Computer Vision

Serge Belongie
Professor , Computer Science and Engineering Professor , Computer Science

CURRENT RESEARCH

Capturing and sharing visual knowledge

If one knows what something is called, a text-based search on websites such as Google and Wikipedia are tremendously useful. However, what if one only has an image or mental image of that "thing" - how can one find it? Using text-driven searches for identifying images has so far proven very difficult. The ultimate goal for Dr. Serve Belongie of Cornell University is to fill this gap in online-search engines and revolutionize the way we search for and identify specific images. Visipedia, an innovative combination of computer vision, machine learning and crowdsourcing, bridges this gap. His research uncovers novel ways of capturing and sharing visual knowledge. By applying the tools of computer vision and machine learning, he will help people visualize the world around them in ways once thought unimaginable

- Dr. Belongie's research in computer vision technology draws upon the complementary strengths of humans and machines to solve an array of human needs.

- More specifically, he trains computers to serve as human visual-assistants for a wide range of applications. For example, he started the "Grocery Shopping Assistant for the Blind" initiative which provides assistive technology for the visually impaired. This technology grants access to textual information located in grocery store settings - thus, comparing two identical cans of soup is no longer a privilege of the sighted!

- Additional applications of Dr. Belongie's research include an electronic-eye to monitor sensitive coral reefs, video fire-detection systems, and facial recognition programs. At this time, the "Visipedia" project (in collaboration with Caltech) remains the top focus for his personal...

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AFFILIATION

Cornell University

EDUCATION

- Ph.D., in Electrical Engineering and Computer Science, 2000,University of California, Berkeley
- M.S., in Electrical Engineering and Computer Science, 1997 ,University of California, Berkeley

AWARDS

- MIT Technology Review "Innovators Under 35" Award, 2004
- NSF Career Award

RESEARCH AREAS

Technology, Computational Sciences / Mathematics

FUNDING REQUEST

Visipedia is a revolutionary search-by-image application that will enable people to submit a random photograph and learn about its contents. This interactive search-by-image tool will allow learning to occur at unprecedented levels. Your funds will help with the development and roll-out of a web and mobile application for Visipedia.