Technologies That Serve Patients

Gang Hua
Associate Professor, Computer Science

CURRENT RESEARCH

Fundamental problems in computer vision lead to innovative technologies with human-health implications

It is common for patients that experienced a stroke to be affected by a loss in hand functionality afterward. Despite extensive physical therapy, many are never able to regain the same hand-functioning abilities to accomplish their daily activities. Dr. Gang Hua, of the Stevens Institute of Technology, tackles fundamental problems in computer vision, from both the algorithms and systems perspective, to enable technologies and systems that facilitate transforming the massive amount of unstructured real-world visual data into structured knowledge. In this way, Dr. Hua's research builds technologies that can benefit people in their daily lives. By focusing on computational models where he and his team can intelligently coordinate software or robots, Dr. Hua allows people to collaborate with technology for improved health outcomes.

More exciting than the incredible innovation behind Dr. Hua's technologies is the way his work is truly centered around the people the technologies aim to serve. His team, including five Ph.D. students and researchers that collaborate from other research institutes, are passionate about work that will have the greatest impact upon patient populations in need of technology's assistance. Dr. Hua takes on the challenges of intelligently creating, understanding, managing, searching, visualizing, and interacting with the gigantic amount of data available to us and employing it to facilitate communication and social networking among users. While addressing such challenges requires a deep understanding of the problems Dr. Hua has recognized that it can also result in solutions that generalize to other related common problems. This opportunity to inspire technologies that can have direct...

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AFFILIATION

Stevens Institute of Technology

EDUCATION

- Ph.D., in Electrical Engineering and Computer Science, 2006 , Northwestern University

AWARDS

- PI, "NRI: An Egocentric Computer Vision based Active Learning Co-Robot Wheelchair", National Institute of Health (NIH) R01NR015371, 09/01/2014-08/31/2017
- Google Research Faculty Award, Google Research, 2013
- Microsoft Live Search Ship-It Award, Microsoft Corporation, 2007
- Outstanding Reviewers, IEEE Conf. on Computer Vision and Pattern Recognition, 2010 and 2013
- Terminal Dissertation Year Richter Fellowship, Northwestern University, 2005-2006

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, Informational Sciences / Internet, IOT, Devices, Data

FUNDING REQUEST

Your contributions will support the continued research of Dr. Gang Hua, of the Stevens Institute of Technology, as he creates technologies that directly impact people's life. Donations will fund the necessary $1M required for his research in hand modeling for hand rehabilitation including supporting personnel, necessary hardware infrastructure, and collaboration for medical professionals. In choosing to donate, you will play a role in revolutionizing technologies that can improve quality of life and health for patients around the world.