TESTING VISUAL UNDERSTANDING ABILITIES OF SHAPE UNDERSTANDING SYSTEM: THE VISUAL INTELLIGENCE TESTS

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Abstract

In this paper understanding abilities of the shape understanding system (SUS) are tested based on the methods used in the intelligence tests. These tests are formulated as tasks given to the system and performance is compared with the human performance of these tasks. The tests were based on the progressive matrices test which requires the good visual problem solving abilities of the human subject. SUS solves these tests by transforming the visual form into the string form. The proposed string form makes it possible to perform complex visual reasoning. The experiment proved that the proposed method, which is part of the SUS visual understanding abilities, can solve the test that is very difficult for human subject.

KEYWORDS: shape understanding, intelligence test, visual concept, visual reasoning