# University of Groningen develops AI-driven sarcasm detector achieving 75% accuracy



Researchers at the University of Groningen have developed an AI-driven sarcasm detector capable of identifying sarcasm with notable accuracy. The project, led by Matt Coler at the university’s speech technology lab, aims to enhance natural communication between humans and machines by teaching AI to interpret sarcasm.

The neural network, developed by PhD student Xiyuan Gao and other researchers, was trained on text, audio, and emotional content from US sitcoms like *Friends* and *The Big Bang Theory*. The database, known as Mustard, was annotated with sarcasm labels and built collaboratively by researchers in the US and Singapore. Using this data, the AI achieved nearly 75% accuracy in detecting sarcasm in unlabelled sitcom dialogues.

The research was presented at a joint meeting of the Acoustical Society of America and the Canadian Acoustical Association in Ottawa. Future improvements may include visual cues like eyebrow movements and smirks to increase accuracy. Additionally, the technology holds potential for detecting negative tone, abuse, and hate speech, enhancing conversational AI systems and other applications.