PicAlert! A System for Privacy-Aware Image Classification and Retrieval

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A large portion of images, published in social Web2.0 applications, are of a highly sensitive nature, disclosing many details of the users’ private life. We have developed a web service which can detect private images within a user’s photo stream and provide support in making privacy decisions in the sharing context. In addition, we present a privacy oriented image search application which automatically identifies potentially sensitive images in the result set and separates them from the remaining pictures.

Acquiring the Ground Truth Using a Social Annotation Game

Common notion of privacy: “Private are photos which have to do with the private sphere (like self portraits, family, friends, your home) or contain objects that you would not share with the entire world (like a private email). The rest are public. In case no decision can be made, the picture should be marked as undecidable.”

81 users annotated
37,535 recent images
27,405 public
4,701 private

Feature Extraction

Classifier Training

BEP
Visual: 0.74
Text: 0.78
Combination: 0.80

Search & Web Service

Search results for the query “cristiano ronaldo” (06/06/12).

Web service GUI for privacy-oriented image classification.