# FINDDIT: CAPSTONE PROJECT

**Project title:** Finddit
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**Project Description:** We are trying to solve the problem of deciding on a restaurant/activity that users in a group will enjoy. This will be streamlined by building an app, taking in user preferences, creating a swipeable stack UI, and displaying the top choice in the end.

The functionality we expect to include in the app are as follows:

- Login/Sign up pages
- Profile creation with name, picture, dietary restrictions, and activity preferences
- Group creation and joining groups
- Notifications to users when they are added to a group
- Swipeable Stack UI to allow users to vote on options
- Group voting deadlines to ensure a decision is made in time
- Real-time voting with a vote tally and top choices displayed
- Filters and Searches based on price, location, activities, cuisine type, etc.
- The final decision is displayed prominently on a leaderboard
- Maintain a history of past group decisions and activities for reference

This idea is driven by a common challenge experienced by our group members when it comes to making collective decisions for our daily activities. This recurring issue has often sparked disagreements and, as a consequence, consumed substantial time in reaching a consensus, whether it's for selecting a straightforward restaurant or an enjoyable group activity that accommodates everyone's preferences. The purpose of this project is to build an app that simplifies group decision-making, discovers potential nearby activities and restaurants, and provides a good user experience compared to back and forths while texting in a group chat.

The stakeholders of this project are developers, users, and restaurant/activity providers.

Our project will be built in an app with both a front-end and a back-end. We will not be using Machine Learning in this project. The app will be built using React Native and Javascript for the front end and Nest.js Typescript backend paired with the Firebase database.

We will create an algorithm to rank restaurants for group outings, aiming to maximize group happiness. This involves creating a cost function that factors in user preferences, veto power, and vote weights to calculate a Restaurant Score for each restaurant. Positive votes boost the score, while negative votes reduce it. Users can also use a super dislike to veto a restaurant. The final ranking will be based on these Restaurant Scores, with the goal of optimizing the happiness in the group.

We will also be using Google Maps APIs for the discovery of nearby places. For testing purposes, emulators in Android Studio and XCode on MacOS platforms will be used to see our changes while developing. Figma will be used to wireframe our designs for the app and create separate pages and tabs for the UX. We also plan to use Jira and a ticketing system to distribute the workload evenly amongst the team. This will provide visibility on the active and completed tickets enabling us to plan efficiently.