

MyInstagram MongoDB Schema Description

This document describes the schema designed for implementing MyInstagram in MongoDB. However, this schema might differ from the entity-attributes listed in the “Entities and their Attributes” document since that is a conceptual schema and the schema described here is implementation-oriented schema.

- User
 - createdAt:
Stores “date” datatype. Is stored for keeping track of when the user registered on the platform.
 - tokenVersion:
Stores “bool” datatype. Is stored to maintain and manage logins and logouts of an account.
 - fullname:
Stores “string” datatype. Is stored to show the user's name on his/her profile.
 - username:
Stores “string” datatype. Is stored to maintain the user’s username on the platform.
 - email:
Stores “string” datatype. Is stored to maintain the user’s email. Also helps in not allowing other users to use the same email again.
 - phoneNo:
Stores “string” datatype. Is stored to maintain the user’s phoneNo. Also helps in not allowing other users to use the same phoneNo again.
 - language:
Stores “string” datatype. Is stored to always render things in that language for the user.
 - password:
Stores “string” datatype. Is stored to keep track of the user’s password.
 - DOB:

Stores "date" datatype. Is stored for keeping track of the user's birthdate.

→ gender:

Stores "string" datatype. Is stored for keeping track of the user's gender.

→ blockedUser:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles the user has blocked at present.

→ savedPosts:

It is an array. Array stores "_id"s. This attribute maintains a record of the posts the user has saved.

→ followers:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles following the user at present.

→ following:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles the user is following at present.

→ hashtags:

It is an array. Array stores "_id"s. This attribute maintains a record of the hashtags the user is following at present.

→ accountType:

Stores "bool" datatype. Is stored to keep a track of whether the user's account is public/private.

true ⇒ public

false ⇒ private

→ accountType2:

Stores "string" datatype. Is stored to keep a track of whether the user's account is a normal/professional/business account.

Values possible ⇒ normal, business, professional

→ requests:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles that have requested to follow the user at present.

→ taggedIn:

It is an array. Array stores “_id”s. This attribute maintains a record of the posts in which the user is tagged at present.

→ liked:

It is an array. Array stores “_id”s. This attribute maintains a record of the posts that the user has liked at present.

→ account:

Stores “bool” datatype. Is stored to keep a track of whether the user’s account is currently enabled/disabled.

true ⇒ enabled

false ⇒ disabled

→ verified:

Stores “bool” datatype. Is stored to keep a track of whether the user’s account is verified or not.

true ⇒ verified

false ⇒ not verified

→ blockUserFromComment:

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that the user has blocked from commenting on his/her posts at present.

→ manuallyApproveTags:

Stores “bool” datatype. Is stored to keep a track of whether the user wants to approve tags manually or not.

true ⇒ user will himself/herself approve the tags

false ⇒ user can be tagged by anyone abiding the “allowTagsFrom” value

→ toConfirmTag:

It is an array. Array stores “_id”s. This attribute maintains a record of the posts in which the user is tagged and hasn’t yet taken any action on. An “_id” is stored in this only when “manuallyApproveTags” is set to true.

→ allowTagsFrom:

Stores “string” datatype. Is stored to keep a track of who can tag the user in their posts.

Values possible ⇒ all, none, following

→ likeViewCount:

Stores "bool" datatype. Is stored to keep a track of whether the user should be shown the number of likes and views on a post he/she visits(apart from the ones the user has himself/herself posted) or not.

true ⇒ likes and views count should be shown

false ⇒ likes and views count should not be shown

→ allowCommentFrom:

Stores "string" datatype. Is stored to keep a track of who can comment on the user's posts.

Values possible ⇒ everyone, following, followers, followingFollowers

→ checkComment:

Stores "bool" datatype. Is stored to keep a track of whether a comment should be checked before getting posted on the user's post or not.

true ⇒ comment must be checked

false ⇒ comment should not be checked

→ offensiveWords:

It is an array. Array stores "string" datatype. This attribute helps in performing a check on a comment before it is posted for all the words the user has marked as offensive. This will be performed only when "checkComment" is set to true.

→ hideStory:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles that the user has hid his/her stories from.

→ allowAtMention:

Stores "string" datatype. Is stored to keep a track of who can mention the user in their story.

Values possible ⇒ all, none, following

→ closeFriends:

It is an array. Array stores "_id"s. This attribute maintains a record of the profiles that the user has marked as his/her close friends and can see his/her stories whose type is "closeFriends".

→ allowToShareOnStory:

Stores "bool" datatype. Is stored to keep a track of whether other users can share the user's post on their stories or not.

true ⇒ user's posts can be shared on story
false ⇒ user's posts cannot be shared on story

→ muteStories:

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that the user doesn't want to see the stories of.

→ mutePosts:

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that the user doesn't want to see the posts of.

