# Cliquer

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## Problem Statement

There are social media platforms, such as Twitter and Facebook, that aim to connect friends and families, and also team collaboration platforms, like GroupMe or Slack, that allow users to conveniently create groups with their friends. However, these applications are inadequate in allowing users to connect with new people while also providing the convenience of connection and group-making. Our goal is to maintain the feel and ease of use of other social media platforms while also supplying users with the ability to create groups with anyone, friend or stranger, who shares similar skills or interests.

## Background Information

### Target Audience

The target audience is young people who already use social media platforms such as Facebook or LinkedIn, but wish to also have the team collaboration aspect with people in their area based on interests. Included in this could be people searching for game or project teammates, club members, dates, or just friends to hang out with.

### Similar Products

There are already other applications that aim to group people together, each with different strengths. Slack and GroupMe mainly focus on allowing existing groups to create a lobby to chat in to facilitate group communication. Applications such as Twitter, Facebook, and LinkedIn use algorithms to recommend friends by using friends-of-friends, location, and association similar to how we expect to recommend members for a group. YikYak allows nearby users to form , like our app would, with more of an emphasis on anonymous discussion. Tinder is also similar in that it facilitates meeting new people, similar to how our app would function.

### Limitations of Existing Platforms

The limitation that most of the applications have is there is not a way to make a collaborative group with people you do not know. For GroupMe and Slack, you are required to invite potential members with a phone number or e-mail address. Facebook, Twitter, and LinkedIn put a lot of weight into friends or friends-of-friends and do not have any automatic grouping algorithms. Most of these social medias require you to already have connections to begin with. YikYak, while it does allow communication with new people, isn't suited for creating teams due to the anonymity aspect. Tinder is closer to what we want because it has a matchmaking algorithm, but it is exclusively for dating. There is no popular system that groups users based on similar interests or goals, so we seek to fill this gap.

## Functional Requirements

1. As a user, I would like to create an account.
2. As a user, I would like to link my account to Facebook or LinkedIn.
3. As a user, I would like to be able to change my password.
4. As a user, I would like to add skills.
5. As a user, I would like to import skills from LinkedIn.
6. As a user, I would like to change what skills I have.
7. As a user, I would like to view my own profile.
8. As a user, I would like an intuitive interface.
9. As a user, I would like other users to be able to invite me to a group.
10. As a user, I would like to be able to browse public groups.
11. As a user, I would like to be able to broadcast public group events to nearby users.
12. As a user, I would like to search for friends.
13. As a user, I would like to add new friends.
14. As a user, I would like to know my reputation compared to other users.
15. As a user, I would like to be noticed even with a lower reputation.
16. As a user, I would like to opt-out of search results.
17. As a user, I would like to specify a range of reputation to be matched with.
18. As a user, I would like to create groups.
19. As a user, I would like to have the option to become a moderator.
20. As a user, I would like a new user flag.
21. As a user, I would like to be able to send feedback to the developers.
22. As a user, I would like to be able to delete my account.
23. As a group creator, I would like to specify whether a group is public or private.
24. As a group creator, I would like to close a group that I have created.
25. As a group creator, I would like to kick members.
26. As a group creator, I would like to find people based on the options I specify.

27. As a group creator, I would like to specify a range of reputation to search.
28. As a group creator, I would like to screen eligible users before they join the group.
29. As a group creator, I would like to invite specific users.
30. As a group member, I would like to chat with groups I am matched with.
31. As a group member, I would like to react to group mates' chat messages.
32. As a group member, I would like to rate the skills of other group members.
33. As a group member, I would like to add to the reputation of other group members.
34. As a group member, I would like to report disruptive or dishonest group mates.
35. As a group member, I would like to view the profile of other group members.
36. As a group member, I would like to be able to leave a group.
37. As a moderator, I would like a separate moderator account along with my user account.
38. As a moderator, I would like an interface where I can review reported users.
39. As a moderator, I would like to flag users that I deem disruptive or dishonest.
40. As a moderator, I would like to ban users who have been flagged multiple times.
41. If time allows, I would like an app on my phone.
42. If time allows, I would like a leader board of reputations.
43. If time allows, I would like a reputation reward system.
44. If time allows, I would like to be able to upload relative files to the group.
45. If time allows, I would like to be able to invite people to the application.

## Non-Functional Requirements

### Architecture

Front end will be written in JavaScript using the React.js framework. Because we plan our project to be fairly big, we will also use Redux to allow managing the state of our website better. This will especially help with the chat service we plan to implement. We plan to make more than a single-page app, so we will use React Router to handle the routing and allow for a multi-page app.

Back end will be written in Java, with a Spring framework to allow the server to be set up quickly. The Spring application will handle persistence in a MongoDB database and handle serving up the React app. Server hosting will be done on the Purdue CS server through a virtual machine setup with CentOS. The goal of this setup is to consistently maintain hundreds of group lobbies of up to a hundred group members.

### Performance

Use of a NoSQL database will allow information to be quickly verified, obtained, or changed by users, and a dedicated virtual machine on the back end will allow all available resources to be utilized by the server for maximum potential. Since Spring automatically handles multi-threading, incoming requests can be received and handled independently and should scale with the number of active groups.

### Usability

Using React will allow for modular components, so we will make a standard component that is used across the app to display information cleanly, consistently, and intuitively. We hope to create a seamless and easy user experience by styling our components with CSS that makes them easy to read and view. Navigation should also be intuitive for the user; it should not be hard to find certain features.

### Security

Account information, including user name, password, and profile information, will be securely stored in a MongoDB database, with entries for each user, so as to protect the users' information from potential attackers. In terms of the practical security of how easily users can view other users' profile information, the information seen will be extremely limited unless the users are in the same group, where such information may be necessary, and even then only information that would be relevant to the group could be viewed by other group members.