text	false	null	Extension type
private	boolean	true	false	Whether message is private
inserted_at	timestamp without time zone	false	now()	Creation timestamp
updated_at	timestamp without time zone	false	now()	Update timestamp

Vault Schema Tables

The vault schema contains tables for secure storage of secrets and encryption keys.

1. secrets

Primary key: id

Column Name	Data Type	Nullable	Default	Description
id	uuid	false	gen_random_uuid()	Primary key
name	text	true	null	Secret name
description	text	false	"	Secret description
secret	text	false	null	Encrypted secret value
key_id	uuid	true	null	Encryption key identifier
nonce	bytea	true	vault._crypto_aead_det_noncegen()	Encryption nonce
created_at	timestamp with time zone	false	CURRENT_TIMESTAMP	Creation timestamp
updated_at	timestamp with time zone	false	CURRENT_TIMESTAMP	Update timestamp

2. decrypted_secrets (View)

This is a view that decrypts secrets for authorized users.

Column Name	Data Type	Nullable	Description
id	uuid	true	Secret ID
name	text	true	Secret name
description	text	true	Secret description
secret	text	true	Encrypted secret value
decrypted_secret	text	true	Decrypted secret value
key_id	uuid	true	Encryption key identifier
nonce	bytea	true	Encryption nonce
created_at	timestamp with time zone	true	Creation timestamp
updated_at	timestamp with time zone	true	Update timestamp

Database Functions

The database contains various functions organized by schema that provide important functionality for the application.

Public Schema Functions

Function Name	Arguments	Return Type	Description
add_to_farmer_sales		trigger	Trigger function to automatically create farmer_sales records when market_sales are created
create_profile_for_user		trigger	Creates appropriate profile records based on user type
decrement_group_members	group_id uuid	void	Decreases member count for KrishiGram groups
decrement_group_members_count	group_id uuid	void	Alias for decrement_group_members
handle_new_crop_analysis		trigger	Trigger function for processing crop analysis records
handle_new_user		trigger	Trigger function for new user creation
increment_group_members	group_id uuid	void	Increases member count for KrishiGram groups
increment_group_members_count	group_id uuid	void	Alias for increment_group_members
log_store_owner_profile_changes		trigger	Logs changes to store_owner_profiles for debugging
trigger_create_user_profile		trigger	Calls edge function to create user profiles via HTTP
update_timestamp		trigger	Updates timestamp columns automatically

Auth Schema Functions

Function Name	Arguments	Return Type	Description
email		text	Retrieves email from JWT claims
jwt		jsonb	Retrieves full JWT claims
role		text	Retrieves role from JWT claims
uid		uuid	Retrieves user ID from JWT claims

Extensions Schema Functions

This schema contains numerous utility functions for cryptography, HTTP requests, and other operations provided by Postgres extensions. Key functions include:

Function Name	Arguments	Return Type	Description
http_get	url text, params jsonb, headers jsonb, timeout_milliseconds integer	int8	Makes HTTP GET requests
http_post	url text, body jsonb, params jsonb, headers jsonb, timeout_milliseconds integer	int8	Makes HTTP POST requests
algorithm_sign	signables text, secret text, algorithm text	text	Signs data with specified algorithm
verify	token text, secret text, algorithm text	record	Verifies JWT tokens
sign	payload json, secret text, algorithm text	text	Creates signed JWT tokens

Storage Schema Functions

Function Name	Arguments	Return Type	Description
can_insert_object	bucketid text, name text, owner uuid, metadata jsonb	void	Authorization check for object insertion
extension	name text	text	Extracts file extension from filename
filename	name text	text	Extracts filename from path
foldername	name text	_text	Extracts folder path from full path
search	prefix text, bucketname text, limits integer, levels integer, offsets integer, search text, sortcolumn text, sortorder text	record	Searches for objects in storage buckets

Realtime Schema Functions

Functions supporting Supabase's realtime functionality, enabling websocket-based change notifications:

Function Name	Arguments	Return Type	Description
apply_rls	wal jsonb, max_record_bytes integer	wal_rls	Applies row-level security to WAL changes
broadcast_changes	topic_name text, event_name text, operation text, table_name text, table_schema text, new record, old record, level text	void	Broadcasts database changes to subscribers
is_visible_through_filters	columns wal_column[], filters user_defined_filter[]	bool	Determines if a record is visible through filters
send	payload jsonb, event text, topic text, private boolean	void	Sends messages to realtime channels

Database Triggers

The database uses various triggers to automate processes and maintain data integrity.

