



fortify.

Coming to a university near you, because gun control isn't!

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What is fortify?

Fortify is a vending machine, intended to be installed in university classrooms to combat the school shooting epidemic in the United States.

Fortify assigns each student a set role in the case of an emergency, and vends necessary items to each student according to the role they have been assigned. However, these items are intentionally absurd and only effective by technicality, exposing the crux of the issue: the apathy and inaction of the federal government in making laws that protect students from this very real, very prominent risk.

01: Brainstorming

Given the broad nature of the prompt for the third provocation, it took us quite some time to hone in on a specific subject. We started quite broad, and came up with an array of possible subjects through several brainstorming sessions, and affinity mapped them. The topics of interest fit under a general theme of current events or topics that may be trending to especially the age group/ demographic that we belong to. Based off the ideas that were proposed, we were able to group into four different subcategories: consumerism and culture around materialistic possessions (airpod culture, fast fashion, beauty standards), controversy in the realms of media (data privacy, media suppression), Silicon Valley culture (specifically homogeneity in education), and school shootings and desensitization. We were able to narrow down the topics based on the constraints of our project (having to incorporate two out of the three learned skills of Arduino, 3D printing, or laser cutting), evaluating the time, or lack thereof, as well as avoiding oversaturated topics and putting emphasis on an issue that needs more attention and very relevant.



02: Research & refining

We were able to narrow in on the topic of school shootings as we discussed issues that were front and center of recent headlines. The provocative element centered around this topic which largely motivated the decision of this topic was the paradoxical factors surrounding the desensitized sentiment around something that has become a nationwide problem. The lack of serious attention that affects millions of students and families is fully apparent in the inability to fully equip classrooms in case of these situations. Following the choice of this topic, we deliberated on how best to incorporate the criteria for Arduino/3D print/Laser Cutting. Coming across an instructable for a vending machine, the dilemma in which incorporating two out of three of the skills was solved, being able to incorporate Arduino for functionality of electronics to trigger retrieving an item at the push of a button and building all structural elements with wood via laser cutting. Our final implementation of the two ideas came together as we researched around the topic of school shoots, upon discovery of a PSA video released by an organization founded after the tragedy of the Sandy Hook shootings in 2012. The bleak reality of school shootings is revealed through the contents of this video, which does incorporate graphic content, by taking a common ritual for schools and children around the occasion of “back-to-school” and refashioning them in a way that portrays them as emergency survival tools. In addition, we found that the already existing modes of “preparation” for school shootings are manifested in the form of school shooting safety kits, which sell for \$200 (lifesecond.com, IFAK school shooting kits). By incorporating the heavily ironic portrayal of the occasion of “back to school” through its inherent connotations of excitement and anticipation reframed as preparation for unease and ominous disaster, the problems around monetizing school shooting safety kits as a simple solution to the issue, as well as the perpetual lack of attention and policy change from the government, we finally landed on our idea that birthed our project: creating a marketable classroom safety kit in preparation for school shootings in the form of a vending machine.

03: Concept development

After coming up with our general concept, we spent some time going more in depth on our concept and exactly what we wanted to say how we wanted to deliver it. We based these decisions around **four objectives:**

1. Highlight the corporatized nature of school shootings
2. Use absurdity to show how truly vulnerable students are due to a lack of protection from the government due to useless and nonexistent policy change
3. Confront users with the reality of the immediacy and urgency of the gun violence epidemic by creating something that has a looming, static presence to it
4. Incite a strong response in users and viewers that requires them to engage with the reality of the situation the product depicts

Satirical over serious

We felt that taking the project in a satirical direction was a natural followup to the decision to build a vending machine, as it is already an obviously impractical choice for an emergency safety kit given its inefficiency. Drawing upon discussions of laughtivism from class, we chose to lean into this idea of inefficiency and ineffectiveness.

Vending machine as a vessel

We felt a vending machine would fit this satirical vision for several reasons, in large part due to our own associations with vending machines being prevalent on the UC Berkeley campus. We also chose something so hefty and immobile as a vending machine to make it feel more ominous and permanent, as well as contributing to making the entire product deeply inefficient and almost useless. Vending machines are intrinsically tied to big brand names, which we also wanted to draw from.