→ manageNotification:

It is an object. It stores following attributes:

a. posts

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that want to receive a notification whenever the user posts an image/video on feed.

b. stories

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that want to receive a notification whenever the user posts a story.

c. igtv

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that want to receive a notification whenever the user posts an IGTV video.

d. reels

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that want to receive a notification whenever the user posts a reel.

e. It is an object. It stores following attributes:

i. all

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that want to receive a notification everytime the user goes live.

ii. some

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that sometimes want to receive a notification when the user goes live.

iii. none

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles that don’t want to receive any notification whenever the user goes live.

→ highlight:

It is an array. Array stores objects. This attribute maintains the details of each highlight.

Each object contains:

a. title

Stores “string” datatype. It stores the title of the highlight.

b. stories

It is an array. Array stores “_id”s. This attribute maintains a record of the stories added to the highlight.

c. cover

Stores “string” datatype. It stores the link of the image that is set as the cover of the highlight.

→ isMentionedIn:

It is an array. Array stores “_id”s. This attribute maintains a record of the stories the user is mentioned in.

→ storyArchive:

Stores “bool” datatype. Is stored to keep a track of whether the user’s stories should be archived or deleted permanently after 24hours.

true ⇒ user’s stories should be archived

false ⇒ user’s stories shouldn’t be archived and should be deleted permanently

→ liveArchive:

Stores “bool” datatype. Is stored to keep a track of whether the user’s live sessions should be archived or deleted permanently after ending the session.

true ⇒ user’s live sessions should be archived

false ⇒ user’s live sessions shouldn’t be archived and should be deleted permanently

→ restrictAccounts:

It is an array. Array stores “_id”s. This attribute maintains a record of the profiles the user has restricted.

- countdown:
It is an array. Array stores "date" datatype. This attribute maintains a record of the unexpired countdowns set by the user.
- profilePicture:
Stores "string" datatype. It stores the link of the image that is set as the user's profile picture.
- bio:
Stores "string" datatype. It stores the bio set by the user.
- website:
Stores "string" datatype. It stores the website set by the user.
- postCount:
Stores "int" datatype. It is stored for maintaining a count of posts available on the profile of the user.
- blockedFrom:
It is an array. Array stores "_id"s. This attribute maintains a record of the profiles the user is blocked by.
- guides:
It is an array. Array stores objects. Each object stores following:
 - a. title
Stores "string" datatype. It stores the title of the guide.
 - b. description
Stores "string" datatype. It stores the description of the guide.
 - c. cover
Stores "string" datatype. It stores a link for the guide's cover set by the user.
 - d. posts
It is an array. Array stores objects. Each object stores details related to the posts in the guide as:
 - 1. title
Stores "string" datatype. It stores the title of the post.
 - 2. description

Stores “string” datatype. It stores the description of the post.

3. post_id

Stores “_id” datatype. It stores the “_id” of the post.

→ hideFromProfileGrid:

It is an array. Array stores “_id”s. This attribute maintains a record of the posts that are not to be shown on the user’s MyProfile page.

→ posts:

It is an array. Array stores “_id”s. This attribute maintains a record of the posts of the user.

→ stories:

It is an array. Array stores “_id”s. This attribute maintains a record of the stories of the user.

→ recentStory:

It is an array. Array stores “_id”s. This attribute maintains a record of the stories which are not yet expired, .i.e, aren’t yet 24hr old.

→ searchHistory:

It is an array. Array stores “string” datatype. This attribute maintains a record of the profiles/hashtags/locations the user has recently searched for.

• Post

→ u_id:

Stores “_id” datatype. Stores “_id” of the owner of this post, i.e., the user who made this post.

→ createdAt:

Stores “date” datatype. Is stored for keeping track of when the post was made.

→ modifiedAt:

Stores “date” datatype. Is stored for keeping track of when the post was last edited.

→ caption:

Stores “string” datatype. It stores the caption of the post.

→ location:

Stores “string” datatype. It stores the location added to the post.

→ tagged:

It is an array. Array stores objects. Each object stores following:

1. u_id

Stores “_id” datatype. Stores “_id” of the user tagged in the post

2. status

Stores “string” datatype. Is stored to keep a track of whether the user tagged in the post has disabled his/her account or not

Values possible ⇒ enabled, disabled

→ type:

Stores “string” datatype. Stores type of the post.

Values possible ⇒ reel/post/igtv

→ likes:

Stores “int” datatype. Indicates the number of likes on the post.

→ likedBy:

It is an array. Array stores “_id”s. This attribute maintains a record of the users who liked the post.

→ savedCount:

Stores “int” datatype. Indicates the number of users who’ve saved the post.

→ hashTags:

It is an array. Array stores “string” datatype. This attribute maintains a record of the hashtags used in the post.

