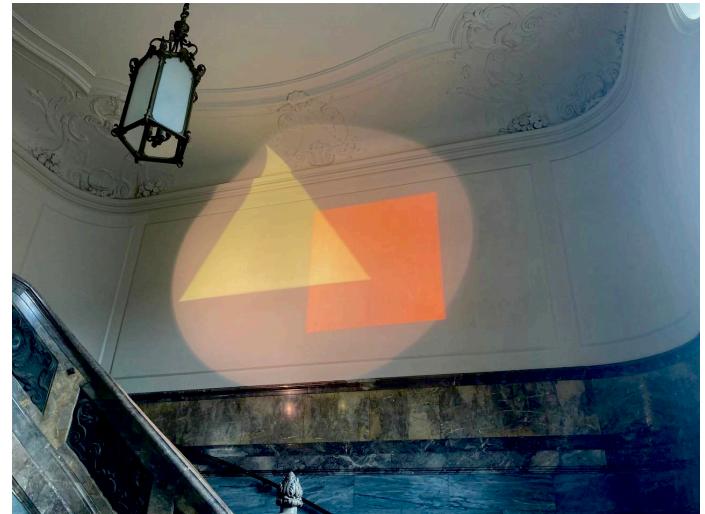
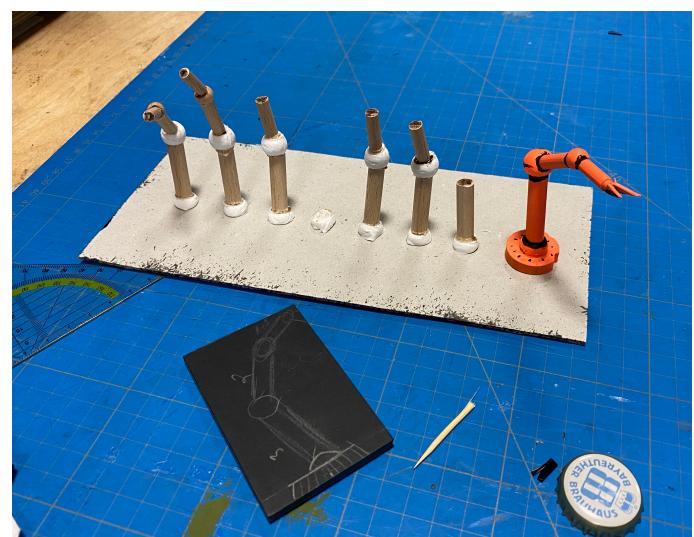


Interior lighting installation - Salon Sophie Charlotte 2022 Berlin-Brandenburg Academy for Science



As part of my lighting design course, I worked in a team of 4 to conceptualize and install interior illumination (hallways/entrance/garden) for this annual event. This year's theme, "Life as a Kaleidoscope," was meant to bring scientists, academics, and artists together to reflect on how life can be measured and shaped. We worked within the tight constraints of a small budget and the limited lighting equipment we were allocated to deliver an impactful experience for participants.

