Are you an expert or novice? Brain scans can tell the difference

To gain new insight into how highly specialized workers learn skills or react to stressful situations, researchers are leveraging advanced scanning technologies to look at what's happening inside the brain.

In the latest findings, a team of researchers studied surgeons as they performed surgical simulations and found they could identify novice from experienced surgeons by analyzing brain scans taken as the physicians worked.

The researchers, who described their findings [October 3] in the journal Science Advances, said that the part of the brain involved in planning complex behaviors was more active in the novices. Skilled surgeons had more activity in the motor cortex, which is important for movement.

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Researchers think such devices could be used to give workers feedback about their performance and to predict who would be a good baseball player or surgeon.

Neural data could offer more objective measures of performance and proficiency than medical-certification boards now use, according to the research team, which included engineers and surgeons. Ultimately, they want to improve the way surgeons are trained, not limit what they can do, they said. A future iteration of their technology could be used to assess comfort levels with certain medical procedures or to help doctors figure out whether they're rusty on certain skills or too fatigued to operate.

Read full, original post: Brain Scans Can Detect Who Has Better Skills