→ deleted:

Stores “bool” datatype. Is stored to keep a track of whether the post has been deleted or not.

true ⇒ post has been deleted

false ⇒ post is not deleted

→ commenting:

Stores “bool” datatype. Is stored to keep a track of whether the user has allowed commenting on this post or not

true ⇒ commenting on this post is allowed

false ⇒ commenting on this post is not allowed

→ archived:

Stores “bool” datatype. Is stored to keep a track of whether the post has been archived or not.

true ⇒ post has been archived

false ⇒ post is not archived

→ count:

Stores “bool” datatype. Is stored to keep a track of whether the post’s likes and view count is to be shown or not.

true ⇒ show likes and views count of the post

false ⇒ don’t show likes and views count of the post

→ title:

Stores “string” datatype. Stores the title of the post.

→ content:

It is an array. Array stores “string” datatype. This attribute stores links of the images/videos posted.

→ music:

Stores “string” datatype. Stores the name of the music.

→ sharedCount:

Stores “int” datatype. Indicates the number of times the post has been shared.

→ disabled:

Stores “bool” datatype. Is stored to keep a track of whether the owner of the post has disabled his/her account or not.

true ⇒ owner’s account is disabled

false ⇒ owner’s account is enabled

→ insights:

It is an object. The object stores following attributes:

1. profileVisits

Stores “int” datatype. Indicates the number of times the user’s profile was visited through the post.

2. follows

Stores "int" datatype. Indicates the number of times the user's profile was followed through the post.

3. impressions

Stores "int" datatype. Indicates the total number of times the user's post was on other users' screen.

- Story

→ viewedBy:

It is an array. Array stores "_id"s of the users who've seen the story.

→ createdAt:

Stores "date" datatype. Is stored for keeping track of when the story was posted.

→ viewType:

Stores "string" datatype. Indicates who can see the story.

Values possible ⇒ all, followers, closeFriends

→ u_id:

Stores "_id" of the user who posted the story.

→ type:

It is an object. The object stores the following attributes.

1. questions

Stores "bool" datatype. It indicates whether the story has the "questions" feature or not.

true ⇒ Story is having "questions" feature

false ⇒ Story is not "questions" feature

2. emojiSlider

Stores "bool" datatype. It indicates whether the story has the "emojiSlider" feature or not.

true ⇒ Story is having "emojiSlider" feature

false ⇒ Story is not "emojiSlider" feature

3. poll

Stores "bool" datatype. It indicates whether the story has the "poll" feature or not.

true ⇒ Story is having “poll” feature

false ⇒ Story is not “poll” feature

4. quiz

Stores “bool” datatype. It indicates whether the story has the “quiz” feature or not.

true ⇒ Story is having “quiz” feature

false ⇒ Story is not “quiz” feature

5. countdown

Stores “bool” datatype. It indicates whether the story has a countdown shared on it or not.

true ⇒ Story is having countdown shared on it

false ⇒ Story is not having countdown shared on it

→ details:

It is an array. Array stores objects. Each object stores the following attributes:

1. u_id

Stores “_id” of the user whose response is being recorded.

2. responseOf

Stores “string” datatype. Indicates the feature whose response is being recorded.

3. response

Stores “string” datatype. Stores the response to the “responseOf” feature by “u_id”.

→ mention:

It is an array. Array stores “_id”s of the users mentioned in the story.

→ location:

Stores “string” datatype. Stores the location added by the user in the story.

→ archived:

Stores “bool” datatype. It indicates whether the story is archived or not.

true ⇒ Story is archived

false ⇒ Story is not archived

→ music:
Stores "string" datatype. Stores the title of the song added to the story.

→ link:
Stores "string" datatype. Stores the link added by the user to the story.

→ sharedCount:
Stores "int" datatype. Indicates the number times the story is shared.

→ content:
It is an object. The object has the following attributes.

1. media
Stores "string" datatype. Stores the link of the photo/video added to the story.

It may also contain some additional attributes which store the details of the features(quiz/poll/questions/countdown/emojiSlider) added to the story.

"questions" ⇒ Stores "string" datatype. Stores the question added in the story.

"emojiSlider" ⇒ Stores an object. The object has the following attributes.

- emoji
Stores "string" datatype. Indicates the emoji selected to be on the slider.
- question
Stores "string" datatype. This stores the question added to the slider.

"poll" ⇒ Stores an object. The object has the following attributes.

- question
Stores "string" datatype. This stores the question asked in the poll.
- left
Stores "string" datatype. This stores the value to be shown on the left option of the poll.
- right
Stores "string" datatype. This stores the value to be shown on the right option of the poll.

“countdown” ⇒ Stores “date” datatype. Stores the countdown added to the story.

“quiz” ⇒ Stores an object. The object has the following attributes.

