Posts collection:

* postId/
  + authorId: userId
  + authorName: userName
  + createdAt: timestamp
  + ***text: String***
  + ***image: url***
  + ***video: url***
  + location: String
  + stayingWith: [{
    - userId
    - username

}]

* + groupId: groupId
  + groupName: groupName
  + Subcollection comment

1 doc gồm có:

* + - comId: id
    - userId: userId
    - username: String
    - text: String
    - avatar: url
    - updatedAt: timestamp
    - replies: [{
      * userId: userId
      * comId: generate uuid
      * username: String
      * text: String
      * avatar: url

}]

* + tags: [String]
  + priority: Int

Counters collection:

Khi tạo post, tạo thêm 1 doc trong này luôn

* postId/
  + num\_shards: Int
  + Subcollection shards

shardNumber/ (1,2,3,4,5,6,7,8,9,10)

* + - count: int

Users collection:

* userId/
  + avatar: url
  + block: [userId]
  + email: email
  + id: userId
  + Map location: {
    - denyExposingLocation: bool
    - Geohash
    - Latitude
    - Longitude

}

* + Username
  + Bio {
    - Biography: String
    - showBio: bool
    - Work: String
    - showWork: bool
    - Education: String:
    - showEducation: bool
    - Current Location: String
    - showLocation: bool
    - Birth Place: String
    - showBirthplace: bool

}

* + Favorite activities: [{
    - Activity: String
    - Image: url

}]

* + JoinedGroup: Subcollection {
    - groupId
    - name
    - wallpaper

}

* + AdminOf: Subcollection {

}

* + Subcollection ownPosts (added by Cloud Functions watch\_post)

Friends collection:

* userId/
  + Subcollection ownRequest

-friendId/

* + - userId
    - username
    - avatar
  + Subcollection friendRequest

-friendId/

* + - userId
    - username
    - avatar
  + Subcollection allFriends – replaced by relationship in Neo4j

Saved collection:

* userId/
  + postId
  + postContent
  + postMedia

Notifications collection:

* userId/
  + sourceName: "Nik Nguyen",
  + content: "đã phản hồi bình luận của bạn",
  + sourceImage: "https://via.placeholder.com/40",
  + createdAt: "2 ngày",
  + isRead: false,
  + type: "comment",
  + url: "/post/2cqvyhc2En5b0nPoNaEE",

Hashtag collection:

* content/
  + content
  + postCount (updated by cloud function watch\_post)
  + Subcollection posts (added by Cloud Functions watch\_post)

***UserChats collection:***

* ***userId/***
  + ***chatId***

***Chats collection:***

* ***chatId/***
  + ***Subcollection chat …***
    - ***Messages***
    - ***Messages:***
      * ***Share ? => url => <a href=”/posts/postId”/> tag***

User Bio + Liked activities**: find act first, not found what u’re looking for? Add more**

-> + like counters -> [Distributed Counter | Firebase Extensions Hub](https://extensions.dev/extensions/firebase/firestore-counter)

Group collection:

* groupId/
  + id
  + wallpaper
  + name
  + description
  + createdAt
  + members: Subcollection {
    - avatar
    - username
    - userId

}

* + admins: [{userId, name, avatar}]
* pendingRequest: Subcollection

{

* + - username
    - avatar
    - userId

}

* + Subcollection posts: …

Algolia Full Text Search + debounce

[Đồng bộ data từ Cloud Firestore lên Algolia thông qua Firebase Functions (viblo.asia)](https://viblo.asia/p/dong-bo-data-tu-cloud-firestore-len-algolia-thong-qua-firebase-functions-3P0lP9Om5ox)

[Full-text search  |  Firestore  |  Firebase (google.com)](https://firebase.google.com/docs/firestore/solutions/search?provider=algolia)

Recommend systemRealtime

Distributed counter

[Distributed counters  |  Firestore  |  Firebase (google.com)](https://firebase.google.com/docs/firestore/solutions/counters)

Cloud scheduler -> Cloud Function -> update hashtag count:

* [Scheduling Google Cloud Functions to Run Periodically | by Gaurav Singh Tanwar | Medium](https://gauravtanwar1.medium.com/scheduling-google-cloud-functions-to-run-periodically-4fd3e763e78f)
* [Schedule functions  |  Cloud Functions for Firebase (google.com)](https://firebase.google.com/docs/functions/schedule-functions?gen=2nd)

Comment -> Transaction edit

Message pagination:

* Realtime structure

Online status

* [Build presence in Cloud Firestore  |  Firebase (google.com)](https://firebase.google.com/docs/firestore/solutions/presence)

Location hash -> distance?

Friend Request….

Group: Member, join, post, description, leave, admin

Hashtag page

Like

Activityt

Map

Noti

Fulltextsearch

Label img

Friend

KO DÙNG COSINE NỮA

Content based filtering: Hiểu thêm về cái này

* Khi tương tác vs bài viết, làm thế nào để biết nó thích hay nhiều. Gợi ý thêm bao nhiêu bài giống như này? Chẳng lẽ so sánh hết với tất cả bài khác. Có nên track danh sách những ng dùng muốn xem?

Natural Language API for text object detection

Khi tạo Group, cũng tạo 1 node Group trên neo4j

Tạo post trên neo4j:

* Append tag của post với labels của image

Đồng bộ user liked lên neo4j

Các mối quan hệ:

Group -> create -> post

User -> in -> group

user -> write -> post

User <-> friend <-> user

Affinity – Weight – Decay? Nên track cái này như nào ? onTrigger hay https callable

Tính Jaccard với bạn bè để đề xuất group

Tính Jaccard với người lạ để đề xuất kết bạn