Branding

We chose to design a brand around our item (fortify.) to highlight the way the private sector has taken advantage of the lack of government intervention and change when it comes to shootings and gun control law. A quick Google search reveals an entire industry built around safety/preparatory kits for classrooms in the case of a school shooting, often costing well above \$200 per kit, even at bulk pricing. We chose a sleeker, stylized brand geared toward a college student-aged group after deciding to cater the product towards universities, given it is the option that would likely hit closest to home while not senselessly offensive. With the audio, we sought to foster a tone that felt very corporate and impersonal, opting for the classic ambiguous “we”.

Brand Style Guide

Name

fortify.

Font

Aa Bb Cc Dd Ee
Ff Gg Hh Ii Jj Kk
Ll Mm Nn Oo Pp
Qq Rr Ss Tt Uu Vv
Ww Xx Yy Zz

ITC Avant Garde Gothic
Pro Bold

Iconography



Item choices

Our items, in tandem with the instructional audios that explain how to use them, are a satirical direct response to a lack of response from the US government on the gun violence epidemic. We sought to use items that are only effective for their users purely by technicality, and are entirely irrational. The item-specific audios are more tongue-in-cheek than the introductory audio, as they are almost meant to offend the user with their sheer uselessness.

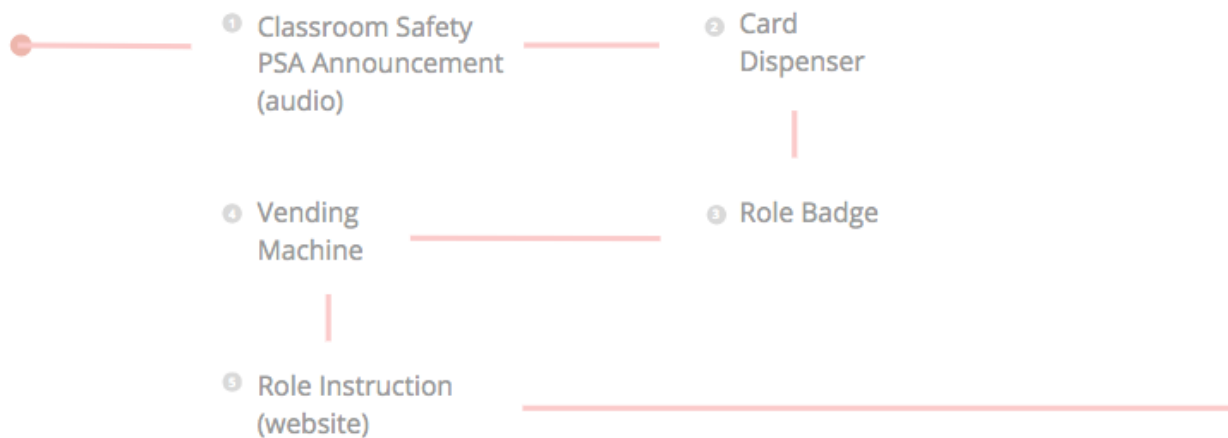
Badge dispenser and categories

We decided to add another component to the experience to increase interactivity and give participants a greater sense of obligation, and, to an extent, dehumanization. The four categories-- defense, response, first aid, and lockdown-- were all based on the different categories of safety kits we found online that were available for purchase at wildly high markups. We broke down those categories into people instead of just kits, and then assigned each role to a corresponding item.