- question
Stores “string” datatype. This stores the question asked in the quiz.
- first
Stores “string” datatype. This stores the first option set by the user in the quiz.
- second
Stores “string” datatype. This stores the second option set by the user in the quiz.
- third
Stores “string” datatype. This stores the third option set by the user in the quiz.
- fourth
Stores “string” datatype. This stores the fourth option set by the user in the quiz.
- answer
Stores “string” datatype. This stores the indicator of the option which is correct.

Values possible ⇒ first, second, third, fourth

→ deleted:

Stores “bool” datatype. It indicates whether the story is deleted or not.

true ⇒ Story is deleted

false ⇒ Story is not deleted

→ disabled:

Stores “bool” datatype. It indicates whether the owner of the story has disabled his/her account or not.

true ⇒ Owner’s account is disabled.

false ⇒ Owner’s account is enabled.

→ insights:

It is an object. The object stores the following attributes.

1. profileVisits
Stores "int" datatype. Indicates the number of times the user's profile was visited through the story.
2. impressions
Stores "int" datatype. Indicates the number of times the user's profile was on other users' screen.
3. follows
Stores "int" datatype. Indicates the number of users who followed the owner of the story through the story.
4. forward
Stores "int" datatype. Indicates the number of times the users who saw the story skipped other stories of the owner of that story, i.e., moved on to some other user's stories.
5. exited
Stores "int" datatype. Indicates the number of times the users who visited the story exited the story panel from there on.
6. next
Stores "int" datatype. Indicates the number of times the users who visited the story went on ahead to view the next story of the user.

- Comment

- p_id:
Stores "_id" of the post on which the comment is being posted.
- u_id:
Stores "_id" of the user who has posted the comment.
- likes:
Stores "int" datatype. Is stored to maintain a count of the number of likes on the comment.
- likedBy:
It is an array. Array stores "_id" of the users who've liked the post.
- createdAt:

Stores “date” datatype. Is stored for keeping track of when the comment was made.

→ rComment:

Stored “bool” datatype. Is stored for knowing whether the comment made is by a restricted user or not.

true ⇒ User is restricted by the owner of the post.

false ⇒ User is not restricted by the owner of the post.

→ commentText:

Stores “string” datatype. Stores the content of the comment, i.e., the comment itself.

→ owner_id:

Stores “_id” of the user who has made the post.

→ disabled:

Stored “bool” datatype. Is stored for keeping track of whether the account of the owner of the post is currently disabled or not.

true ⇒ Owner’s account is disabled.

false ⇒ Owner’s account is enabled.

→ bComment:

Stored “bool” datatype. Is stored for knowing whether the comment made is by a user who is blocked by the owner of the post from commenting or not.

true ⇒ User is blocked from commenting by the owner.

false ⇒ User is not blocked from commenting by the owner.

- Logs

→ u_id:

Stores “_id” of the user whose activity is being logged.

→ createdAt:

Stores “date” datatype. Is stored to keep track of when the activity took place.

→ attribute:

Stores “string” datatype. Stores the attribute name which was updated or the action performed.

Example: Login, tagged, update username etc.

→ activityRelated:

Stores "bool" datatype. Is stored to keep track of whether the activity being logged has is related to the "Activity Related to My Account" functionality of the platform or not.

true ⇒ It is activity related.

false ⇒ It is not activity related.

→ value: (Not used everytime.)

Stores any datatype suiting the "attribute" field mentioned in the log entry. This is for logging the value the user changed fields to, such as, new username, user answering a poll or a quiz etc.

- Report Log

→ object_id:

Stores "_id" of the entity reported.

→ category:

Stores "string" datatype. Is stored to keep track of the reason why the entity was reported.

Example: Spam, Harassment, Inappropriate etc.

→ entity:

Stores "string" datatype. Is stored to keep track of which entity has been reported.

Values possible ⇒ post, comment, story, profile

- HashTag

→ _id:

Stores "string" datatype. It stores the hashtag itself as the document's "_id".

→ posts:

It is an array. Array stores "_id"s. It maintains a record of the posts which have used the corresponding hashtag(_id in this case).

- Request For Verification

→ u_id:

It stores “_id” of the user who made the request for verification.

- fullname:
Stores “string” datatype. It stores the name of the user.
- knownAs:
Stores “string” datatype. It stores the title the user is known by publicly.
- category:
Stores “string” datatype. It stores the category the user works in. Example:
musician, actor etc.
- proof:
Stores “string” datatype. It stores a link of the image of the legal proof given by
the user.
- status:
Stores “string” datatype. It indicates the status of the request the user has made.

Values possible ⇒ posted, viewed, underVerification, approved, declined

- LiveVideos

- video:
Stores “string” datatype. It stores a link of the video of the live session.
- createdAt:
Stores “date” datatype. Is stored for keeping track of when the live session was.
- u_id:
It stores “_id” of the user whose live session’s video is being saved.

- Delete Account

- u_id:
It stores “_id” of the user who made a delete account request.