TIE-21307 Large-scale Software Design, spring 2019

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Topic

Nowadays people live in virtual environments more and more. They leave lots of information about themselves in the Internet. In this exercise we will design an architecture for "Nerdy SocialSniffer" that evaluates a person's digital footprint and scores the expert value of an examined person.

A user can give a name and other identifying information about the sniffed person to request social status evaluation from that person. Based on the information, the Nerdy SocialSniffer starts to search different social media platforms and similar sources (such as Twitter, Facebook, LinkedIn, Google Scholar, GitHub...) and collects data about person's effectiveness in communication and whether any signs of expertise are present. A summary about the results is shown to the user.

To allow for easy social status evaluations, the system must also support cameras and face recognition, to enable automatizing of the evaluation process in multiple locations at the same time. Results from the evaluation can be used to monitor and control access rights in these different locations, for example by preventing unaccomplished students to participate in class about advanced topic.

When the automatic evaluation process is in place, admin users receive notifications in their mobile phone applications about exceptionally high or low expertise statuses that are found. The admin users are location specific.

Sometimes just finding about expertise is not enough, so system must allow for easy way to switch between different profiling and evaluation methods. That is also why collected data must be stored, in case of future evaluations. The system must also store the results of the evaluations, and allow user to search for persons with specific kind of evaluation results.

Requirements for the software system

• System should have comprehensive logging facilities (when evaluations were made, who requested evaluations, what evaluations were requested, who accessed evaluations)
• System upgrades should be automatic
• System must protect against wrongful access to the evaluation data
• System should be protected against external and internal risks (threats to the system integrity)
• System should ask confirmation in unclear cases, e.g., many people with a same name are found
• System should be prepared for the additions of new social media site