

Synopsis

On

“Anymo - anonymous posts and chats”

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2021-2022

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1.Introduction

As social media use continues to grow, and details of many people's lives are becoming **publicly accessible** online, a clear division is forming between two types of people; those that seek to release as much information about themselves into the digital realm as possible and those that seek to protect their personal information.

With this divide growing, so is the use of **anonymous chat apps** which have been exploding in recent times. Popularized for their ability to connect users **without revealing their identities**, anonymous chat apps provide the perfect platform to securely share private information about yourself without the worry of potential hackers being able to know that it is your information.

There are many benefits and reasons as to why **businesses or common individuals** should use anonymous chat apps. In contrast, anonymous chat apps allow you to chat or email through secure channels to other anonymous users, concealing your real name and contact information. You can actually chat under a randomized alias or email address.

Taking it one step further, they're also apps that collect as little information about you as possible, from account set-up to usage data. So, even if security is compromised for any given reason, it's hard for an attacker to identify you. Therein lies the beauty of the concept!

Similarly, The **Anymo** android based application focus on the publishing of text and graphic information anonymously. Users can post anonymously, write anonymously comments, and have one-to-one anonymous chats. The post feed is based on **device geolocation** to make it easier for users to find anonymous posts in their **region**.

Many people like to use **anonymous chat apps** to meet people rather than converse with existing friends. Interacting with new people can let you make new friends, acquaintances. Our **Anymo android based app** to publish text and graphic information anonymously. Users can post anonymously, write anonymously comments, and have anonymous chats. The post feed is based on device geolocation to make it easier for users to find anonymous posts in their region.

When creating posts, you can select the background colour, text, add images and set their transparency. This makes it possible to create unique and beautiful posts!

Along those lines, within anonymous chat apps, there are actually two types of anonymity:

1. Anonymity of the creator of information shared. This is so that hackers can't identify the person who sent a message, but an authorized contact can like In WhatsApp with end to end encryption.
2. Anonymity within the app for contacts who are approved to communicate but wish to remain unidentifiable by the receiver of the communications. So, if you send a message but you don't want people knowing it's from you, this is something the **Anymo focuses on**.

1.Problem Statement & Objective

We're all familiar with instant messaging and using it to chat to people in real-time. Sometimes, though, we might want an app which allows us to send messages anonymously to friends, or to chat anonymously with strangers in close proximity. An example of such an app is **Anymo**, which lets you talk with people not in your contact list without disclosing your identity. Anymo is basically implementing the **anonymous chat room** features.

Objective

- To provide basic social media features like posting, liking, commenting and one-to-one chatting
- As the specialty of application, the posting should be anonymous as User's real identity will be hidden
- Application should run on basic Android Smartphones, for easy access.
- Provide content moderation to control the types of contents that are posted by users be suitable for the normal users to maintain a healthy social environment
- User can say whatever he/she want. When they're anonymous, they can say what's on their mind without bothering about other's judgement
- User should be able to create posts like Facebook or Instagram posts and have basic features like liking and commenting on the post
- In order to interact with the other users, users can have private chats and that's too anonymous unless they wish to disclose their true identity

- Users can view the posts in the specific region hence avoiding the heap of un-necessary yet uninteresting posts
- Users should have choice to select the type of posts they like to view by following or unfollowing the author
- Users should be able to report the unsuitable posts / activities they might face while chatting with stranger or viewing the posts in their timeline

2.Literature Survey

Social Media and Privacy Risk

No doubt social media has many advantages- Social media sites are a great place to build connections for personal and professional work. For a significant number of older adults living alone and people away from family and friends, social media offers the opportunity to make meaningful social contact by joining social networks such as Facebook, Twitter, LinkedIn, Instagram, Pinterest etc. Also, social media platforms are helpful for people who suffer from social anxiety, because they offer the chance to develop social relationships over time without the stress of face-to-face interaction. Primarily social media platforms include features such as the ability to share photos, videos and other personal information about yourself and your activities to encourage interaction with your connections. Some of those also empower users with various other capabilities like text, audio & video chatting; social commerce and perform various financial transactions over those platforms. Needless to mention that social media has a great impact in our lives now a days and hence a huge focus of these companies to enrich users with more and more attractive features.