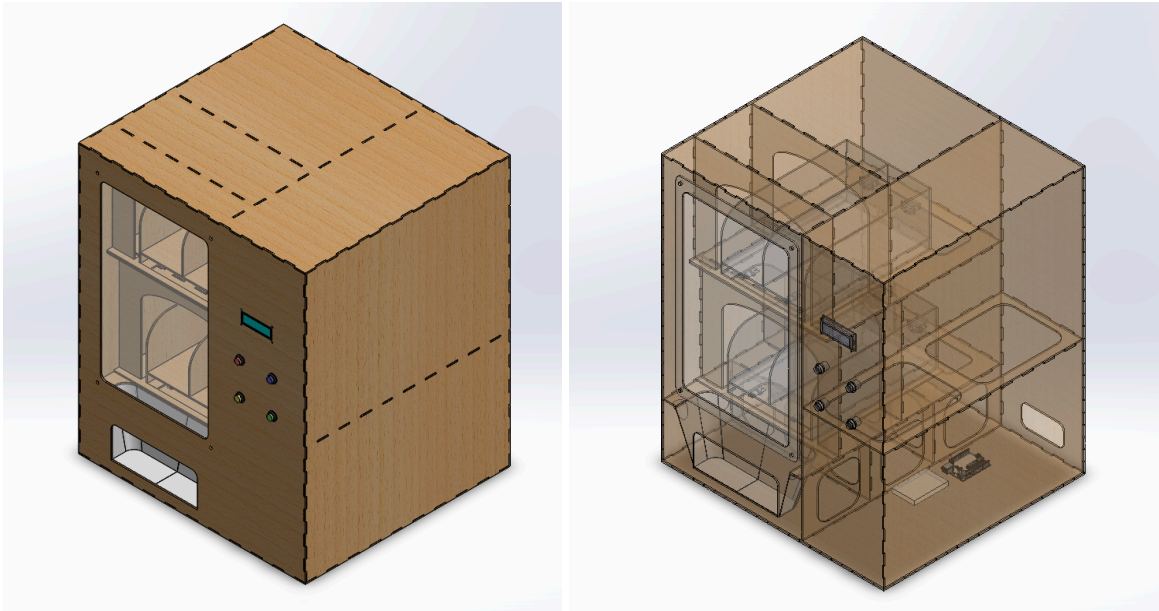
Final experience components

Ultimately, we added a few new components to our planned experience to ensure clarity in our message. The experience begins on the first day of class with an onboarding/orientation audio explaining Fortify as a concept and how to use it. Then, students would obtain their role badge from the dispenser, which has their role and corresponding color on it. Using that color, students then push the matching button on the vending machine, which dispenses their item. They can then visit the website and click the matching button to listen to the audio that provides them with instructions on how to use their item.



04: Modeling

The vending machine was completely modeled in SolidWorks (SW). This was done to ensure that parts would fit together properly once fabricated and to account for space needed for any internal components. In total, there were 47 parts that were modeled for the project.



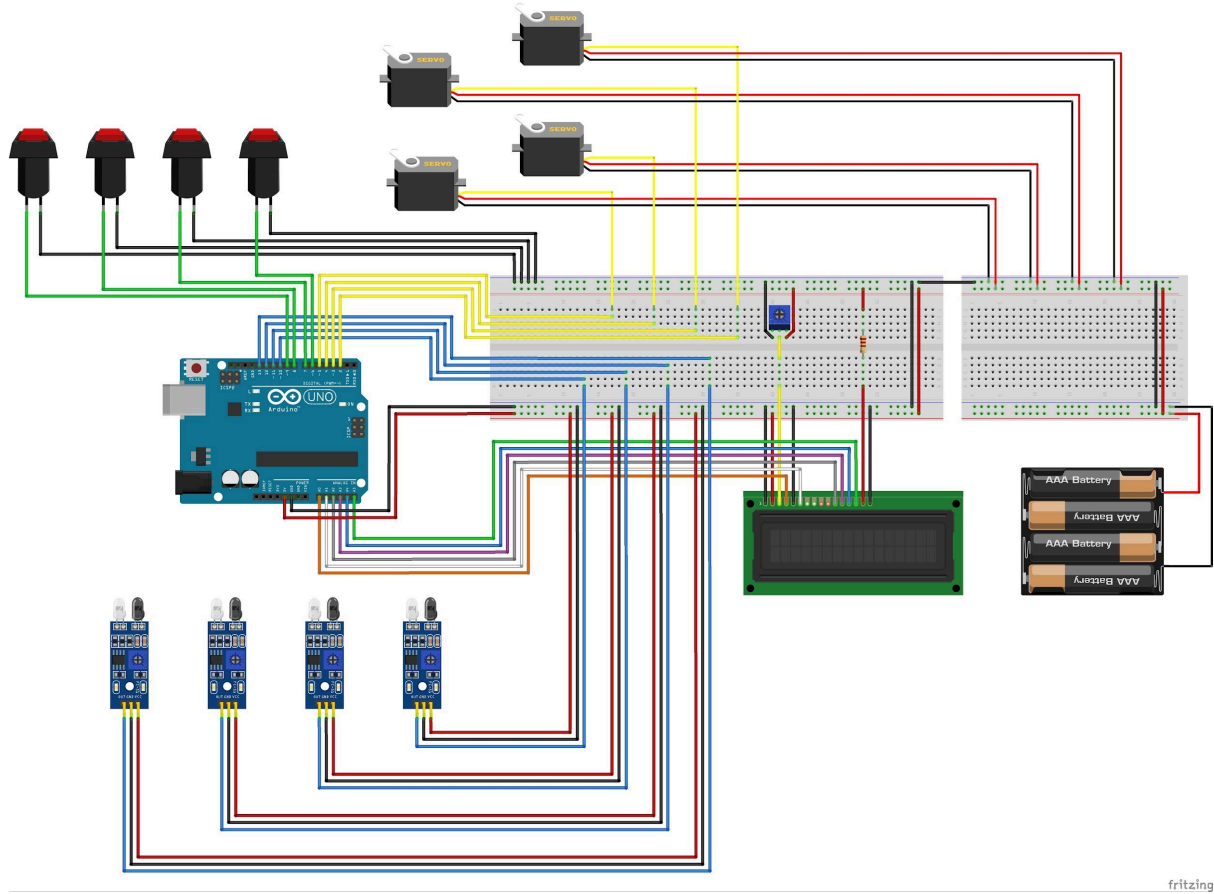
Left: Fully assembled vending machine; Right: Transparent view to see all components

