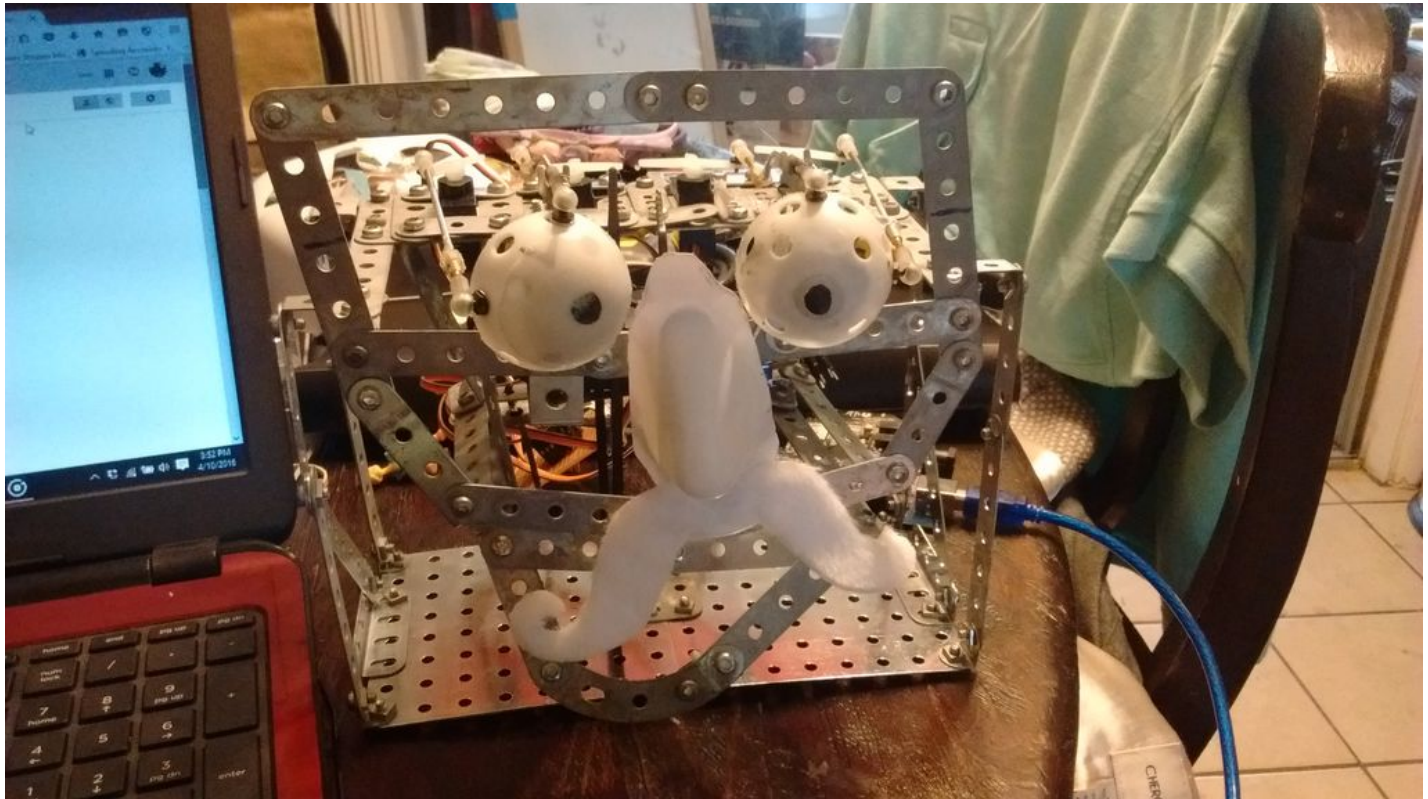


# Arduino Blog – Two college students build a hilarious animatronic face

## Two college students build a hilarious animatronic face

Arduino Team — May 13th, 2016



Let's start off by saying that, if you're a senior engineering student just weeks away from graduation, it takes some serious guts to create [an animatronic face](#) of your school's president. We should also add that it's pretty hilarious.

Geoffrey Toombs and James Schopfer are the two University of Texas at San Antonio undergrads behind the Disney Audio-Animatronics-inspired project, which uses a plastic mask, an Erector set, an [Arduino Mega](#) with an MP3 shield, and some computer speakers. The face — consisting of eyes, a nose, a mouth and a formidable mustache — is driven by a set of servos. An even cooler feature of the robot is that the mouth is synchronized to an audio clip.

The audio was a sample taken from a [YouTube video](#) using various softwares to turn the video file into an audio file and then cutting to the proper length. The original YouTube address of the video I wanted was copied and pasted on the Zamzar.com website so the video could be downloaded and manipulated. The program, Audacity, was used to turn the video file into an audio file and it allowed the audio to be clipped and saved as an MP3. This MP3 audio file was then saved to a microSD card. The card was then placed into the MP3 shield, and the shield is then carefully attached to the [Arduino Mega](#), being

careful to not bend the pins.

Code was written for the eye movements. It was decided that he would roll his eyes and wiggle his nose after the mouth movement. This wasn't really necessary but it let me use the eyes that I spent so much time making and gave a little humor to the project.

[While this particular project](#) mimicked the university's president, the Makers note that any face or picture could be used. A friend? A colleague? A principal? The possibilities are endless. Future upgrades may include a smaller speaker hidden inside the head, a web camera built into an eye, steppers for more precise and fluid movement, IR sensors and more motors for tracking, blinking eyelids, and potentially Skype integration.



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