But one of the most important issues surrounding the use of social media is privacy and security. And the same has been increasing these days in a terrifying manner. It has become so dangerous that if you somehow cross your red line; there are chances that you are putting yourself, your organization/ business and even your country at large at a huge risk. There are hundreds of black hats waiting outside to exploit even the slightest mistake that we may do while using those platforms.

Why we should preserve anonymity on social media

The argument for anonymity on social media is important because it is this that allows individuals to freely express themselves without fear of repercussion.

Yet this is also precisely the reason it has become a cloak from under which to send a barrage of hateful messages on social media, and why some have suggested putting a stop to it.

Calls to prohibit 'anonymous' social media accounts have intensified during the pandemic throughout which period online abuse has increased. From death threats to racism, our online spaces have turned into toxic cesspits of hate.

The sheer volume of abuse some people receive from anonymous accounts is enough to make even the most privacy-conscious question their commitment to anonymity on social media.

Yet it's unclear whether ending anonymity on social media is the best action to take.

It's hard to ignore, for instance, the importance of preserving anonymity on social media for users living under oppressive regimes.

Back in 2011 a Facebook group that played a significant role in inspiring protestors to march on Tahrir Square was initially administered by a pseudonymous account, something which helped the creator avoid the considerable risks associated with acting under his real name.

Attempts by social networks to crack down on the use of pseudonyms, or implement new 'real name' policies, have previously silenced bloggers reporting from dangerous locations and have historically been met with resistance from rights groups, who have long argued that it protects people from harm across the globe.

Whistleblowers also rely on anonymity to voice their concerns while ensuring they won't lose their jobs or, depending on the government, be subject to criminal punishment or even death. Such accounts exist in authoritarian regimes, but British accounts such as *The Secret Barrister* are a reminder that hiding one's identity can enhance a person's ability to speak truth to power even in the West.

The power of secrets: anonymous social networks start to spread

The distrust generated by the potential repercussions of the tracking of our digital footprints on the internet – after years of social networks uploading personal data of our daily lives – has prompted thousands of users to shift over to anonymous social networks. **Whisper** and **Secret** are two of these applications that allow users to continue to be social, but with complete anonymity, and without real data.

The problem of privacy on networks like Facebook or Twitter is that these networks have stopped being a way to share personal thoughts and have become a global medium of communication with the world. The arrival of professional and corporate profiles has made social networks a powerful marketing tool for promoting personal branding and increasing customer loyalty. This means that we need to be careful with everything that we share on the internet, because the tracking of our digital footprints can sometimes be a source of headaches for us.

The biggest dilemma facing many users is knowing exactly what they can or cannot say or share when they are using their personal profile,

professional profile or both at the same time. The solution to be able to say or share whatever you want without fear of it interfering with your online reputation lies in these anonymous platforms, or other similar ones, like Snapchat.

In essence, these new platforms work very much like the conventional networks that we're all familiar with, except that the anonymous networks get rid of the real digital identity of each user, to allow them to share opinions, thoughts and ideas. Just a few lines of text on an image to express any idea, thought or secret that you want to share, under the anonymity of a pseudonym.

Anonymity on social media and its ugly consequences

For the past few months, disturbing message of unknown origin on WhatsApp forwarded messages are crafted from partial truths. As their content makes clear, the ulterior aim of these 'forwards' is to sharpen differences between the followers of two religions and re-ignite one of the oldest conflicts in human history. Digital platforms are being used for many other ills, too, such as spreading fake news and trolling one's opponents. In recent times, digital media has been used to incite many a violent act in the physical world too. Digital media giants have been experimenting with multiple ways to filter out or label negative or misleading posts. But they have not had much success. Many observers are worried that these trends could affect digital media's image and harm its future.

Why do so many people behave in such an uncivilized manner on social media platforms? The answer might be found in many studies, including a few famous ones conducted by Philip Zimbardo, an American psychologist. Participants in studies who wore hoods over their faces, which offered them a sense of anonymity, were more likely to indulge in undesirable behaviours than those whose identities were known. Anonymity does breed anti-social behaviour. Fake IDs, pseudonyms and unverified user-accounts abound online, giving people ample opportunity to mask their identities as they post messages.