The housing and structural components of the machine were cut out of $\frac{1}{8}$ " plywood, and were modeled as such in SW. This allowed the wood pieces to fit together snugly, and to minimize errors after cutting. By utilizing the drawing function of SW, we were able to get 2D views of the plywood pieces to export as (.dwg) files, then as (.ai) files to import into the laser cutters. The electronics components were also modeled to determine what additional hardware (nuts and bolts) were required to attach these components to the housing. This also helped in modeling the size and internal space of the vending machine to ensure that there was proper room for wiring. Another perk of modeling the vending machine is that we were able to produce high quality rendered images of the final product, as seen below.



05: Electronics

To create our envisioned vending experience, we utilized buttons as the main touchpoint, and then used aluminum coils attached to continuous rotation servos to dispense out the items. Proximity sensors were installed in order to stop the servo dispensation. We also incorporated an LCD screen to display guiding text throughout the process. The wiring schematic is shown below:



As shown in the wiring schematic, we chose to connect digital I/O wires to the breadboard and then to the Arduino because this helped to clarify the routing of the wires and assisted in understanding where the wires were connected. We powered the motors separately using a battery pack; if we powered the motors and LCD simultaneously through just the Arduino, the current supplied would not be enough. Even though we powered the motors separately, we connected the GND reference to the Arduino to ensure that all components had the same reference point. We didn't have enough digital I/O pins for all of our components, so we repurposed the analog I/O pins on the board to act as digital I/O pins (explained further in the coding section).

We had plenty of wires encased within our vending machine; to organize them, we grouped them by function (ex. Button1 wires, button2 wires, motor1 wires, motor2 wires, etc.) and taped those wires together. We also made the shelves which housed the items to dispense removable, so the wiring had to be easily connected/disconnected. The wires that led to the shelves were taped to the sides of the vending machine wall, allowing us to easily spot and connect/disconnect wires when shelves were put into place/removed. This helped us to more easily debug the system and understand which wires were going where.

The wires that were used for electronic components had to be extended because of the size of our system. To do this, we snipped jumper cables in the center and soldered 24 AWG stranded wire in the center, using heat shrink tubing to protect the solder joints. We also used two breadboards to spread out the wiring to be more easily understandable and flattened out the wires that resided on the breadboards as well. We flattened wires by using 24 AWG solid core wire and bending it so that it was just long enough to connect the points on the breadboard as needed. Flattening the wires made the wiring schematic easier to follow and connections easier to see immediately.

