Project Proposal document

**Verbal Description:** The application I have decided to build is a social-camera app for Android that is meant to replace the native camera app. The primary purpose of the application is to simplify the process of sharing photos with friends and family. Generally photos are taken with said friends and family after social events with the goal of sharing them with those involved. Currently, sharing photos is a multistep process usually involving a camera application, a gallery application, and a messaging application. What I am building aims to streamline and automate the process, so that users only need to specify who they would like to share photos with, rather than how they are shared. All users of the application need to sign up for an account. Once registered, they can look up friends and family by username, or through Facebook. Users can then create user groups containing one or more friends. When launching the app, users will have the option to select a group to share the pictures with. Any photos that are taken during that session will be automatically sent to each of the members of that group. The application will have its own gallery interface that will contain all of the pictures on the user’s device, as well as any photos that have been shared with them by members of the groups they are in.

**Justification:** This application will give me the ability to build both a database-backed REST API, as well as an Android client. I will be using best-practice principles learned throughout my past 3 years as a Computer Science major to demonstrate my ability to produce clean, functional, and maintainable code that provides an intuitive yet appealing user interface to the end user. Though I helped with architecture decisions for our REST API last semester, I have not single-handedly engineered and implemented an entire backend architecture, so this will be on its own, a new challenge for me. Last semester in 402, I personally implemented the Android client, which performed network communication, so I do have enough experience with that to ensure that I have a working user-facing product to present by the end of the semester. I am, however, still challenging myself to step outside my comfort zone to further enrich my knowledge of Android development. I will be working with technologies I haven’t used before, including Android’s Camera2 API for communicating with the camera hardware, and additionally exploring new libraries and tools for producing modern looking front-end design. I will certainly have enough of a challenge to build the best piece of functional software that I have built to date. I also have a strong interest in photography, and sharing photos with friends and family. I have experienced the role photography has in upholding memories of the past, and re-invigorating interpersonal relationships by reminding people of positive interactions they have experienced together. I am hoping that this app will allow people to continue to focus on the real reason they are taking pictures, to share and remember their human experiences with others, instead of having to waste time worrying about how the photos of these experiences are shared.