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Math 1080

April 8th, 2017

Spring Project Reflection

A vast majority of everyday objects and patterns appear to come from sine and cosine wave functions. Not only that but they can also be broken down into sine and cosine functions. Things like a pogo stick, how our movement on one can be written as a wave function, or even a car as it goes over hills on a road. If we understand the amplitude, period, and frequency of systems we can model these systems and predict future patterns and estimate real world data from these values. This project didn't change the way I think about trigonometry and how it's applied to the world, however, the project helped further my belief in the simplicity of adding different wave functions into one. Let's say you have one runner following the pattern of a sine function and another following the pattern of a cosine wave. Now let's figure out what a collision between these two runners would look like, with the existing sine and cosine waves we have we can then predict what that collision would look like. We could also use these models to predict a collision between object flying through space, or through the water. My take away from this project is solidifying my belief that the world is made up of simple mathematical functions.