The DETECT system is a portable, efficient diagnostic tool that creates an immersive environment for neuropsychological testing to determine the presence and severity of concussions. Possible applications include:

- Sideline assessment of sports-related injury
- Emergency room diagnostics
- Battlefield evaluation

The virtual display and noise reduction technology used in the DETECT system will create a non-distracting, immersive environment for neuropsychological test administration.

42 uninjured Georgia Tech undergraduates participated in the study. They completed the test twice, once in a lab without additional noise and once in the lab with simulated noise. Two sets of data were used, and the study was counterbalanced to avoid ordering effects. Responses and reaction time were recorded. After the tests, participants completed a post-task questionnaire to assess the effectiveness and comfort of the hardware components.

The findings show the environments did not contribute to significant differences in test scores or reaction times.

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