Authentication Schema Triggers

Trigger Name	Table	Event	Function	Description
on_auth_user_created	users	AFTER INSERT	handle_new_user()	Creates user records in public schema when auth users are created
on_auth_user_created_trigger	users	AFTER INSERT	trigger_create_user_profile()	Calls edge function to set up user profiles

Public Schema Triggers

Trigger Name	Table	Event	Function	Description
update_broker_profiles_timestamp	broker_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
update_consumer_profiles_timestamp	consumer_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
on_crop_analysis_insert	crop_analyses	AFTER INSERT	handle_new_crop_analysis()	Processes new crop analyses
update_expert_profiles_timestamp	expert_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
update_farmer_profiles_timestamp	farmer_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
add_farmer_sale_on_market_sale_insert	market_sales	AFTER INSERT	add_to_farmer_sales()	Creates farmer sale records
store_owner_profile_audit_trig	store_owner_profiles	AFTER INSERT/UPDATE/DELETE	log_store_owner_profile_changes()	Logs profile changes
update_store_owner_profiles_timestamp	store_owner_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
update_student_profiles_timestamp	student_profiles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
update_user_roles_timestamp	user_roles	BEFORE UPDATE	update_timestamp()	Updates timestamp on record changes
update_users_timestamp	users	BEFORE UPDATE	update_timestamp()	Updates timestamp

Trigger Name	Table	Event	Function	Description
				on record changes

Other Schema Triggers

Trigger Name	Schema	Table	Event	Function	Description
tr_check_filters	realtime	subscription	BEFORE INSERT/UPDATE	realtime.subscription_check_filters()	Validates subscription filters
update_objects_updated_at	storage	objects	BEFORE UPDATE	storage.update_updated_at_column()	Updates timestamps for storage objects

Database Indexes

The database uses various indexes to improve query performance and ensure data integrity.

Important Public Schema Indexes

Index Name	Table	Type	Definition
users_pkey	users	UNIQUE	Primary key index on id
users_email_key	users	UNIQUE	Unique index on email
user_roles_email_role_type_key	user_roles	UNIQUE	Unique index on email and role_type combination
krishigram_posts_pkey	krishigram_posts	UNIQUE	Primary key index on id
unique_post_like	krishigram_likes	UNIQUE	Ensures a user can only like a post once
unique_comment_like	krishigram_likes	UNIQUE	Ensures a user can only like a comment once
unique_group_member	krishigram_group_members	UNIQUE	Ensures a user can only be member of a group once
unique_follower	krishigram_followers	UNIQUE	Prevents duplicate follower relationships
market_sales_sale_number_key	market_sales	UNIQUE	Ensures unique sale numbers

Functional Indexes

Several functional indexes exist to optimize specific query patterns:

Index Name	Schema	Table	Purpose
idx_crop_analysis_user_id	public	crop_analysis_history	Improves user-based crop analysis queries
idx_farmer_sales_farmer_id	public	farmer_sales	Speeds up farmer sales lookup
idx_farmer_sales_broker_id	public	farmer_sales	Speeds up broker-based queries
market_sales_broker_id_idx	public	market_sales	Optimizes broker sales reporting
name_prefix_search	storage	objects	Optimizes prefix-based storage object searches

Authentication System Indexes

The auth schema contains numerous indexes to optimize authentication operations:

Index Name	Table	Type	Purpose
users_email_partial_key	users	UNIQUE	Enforces unique emails for non-SSO users
users_phone_key	users	UNIQUE	Ensures unique phone numbers

Index Name	Table	Type	Purpose
sessions_user_id_idx	sessions	BTREE	Optimizes user session lookups
refresh_tokens_token_unique	refresh_tokens	UNIQUE	Ensures token uniqueness
identities_user_id_idx	identities	BTREE	Speeds up identity lookups by user ID

Storage System

KrishiSagar uses Supabase Storage for file storage needs. All storage tables have Row Level Security (RLS) enabled to ensure secure access control.

Storage Tables

Table Name	Has Indexes	Has Triggers	Row Security	Purpose
buckets	Yes	Yes	Yes	Defines storage buckets for different purposes
objects	Yes	Yes	Yes	Stores files and metadata
migrations	Yes	No	Yes	Storage system migrations
s3_multipart_uploads	Yes	Yes	Yes	Handles chunked file uploads
s3_multipart_uploads_parts	Yes	Yes	Yes	Stores parts of multipart uploads

Storage Buckets

The platform uses several storage buckets for different content types:

1. **crop-images** - Stores images of crops uploaded by farmers for analysis
2. **profiles** - User profile pictures and related media
3. **krishigram-media** - Images and videos for social media posts
4. **documents** - Reports, analysis documents, and educational materials

Each bucket has specific RLS policies to control access based on user roles:

- Farmers can access their own crop images and soil analysis files
- Social media content in krishigram-media is accessible based on the post's visibility settings
- Profile images have public read but restricted write access

Installed Extensions

Extension Name	Schema	Version	Description
plpgsql	pg_catalog	1.0	PL/pgSQL procedural language
uuid-oss	extensions	1.1	Generate universally unique identifiers (UUIDs)
pg_stat_monitor	extensions	2.1	Query Performance Monitoring tool
postgres_fdw	extensions	1.1	Foreign-data wrapper for remote PostgreSQL servers
pg_stat_statements	extensions	1.10	Track planning and execution statistics of all SQL statements executed
pg_net	extensions	0.14.0	Async HTTP
pgjwt	extensions	0.2.0	JSON Web Token API for PostgreSQL
pgcrypto	extensions	1.3	Cryptographic functions
pg_graphql	graphql	1.5.11	GraphQL support
supabase_vault	vault	0.3.1	Supabase Vault Extension