

Voice-Controlled Chess Game on FPGA Using Dynamic Time Warping

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Project Abstract

In the realm of hardware based games, user interface is very important. All too often game designers focus on improving graphics and story lines of their games without improving how games are played. We hope to address this problem by designing an FPGA based, voice-controlled, chess game. We will train the game to recognize specified voice commands from the players. We will then use dynamic time warping to compare real-time microphone samples to the trained commands to ensure a more robust system that can operate with any user. The game will be displayed on a VGA display with all the functionality of a typical chess game.