

3.28 Large-scale Image Retrieval

Keywords

Content-based image retrieval; large scale

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Corporate Sponsorship Program

See Section 4 of the present document

File reference & version number:

Software disclosure 6006

Functional description

Iterative Relevance Feedback is a software technology to facilitate search in very large image databases. The core idea is to provide the user with an interactive interface which displays candidate image among which he has to pick the most relevant. From that choice, the system update the scores attached to every image, and propose a new selection. The approach we develop relies on a sophisticated statistical model which maximize the information gathered from the user at every step.

Our technology can cope with very large databases. Concurrent methods with the same statistical models are limited to a few tens of thousands of images. Our technique allows to scale this up by two orders on a single PC, and has to potential to scale by several other orders of magnitude on a dedicated cluster of machines.

Innovative aspects

- Use an adaptive granularity for the image set representation
- Scales gracefully to very large data-sets

Commercial application examples

- On-line product search
- Interactive person identification
- Image bank browsing

More information

N. Suditu and F. Fleuret. Adaptive relevance feedback for large-scale image retrieval. Multimedia Tools and Applications (MTA), 2015. To appear.

Software & IPR status

The reference implementation is available under the GPL3 license:

- HEAT system: <http://www.idiap.ch/scientific-research/resources/heat-image-retrieval-system>