When it comes to vision, computers are beating us at our own game

Does computer vision need inspiration from human vision at all?

In some ways, the answer is obviously no. The information that reaches the visual cortex is constrained by anatomy: Relatively few nerves connect the visual cortex with the outside world, which limits the amount of visual data the cortex has to work with. Computers don't have the same bandwidth concerns, so there's no reason they need to work with sparse information.

"If I had infinite computing power and infinite memory, do I need to sparsify anything? The answer is likely no," [computer scientist John] Tsotsos said.

But Tsotsos thinks it's folly to disregard human vision.

The classification tasks computers are good at today are the "low-hanging fruit" of computer vision, he said. To master these tasks, computers merely need to find correlations in massive data sets. For higher-order tasks, like scanning an object from multiple angles in order to determine what it is (think about the way you familiarize yourself with a statue by walking around it), such correlations may not be enough to go on. Computers may need to take a nod from humans to get it right.

Read full, original post: Computers and Humans 'See' Differently. Does It Matter?