

## Team

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## popfund: CS 97 Project Proposal

popfund aims to alleviate mom and pop shop financial struggles through Covid-19. To do this, we will create a centralized platform where individuals can stimulate local businesses in a variety of ways, such as buying their products and services, donating to these businesses, or participating in bids thus helping them pay their employees. In doing so, the local community has the opportunity to help ensure the future of their favorite local businesses after the quarantine.

popfund will contain these integral parts: a detailed profile for local businesses, a list of funding requests from small businesses with the target amount, current amount, and purpose, and a purchasing section showing the products, subscriptions, and services that local businesses near you are offering. Our users will have the option to create one of two types of profiles: small businesses and individuals/donors. Small business profiles will exclusively have the ability to create and manage funding requests as well as add services, products, or subscriptions to the purchasing tab. Individuals will then be able to check out their favorite shops on our app and contribute financially, either through direct donations or purchasing of subscriptions/products. In addition, individuals will be able to see charts of funding goals fulfilled as well as their contribution to that goal.

Some things our app will not do, unless we have time after testing, are creating a way of verifying a business or creating a review page where we can see how people gauge the businesses' use of their donors' money. Other features that are just out of our current scope include creating our own payment method or adding a social interaction feature that allows

communication between other users. Creating our own payment method would take way too much time and is simply not in the general purpose of our application. Additionally, while adding a social interaction between users might increase the amount of time users spend on the app, it also may complicate the app too much, potentially deterring older generations from joining or using the app.

The features we talked about can be implemented using SQL(or possibly No-SQL e.g. MongoDB), a Python and flask application, and a Swift User Interface. Although we are not set on these technologies, this will serve as a tentative foundation for the frameworks we will use. On the backend, we are planning on using SQL to store tables containing dynamic and integral information such as the profile information of small businesses, the list of funding requests, and the list of items that could be bought by individuals. Our backend will also handle payment authentication, interacting with third party payment APIs such as PayPal or Stripe. On the frontend, we plan to use iOS Swift (SwiftUI / Storyboard tentative) to build a mobile application to handle fundamental user experience. The main view will be a list of local businesses based on GPS proximity. As mentioned previously we will also have a detailed view for each business highlighting current funding goals, products/subscriptions being offered, ongoing bids, basic descriptions, etc. We can alternatively redirect the user to the small businesses website to buy the item they are interested in. We will collaborate with our team members using a GitHub repository to store our work and track the changes we make and use a form of monday.com to keep up to date with the logistics of each person's job and how it is coming along. We decided to use GitHub due to the benefits of version control and being able to back up our files and tracking the changes (and their rationale) over time.

Overall, we decided on breaking it into front-end and back-end. The front-end team will handle the UI and develop the iOS app. The back-end team will be in charge of setting up the database and creating the application to connect the front-end and back-end. Dave and Rish will be in charge of the back-end, and Mat and Sam will be in charge of the front-end. Although we are splitting into two teams, we are planning on meeting once a week to explain the changes we have

made and the progress we have made. This will help us set goals for the upcoming week that we will try to reach. Since we have similar schedules taking CS 97 and CS 33, it will not be too difficult to set up these meetings and ensure that we all are able to hit the deliverables we come up with. We hope that the donation feature of the app will be finished first, then we will move onto profiles, and add the purchasing order option last. We will test incrementally and define the edge cases as we go. As mentioned earlier, we will collaborate and communicate outside of class through meetings held on Zoom and through updating an agile board to track our progress.