



# **COVID Lens**

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## Project Definition

COVID Lens is an iOS application that will be utilized as a viable data-driven tool to help combat the current safety and social threats posed by the COVID-19 virus. The global COVID-19 pandemic was declared on March 11, 2020 by the World Health Organization and, as the new year is slowly approaching, the virus shows no apparent signs of disappearing soon. This suggests a necessity of new data-driven tools and methods to help society work around and cope with COVID-19 while promoting safety. The main goal of COVID Lens is to produce a novel COVID-19 tracking and public awareness system that will inform and protect members of the UNCG community from the COVID-19 virus. COVID Lens will regularly update and inform users of the possibility of COVID-19 exposure in their area. Users will be provided with information and resources - from reliable sources such as the Centers of Disease Control and World Health Organization - to stay up-to-date with current COVID-19-related news as well as current safety measures. Users will also be able to view a real-time map that displays areas where positive COVID-19 diagnoses have been reported.

## Functional Requirements

- The application should be able to track user location data and update it in real time.
- The application should be able to display data on a real-time map.
- The application should be able to gather required data from users.
- Users should be able to sign up and sign in using their UNCG student login credentials.
- The application should provide users with guidance and reminders regarding COVID-19 safety measures.
- Users should be able to self-report a positive diagnosis for COVID-19 while preserving anonymity.
- The application should provide users with nearby COVID-19 testing locations.

## Usability Requirements

- Users will be able to adjust settings to personalize their experience with the app.
- Authorized users will have fast access to data upon request.
- Users also will be able to share their experiences.
- The user interface should be easy to learn and navigate.

## System Requirements

- Supporting any major version of iOS 13 or higher.
- Basic internet connectivity or cellular data service.

- Additional recommended requirements:
  - Bluetooth-supported devices
  - Mobile location data enabled

## **User Requirements**

- User must be a student currently enrolled at UNCG.
- Allow basic device permissions for the application.

## **Security Requirements**

- Application must maintain the confidentiality of all sensitive data that is classified confidential.
  - Emails
  - Passwords
  - Location data
  - User diagnosis report
- Application libraries/APIs must follow and ensure the confidentiality of login information.
  - Sign-up/sign-in APIs.

## **Project Specifications**

### **Focus Domain**

COVID Lens will serve to inform and protect members of the UNCG community from the COVID-19 virus by containing it as it encourages users to self-quarantine when needed and social distance. It would also focus on informing the UNCG community on preventive measures from the virus.

### **Libraries / Frameworks**

- MySQL for database services
- Swift for front end development
- Python for data analysis
- PHP for back end development

### **Platform**

An iOS application available for Apple mobile devices.

### **Genre**

An iOS application within the genre of health and community and community safety.