Problem Statement: To build a 1/5 scale model of ISU Campanile-Carillon.

Customer Requirements
- Easily transportable across the country
- Fully functioning model with 27 bells
- Aesthetically identical
- Playable
- Retractable tower
  - 20 ft. extended
  - 6.5 ft. collapsed
- Withstand 50 mph wind gust
- Easily assembled and disassembled
  - 45 minutes for 2 people

Scissor Lift Mechanism
The torque required to raise the fully loaded scissor lift assembly is greater than the strength of the material can withstand during the initial 6 inches of lift. Springs were added to the scissor lift frame to provide an upward lifting force so that the screw jack does not fail.

Final Design
- Facade Panels & Clock
  - The Campanile model consists of foam panels that are mounted to the scissor lift. The panels are milled and painted to replicate the texture and design of the Campanile.

- Hat & Ornamentation
  - The hat is made of foam and will be attached to a wooden support frame. This frame will be mounted to the top of the upper scissor lift and will be removable. The ornaments are vacuum formed plastic around plastic 3D printed molds.