# Aim

What our group looks to accomplish through this project is the establishment of a fully-fledged dating service equipped with all the bells and whistles present in other dating services available while at the same time streamlining the user experience to potential users. This serviced service is designed with scalability in mind and can be endlessly improved overtime. As mentioned before, the outcome of this project will be a website and mobile application where users will be matched and interact with each other virtually. This service will be comprised of multiple complex technology stacks and will require a vast amount of time and funding. As stated earlier, completing this project will not only aid members of our group in developing our skills and furthering our careers but also benefit the new generations of young adults in navigating the brutal modern dating scene.

# Goals:

## 1. High Priority

1.1. Working website and/or mobile app

This website will be developed with various programming languages such as HTML, CSS and JavaScript, and frameworks such as React, Django, etc. The website will include a login page, the main UI, a navigation system, profile settings, user history, etc. These pages and features will be implemented similarly to a mobile app programmed in Kotlin for Android and Swift for IOS products. Since this is the primary way for users to access our service, this project must feature a functional website and/or mobile app that is ready for commercial use for this project to achieve success.

1.2. Effective Matchmaking

Users would only use a matchmaking service that could create matches effectively, and the same applies to our service. The matchmaking algorithm must be highly optimized and thoroughly assessed before being put to live use for the service. This system will consist of multiple well-researched algorithms for matchmaking purposes, such as the Gale-Shapley algorithm [3, P] and our proprietary algorithm based on the 20 questions game. Without a genuinely effective matchmaking system, our service will not attain the trust of potential users and, in turn, will cause the failure of the entire service due to a lack of users.

1.3. Advanced Security and Privacy

With any popular service that manages user data, the protection and security of this data heavily lie on our shoulders, especially for a service such as ours, which works with extremely sensitive data from our users. The security for our service will consist of a host of layers of protection from cyber-attacks and data leaks, including encryption, Two-factor authentication (2FA), Integrated Malware Protection, and Blockchain Technology [https://www.techtarget.com/searchcustomerexperience/answer/How-do-companies-protect-customer-data], to ensure that our users feel comfortable with our service handling their personal information. We believe that seriously developing these security measures is essential for our service, not only for morals and ethics but also for the susceptibility to lawsuits, fines, and distrust from the user base that will arise if these measures are not met.

## 2. Medium priority

2.1. Communications

It is vital for users to have the ability to contact their matches through our platform instead of getting them through other means. The communications systems we envision for this service are a chatting feature and a voice/video call feature similar to popular texting services (Messenger, WhatsApp, etc.), where users can send texts/pictures/videos to each other and stream their calls live on the Internet. This feature is prevalent in many dating services, and we agree that its inclusion will increase the convenience factor of our service.

2.2. Database & Accounts system

Like other dating services, the ability to store users’ data for repeated use will prove helpful when users continue to use our service in the long run. This service will be built from the ground up using PostgreSQL, MongoDB, and MySQL [cometchat]. It will be utilized to store users’ data and settings, preferences, the service’s analytical data, etc. Expecting users to enter their preferences and data each time they want to access our service is nonsensical as it turns using the service from a pleasant experience into a chore.

2.3. Machine Learning

As Machine Learning and Artificial Intelligence become more prevalent in the IT industry, they become more critical in any IT-related service. We agree entirely that implementing this booming side of the industry is necessary for the success of our dating service. The usage for Machine Learning is almost limitless in services such as ours. We intend to use it to analyze the users’ data and chat messages, enhance the matchmaking algorithm further, and create prompts for users to start chatting when they get stumped on how to start conversations. These features will improve our service and improve the user experience immensely.

## 3. Low priority

3.1. Monetary system

Even though BEAT may not be designed for monetary gain, money is still needed to fund the development and upkeep of the BEAT’s services, servers, databases, etc. To refrain from interfering with the users when using our service, the primary means we will gain funds with the service is through visual advertisement banners that occasionally appear on our website and mobile app. We will additionally provide an optional membership that will remove those advertisements for users who find them too distracting or want to support our service.

3.2. Miscellaneous Features

Every IT service requires a collection of features that enhances the user experience and creates a satisfying experience to attract new users and attain existing ones. We are no outlier to this fact as our service will incorporate a host of features that will match our goals for the ideal user experience. These features include but are not limited to Geolocation, Reporting, Advanced search, etc. Features such as these will be the finishing touches to our service and contribute to the convenience we imagine users of BEAT will have the opportunity to experience.