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## CSE 160 Op Ed

I learned a lot about computer graphics this quarter and thought It was cool getting to learn the fundamentals and also getting to explore the three js library later.

One thing that stood out to me and that I enjoyed learning about was how vertices and index buffers were used together to create shapes in the shaders, and how they could be manipulated with different matrix multiplications. Another cool thing that stood out to me was just how linear algebra was so useful for a real world application. Before my computer graphics classes, most of the math that I had learned in college had no evident real world applications.

Using the three.js library, it was cool to see how the fundamentals of computer graphics were used in three.js. As I was trying to figure out how to load 3d models into the scene from code, I looked at the file (called a .gltf file) and it had all of the vertex locations and indices and even textures for texture mapping. I didn't even have to set up any shaders or anything because they were already done automatically. The lighting calculations were all done automatically as I added 3 directional lights and a point light and that was really cool.\

My learning experience in the class was generally positive, but towards the last few weeks of class I felt like it was hard to keep up since professor Pang had pre-written notes instead of earlier when he would write out all his notes so I could keep up with it.