Theater stage design - NYOTAIMORI by SAHRA BERTHIAUME



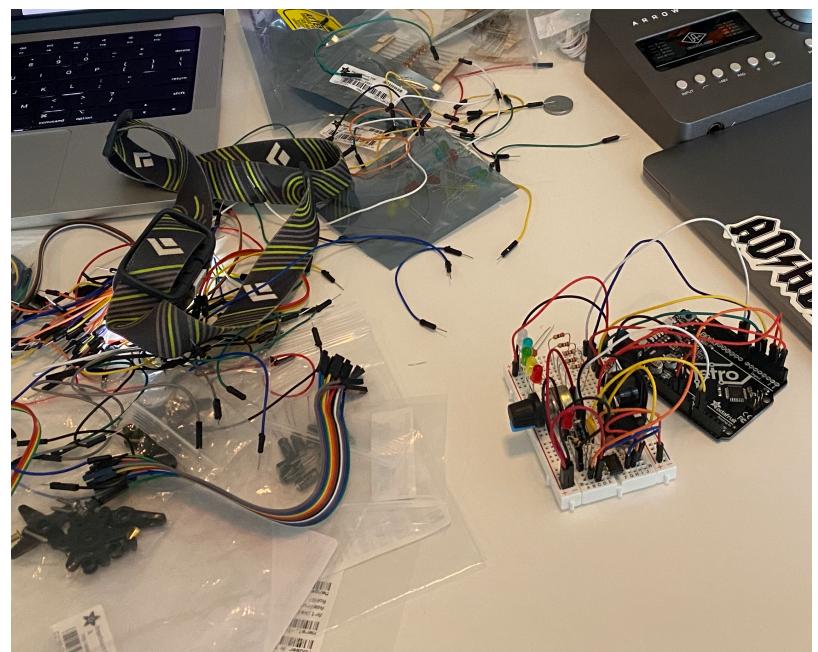
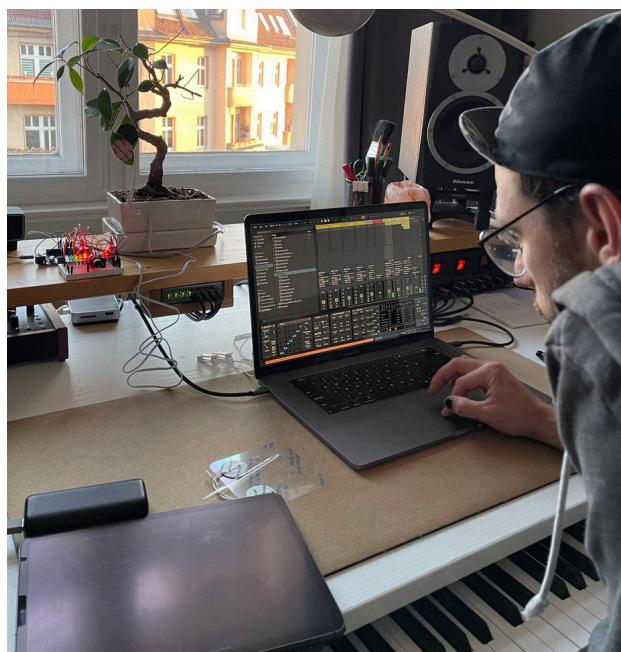
As part of my performance design course, I worked in a group of 4 to develop the stage design and construct a 1:30 stage model. I conceptualized and built the set for one scene. In this scene, the main character, Maude, is transported to a Toyota manufacturing assembly line in Japan through the trunk of car. The play examines the problematic nature of globalization and its consequential exploitation of people through a blending of realism and surrealism. All the worlds within the play are connected by the automobile. To convey the tragic nature of capitalism, I designed a glass coffin to represent the automobile rather than presenting it literally.

Concert stage design - Deichkind



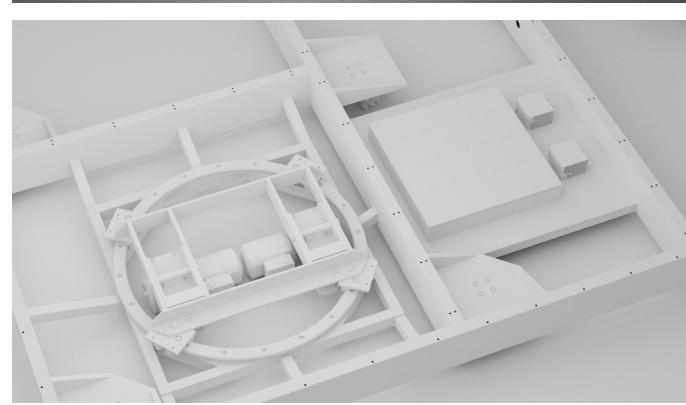
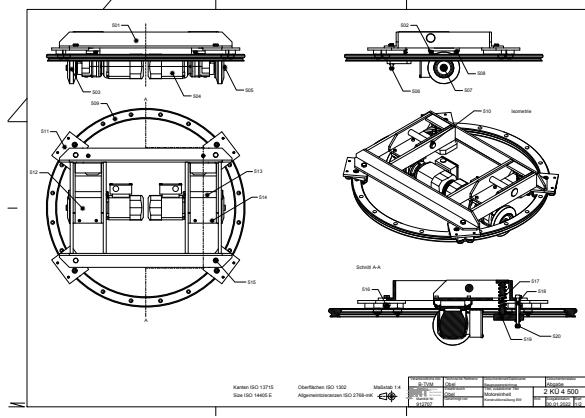
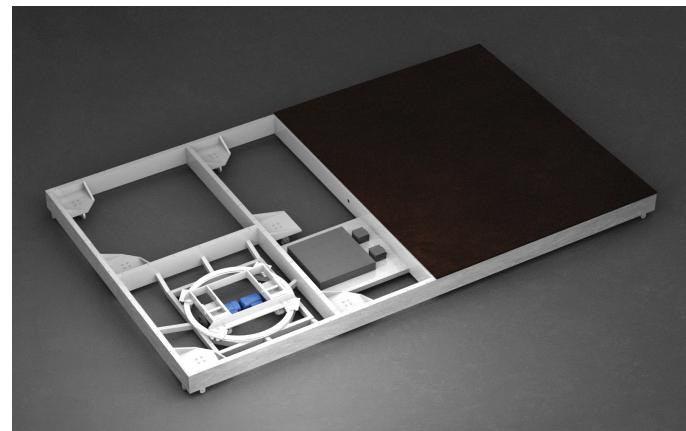
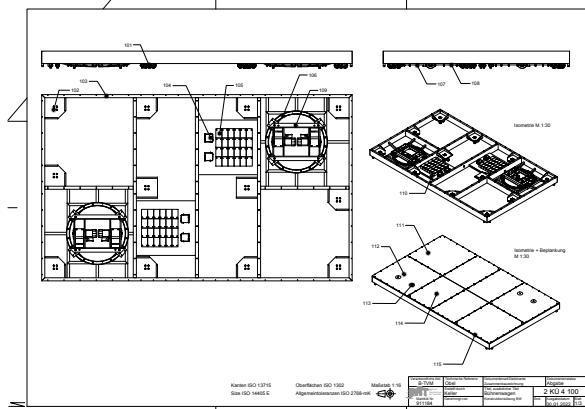
For my design principles course, I worked in a group of 4 to develop a concept and a 1:30 concert stage model for the band, Deichkind. We brainstormed and sketched designs with consideration for the band's aesthetic and edgy lyrics. The band's live performances are chaotic and theatrical so the intent of this design was to provide the band with a "playground" with multiple levels and an interactive platform.

