

## SDSU Program Design Competition 2017

### Cell Phone Theft Security with GPS Tracking

Anti-Theft Mobile Security is a mobile application that allows a user to find his/her lost phone by sending a message to the phone via a web application. This web application has a module where the user can register for this service using his/her name, phone number, email id, and password. Once registered, the web application is linked with the mobile app allowing the user to send a message to his/her lost phone. When the message is sent to the phone, the mobile app will take a photo and send the photo with the current GPS coordinates to the web application.

For example, let's assume your day just got worse because you lost your phone. You will login to your web application and a button will trigger the lost phone. The mobile app will then take a picture and send the picture along with the GPS coordinates of the phone, by which the user can track the phone. The picture taken by the phone allows you to identify the location of the phone and view the photo of the surrounding environment – or better yet, get a look at the thief.

This project is a combination of a web application and a mobile application. Therefore, the key aspects of this project are three-fold: (1) development of modules that enable the communication between the web application and the mobile application; (2) development of modules to access the camera and the GPS modules of the phone; (3) user interface design for both web and mobile applications for better and easier user interaction with the applications.

Your work will be judged on:

1. Correctness of the solution
  - a. Communication between the web and mobile apps
  - b. Correct access to the camera module of the phone
  - c. Correct access to the GPS module of the phone
2. Completeness of solution
  - a. User can register for this service via the web app
  - b. User can send a message to the phone
  - c. The mobile app can take a photo and obtain the current GPS coordinates
  - d. User can retrieve the photo along with the current GPS coordinates via the web app
3. User-interface design

The mobile app can be developed on either an Android or an iOS platform. Use any tools you like to accomplish the task, including any operating system and any browser.

All team members are encouraged to participate during the presentation. All parts of the presentation and source code must be burned to a clearly-labeled CD and submitted to the program design competition committee on the day of the competition. If you have any questions regarding the problem, please do not hesitate to ask us. (myounggyu.won@sdstate.edu or jerry.cooley@sdstate.edu). Good luck and have fun!