There is now substantial evidence that the use of inauthentic accounts are a major tool used by those wishing to put out and amplify misinformation. In an article in the journal *CyberPsychology and Behaviour*, Professor John Suler describes anonymity as one of the principal factors creating disinhibition on social media. According to Suler, when people have an opportunity to separate their actions online from their in-person lifestyle and identity, they feel less vulnerable about self-disclosure and 'acting out' roles. In a process of dissociation, the online self becomes a compartmentalized self. In fact, people might even convince themselves that their online behaviours "aren't me at all".

In the initial days of mobile phones, users were largely anonymous. But soon, the authorities realized that this anonymity was being misused, especially by extreme elements. So today mobile phone users have to furnish proper identity documents before getting a new telecom connection. This, no doubt, has greatly reduced its misuse. But this has not really affected ordinary citizens who need to be in intimate touch with their dear ones over telecom networks. Similarly, social media owners will have to work towards truly robust user-identification policies. People could be allowed to use pseudonyms so long as their real identity has been verified and they can be held accountable for any bad behaviour. It is also true that even individuals with unmasked identities have used digital media platforms for ulterior purposes. But the law can still catch up with their misbehaviour, even if it's post facto.

Given human nature, unhindered online anonymity is likely to be increasingly misused. Just as street lights helped dispel the darkness in public places to make them safer, social media platforms should make the digital world a better place by dispelling the darkness of anonymity.

Anonymous apps have a secure spot in our collective digital future. With the effort to build "one digital identity" through your social accounts, there will continue to be a push for apps and platforms that provide unquestioned anonymity, says Harig.

And Polgar agrees. "As more people realize the permanent nature of mainstream social networks ... it will continue to open up opportunities for social networking platforms that promise an escape." There may very well be two sides to the Internet. Sites like Facebook will act as

“extensions” of work discussions, and anonymous apps and sites will act as the “proverbial bar or locker room,” says Polgar.

As long as people have the desire to speak freely somewhere online, anonymous social apps will have a role to play in how we interact.

In a nutshell, even the biggest contenders in the world of anonymous chat apps are not always secure. When using these apps, you are often leaving your data vulnerable. That's why apps that combine the best features of anonymous chat apps with a privacy-first approach to encryption, such as **Anymo**, can pave the way for the best of both worlds. It's important to remember that anonymous does not always equate to secure. Even within the realms of anonymous chat apps, you should be ensuring that you're using a secure app too.

Similar Applications

- **Chateous**

Another stable and legitimate incognito chat application that allows you to chat with strangers is Chatous. The chat application itself is very simple in that it enables users to quickly chat with strangers online without giving up any kind of personal details.

This chat application doesn't monitor any of the chats which helps to ensure privacy for the users. Additionally, the app helps you to meet new people so every time you find a stranger to talk to, you're likely to have a completely new experience.

- **Connected2Me**

This is another chat application that does a great job of providing a friendly and entertaining service. If you look at the features that this app offers and the way it sets those features up on the screen, it shouldn't be hard to notice that Connected2.me is more than just an anonymous chat application.

It also acts like a social media platform if you allow it to. You have the option of creating a full profile for yourself just like you would on a regular social media platform. Then, you can use the user interface to search for a stranger to chat with.

- **PepperChat**

Sometimes you don't want your anonymous chat app to be fancy. PepperChat is one of the best and most straightforward chat apps on Android that works flawlessly even on older Android models thanks to its low resource consumption. All the while, it keeps your conversations private and secure while offering minimal features.

- **Omegal**

Omegle used to be the king of anonymous chatting apps. Not anymore. Fundamentally, it's still an app for video chats. However, the main problem with this app is its popularity. You don't have to identify yourself to talk to others and many kids are known to use this chat app. This combination has made it a predator favorite. Stranger chat can be fun, but users are at risk when the app becomes popular for other users who want to harm them.

- **MeetMe**

MeetMe uses your location to identify people near you. While this can be helpful for making friends in your area, it's not the best feature when you're trying to maintain your privacy and keep your identity hidden.

3. Proposed Work

The intent of our project is that the users should be able to post and chat anonymously on the huge social media platform without exposing their true identity. The application will be a simple Anonymous chatting and posting android application that will be user friendly.