Biodata sonification experimentation



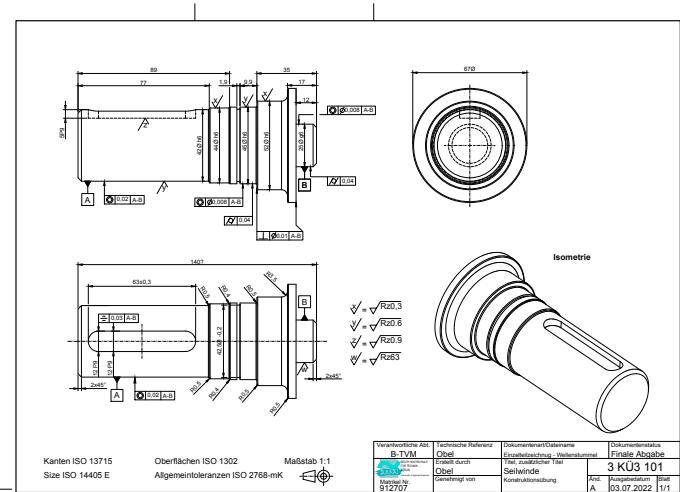
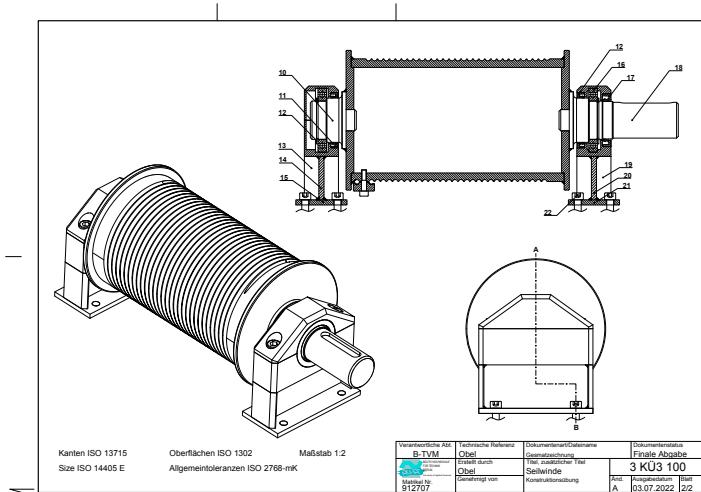
As a personal passion project, I built a biodata sonification device using an arduino microcontroller and electrical components to translate plants' electrical signals into MIDI data to create music. I am experimenting to transform the seemingly erratic electrical signals from the plant into self-generated pleasing musical patterns without further human manipulation.

Theater stage cart design with friction drive



As part of my mechanical engineering 3 course, I was the team lead for a group of 4 to design a motorized stage cart and create 3d model CAD drawings. We had to consider predetermined specifications for the cart's dimensions, load limits, and a required xy 360 degree range of motion. I was responsible for the design and necessary calculations of the motor unit to meet the range of motion specification. I also integrated all the individual designed components by the team into the final 3d model.

Steel wire winch design for a theater fly system



As part of my mechanical engineering 2 course, I designed a steel wire winch for a motorized theater fly system and created 3d CAD drawings. Given specific requirements for wire material, dimension, length, load limits and the individual components' thicknesses, I performed the necessary calculations based on my design concept. One important consideration was ensuring the real-world practicality of manufacturing and ease of on-site assembly of the design.