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Imagineering With Audio-Animatronics Puts Musical Notes Into Mannequins

This project combined full-form mannequins, servo motors and audio-animatronics to respond to musical input, creating a semi-lifelike dance in the mannequin. It was the hope of this project to use Imagineering to create an audio-animatronic mannequin that will appeal to a new generation of consumers. The theory was tested by engineering three mannequins, a head, torso, and lower body. Cuts were made in the mannequins and servo motors were installed to produce a semi-lifelike dance motion. The animatronic cards were programmed to give the mannequins the range of motion and the sensitivity to musical stimulus that was desired. After the construction phase of our project, we took the mannequins to Sportsfan at our local mall to see what the response would be. We then did a two part test, the first of which was just to display the mannequins without motion or music to see what the response of people would be. As you could imagine, people came into the store and if they were interested in the clothing they would look and move on. We did not see any difference between our mannequins and other mannequins that are true to form with others you would see on display. We then turned on our music and motion and observed the response. We observed that young boys, 9 - 12 years old, would come into the store and look at our mannequins and listen to the music, some even began to dance. The older teenagers frequently stopped and looked as well. As people became older, the response was not as great and they did not stand and watch, but they did look as they went by, which is really what we were after. If we can get someone to take just one more look at our product, the mannequin has done its job. Even if it is just for a second, this would be a successful enterprise. From this data, our engineering goal to combine a full-form mannequin with audio-animatronics to attract consumers has proven correct. We did turn heads and people did stop to take a few seconds notice of our product. So all in all, we believe that our project was a success and our hypothesis was proven correct.