Literature Survey

**#1 Over-Exposed? Privacy Patterns and Considerations in Online and Mobile Photo Sharing**

As sharing personal media online becomes easier and widely spread, new privacy concerns emerge – especially when the persistent nature of the media and associated context reveals details about the physical and social context in which the media items were created. In a first-of-its-kind study, we use context-aware camerephone devices to examine privacy decisions in mobile and online photo sharing. Through data analysis on a corpus of privacy decisions and associated context data from a real-world system, we identify relationships between location of photo capture and photo privacy settings. Our data analysis leads to further questions which we investigate through a set of interviews with 15 users. The interviews reveal common themes in privacy considerations: *security, social* *disclosure, identity* and *convenience*. Finally, we highlight several implications and opportunities for design of media sharing applications, including using past privacy patterns to prevent oversights and errors.

**#2.** **Privacy Suites: Shared Privacy for Social Networks**

Creating privacy controls for social networks that are both expressive and usable is a major challenge. Lack of user un- derstanding of privacy settings can lead to unwanted disclosure of private information and, in some cases, to material harm. We propose a new paradigm which allows users to easily choose \suites" of privacy settings which have been speci\_ed by friends or trusted experts, only modifying them if they wish. Given that most users currently stick with their default, operator-chosen settings, such a system could dramatically increase the privacy protection that most users experience with minimal time investment.

**#3 SheepDog – Group and Tag Recommendation for Flickr Photos by Automatic Search-based Learning**

Online photo albums have been prevalent in recent years and have resulted in more and more applications developed to provide convenient functionalities for photo sharing. In this paper, we propose a system named *SheepDog* to automatically add photos into appropriate groups and recommend suitable tags for users on Flickr. We adopt concept detection to predict relevant concepts of a photo and probe into the issue about training data collection for concept classification. From the perspective of gathering training data by web searching, we introduce two mechanisms and investigate their performances of concept detection. Based on some existing information from Flickr, a ranking-based method is applied not only to obtain reliable training data, but also to provide reasonable group/tag recommendations for input photos. We evaluate this system with a rich set of photos and the results demonstrate the effectiveness of our work.

**#4 Personalizing Image Search Results on Flickr**

The social media site Flickr allows users to upload their photos, annotate them with tags, submit them to groups, and also to form social networks by adding other users as contacts. Flickr offers multiple ways of browsing or searching it. One option is tag search, which returns all images tagged with a specific keyword. If the keyword is ambiguous, e.g., “beetle” could mean an insect or a car, tag search results will include many images that are not relevant to the sense the user had in mind when executing the query. We claim that users express their photography interests through the metadata they add in the form of contacts and image annotations. We show how to exploit this metadata to personalize search results for the user, thereby improving search performance. First, we show that we can significantly improve search precision by filtering

tag search results by user’s contacts or a larger social network that includes those contact’s contacts. Secondly, we describe a probabilistic model that takes advantage of tag information to discover latent topics contained in the search results. The users’ interests can similarly be described by the tags they used for annotating their images. The latent topics found by the model are then used to personalize search results by finding images on topics that are of interest to the user.