Computer program classifies dog barks

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BUDAPEST, Hungary - Hungarian scientists have developed software that can classify dog barks according to various situations, even identifying barks from individual dogs.Csaba Molnar and colleagues at Eotvos Lorand University, reporting in the journal Animal Cognition, tested a computer algorithm's ability to identify and differentiate acoustical features of dog barks. The software analyzed more than 6,000 barks from 14 Hungarian sheepdogs in various situations. The barks were recorded, digitized and transferred to the computer, where they were coded and classified.When classifying barks by situation, the software correctly identified barks in 43 percent of cases. The best recognition rates were achieved for "fight" and "stranger" contexts, and the poorest in categorizing "play" barks. The scientists said the findings suggest different motivational states of dogs in aggressive, friendly or submissive contexts might result in acoustically different barks.In another experiment, the algorithm correctly classified individual barks in 52 percent of cases, reliably discriminating among individual dogs, suggesting there are differences in barks of dogs even humans aren't able to recognize."The use of advanced machine learning algorithms to classify and analyze animal sounds opens new perspectives for the understanding of animal communication," the scientists said.