

SNGH's Not Guitar Hero

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Abstract

Guitar Hero and Dance Dance Revolution demonstrate how computer games can make real skills such as playing the guitar or dancing fun to learn and practice. Unfortunately, the skills that these games teach are too simplified to translate well into their real world analogs. Guitar Hero uses a small abstract guitar with five fret buttons and a strum paddle to simplify note detection to a purely digital task. The goal of SNGH is to use sophisticated audio processing to create a guitar-playing game that is both realistic and enjoyable. Therefore, the core functionality of the game is the ability to detect chords being played on a standard electric guitar in real time and compare them to chords displayed on the screen. Users can learn the guitar chords for real songs, or work through preprogrammed lessons that cover a variety of common chords. The game also provides quantifiable measures of progress, so players can watch as well as hear themselves improve.