The role of the users with the application is started with the user sign up with a phone number or the email address (which won't be disclose) to anyone and anywhere. As the user sign in, he is free to view the other users (author) posts as well as create new beautiful posts by selecting the background as a background image or just a simple solid background color along with the text color.

The chat application itself is very simple in that it enables users to quickly chat with strangers online without giving up any kind of personal details. This gives users peace of mind which allows them to concentrate on having a good conversation with a stranger rather than worrying about who's doing what with their data.

Communicating with stranger will take a decent amount of time to get to know someone and verify if they're worth talking to even on an anonymous chat application. However, this time can be useful for making new friends around the world as you'll really get to know the person.

The chatting features and user interface is inspired from Instagram, While chatting user can send images, text, camera captured images, and stickers also videos in further update. User can delete the message from both the ends as in Instagram.

For better utility the app provide the dark mode feature making it usable in night time without having strain on eyes.

The app has an effective notification mechanism to receive notifications about the posts from the followed author, messages from strangers or already interacted user.

As for safety concern, the user can post only 10 (as defined) posts per day forcing the user to post only meaningful posts and the message on the posts has the maximum size of 150 words (as defined) or enough to cover the card for concise yet meaningful posts.

There are of course **inherent downsides** to such communication or sharing of images, videos, information with complete strangers. However steering clear of all of that, these apps can be a lot of fun and a great opportunity to form new bonds with people you would have otherwise never run into.

Reporting the post to the admin , Abuse filter before final posting and daily limited posts by an individual also unfollowing an author whose posts doesn't seem to be appropriate also ultimately banning the user IP will help in controlling the exploitation of the service.

4. Technology Used

Android Application for Users

- Java, MVC Pattern
- **Library/API/Framework:** Firebase Push Notifications, Google login, OTP verification (SMS), volley, okhttp, mediarouter, firebase analytics, firebase auth, google emoji, photoview, recyclerview, cardview, Google Play Location Service, Xml, Firebase, Google Cloud API Services, Location API, Picasso, glide, firebase messaging, exifinterface, blurry, Vectordrawable and WebView.
- Compile Sdk Version 29 compatible with android 12

Web Based Admin Panel for Admin

- HTML, CSS, PhP (Without Using Framework) Compatible with PhP 7.x and 8.x , SQL Database , MySQL 5.5
- **IDE:** Android Studio , VS Code , Bluestacks Emulator
- **Hardware used:** PCs with Windows 10 OS, Linux Server

5.Applications and Features

Applications

- In Anymo, user can interact with unknown people across the world
- Users will make anonymous friends or chat with random people on the internet
- Users can share files and high-resolution photos
- Users will freely post text posts with caring about other's judgement
- Users can use it for one-to-one chatting as alternative to Instagram and Facebook
- Users can ask for help to strangers if they feel unconfident while asking
- Whistleblowers can leak secret information safely
- For feedback purpose, where users can provide the honest opinions secretly

Features

1. User (Android app)

- Creation of personalized, anonymous posts (secrets)
- Posts (secrets) feed is based on geolocation
- Anonymous comments
- Anonymous, one-to-one chats
- Likes to posts (secrets)
- Google login
- OTP (Phone number verification)

2. Admin (Web)

- Statistics
- Secrets Stream (View and Delete)
- Messages Stream (View and Delete)
- Comments Stream (View and Delete)
- View abuse reports to secrets
- Support section
- See and Edit user profile
- Block / Unblock user profile
- View recently sent messages (FCM)
- Send push notifications (FCM) to all users or for an individual user

6.Expected Project Outcomes

We will develop an android based app, which will amend the mode of current Unsafe yet risky social media platform by providing a **safe, privacy focused anonymous social media platform**.

This application can also be **custom build** according to the user requirements by providing feature like **private chat rooms** to allow specific people in any **campus or region**.

We will apply software engineering knowledge to analyze this problem and provide a modern engineering solution. During this project tenure we will apply **professional ethics** and will understand the importance of **team work** and **communication** while presenting project in various competitions and conferences for **project management**, which leads us to engage ourselves in **lifelong learning**.

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