06: Arduino code

There are various versions of running the vending machine within the code uploaded. We originally planned to be able to press a button, and run the motors attached to the coils until an item dispensed, using IR obstacle detection sensors to determine when an item had successfully dispensed. However, due to time constraints and hardware mishaps, we were unable to include the IR sensors within the functionality of the code. Therefore, we pivoted from the original plan, and wrote the code so that motors would turn while a button was held down. Users would then have to hold a button until their selected item dispensed.

Using the LCD screen, we also included prompts and messages to play while the vending machine was running. When no buttons are pressed, the LCD screen displays a message to “Select your item”. While a button is being held down, the LCD screen displays: “Dispensing... ‘color’”, where “color” is replaced with the specific color of the item being dispensed at the given time. This helped to make the entire experience a bit more interactive.

As mentioned in the previous section, we had to repurpose analog I/O pins as digital I/O pins to have enough pins on one board to run all of the components in the vending machine. To repurpose the pins, we simply switched the reference in the code (instead of calling the pins A0, A1, ... , A5, we called them 14, 15, ... , 19 respectively).

View our code here: <https://tinyurl.com/vending-code>

07: Website component

Given the potential to confuse the duties of each item tied to each role, we decided that creating a website would be the best form of providing a description that aligned with the overall theme of our project. Initially, thinking about different mediums to properly deliver the associated description for each individual, among different ideas that were discussed was the most conventional way of simply displaying a sign that had a written description of the role. However, for cohesion with the introductory onboarding PSA and the intent behind utilizing

this, we continued with audios. Keeping the themes of simplicity and modernity of our brand in mind, our website would solely provide a means of letting the role description to be known: to display the correlated colors for each role/ button of the vending machines along with our brand, fortify, on the screen as well.

We were able to execute the necessary content and its simplicity by utilizing HTML and CSS to code the website. Although the basic components of the website proved execution to be relatively simple, the biggest hurdles were playing with the different functions that we were trying for the first time in terms of HTML and CSS especially when they failed to do exactly what it wanted to do, like clicking and playing the audio. To properly fully execute the entirety of our project, we wished to deploy our site on an actual live domain for efficiency and access to more individuals, given the constituents of a classroom. However, within the constraints of time and resources, we had a local file and utilized one computer for the purposes of execution and demonstration.

```
<html>
<head>
<link rel="stylesheet" href="https://use.typekit.net/nvk3bqz.css">
<link rel="stylesheet" href="assets/css/style.css">
<title>fortify.</title>
<script src="assets/js/script.js"></script>
</head>
<body>
<div id="container">
<div id="btn-spine">
<button id="playButton btn-red" class="btn" onclick="document.getElementById('firstAid').play()" style="background: #E5448;">
<p>FIRST AID</p>
<audio id="firstAid">
<source src="assets/audio/FIRST AID TEAM.mp3">
</audio>
</button>
<button id="btn-blue playButton" class="btn" onclick="document.getElementById('defense').play()" style="background: #0598FF;">
<p>DEFENSE</p>
<audio id="defense">
<source src="assets/audio/DEFENSE TEAM.mp3">
</audio>
</button>
<button id="btn-yellow playButton" class="btn" onclick="document.getElementById('response').play()" style="background: #F9DC5C;">
<p>RESPONSE</p>
<audio id="response">
<source src="assets/audio/RESPONSE TEAM.mp3">
</audio>
</button>
<button id="btn-green playButton" class="btn" onclick="document.getElementById('lockDown').play()" style="background: #7FFF98;">
<p>LOCKDOWN</p>
<audio id="lockDown">
<source src="assets/audio/LOCKDOWN TEAM.mp3">
</audio>
</button>
</div>
<div id="text-box">
<h1>fortify.</h1>
<p>Thank you for contributing to your classroom's safety!</p>
</div>
</div>
</body>
</html>
```

```
html {
font-family: "itc-avant-garde-gothic-pro", Helvetica, sans-serif;
}
body {
border: 5px;
}
#container {
width: 100vw;
height: auto;
}
#btn-spine {
display: flex;
position: absolute;
top: 45%;
left: 50%;
transform: translate(-50%, -50%);
}
.btn {
width: 175px;
height: 175px;
margin: 55px;
box-shadow: 0 1px 6px rgba(0, 0, 0, 0.2);
border-radius: 100%;
border: 5px solid rgba(255, 255, 255, 0.2);
transition: transform ease 0.2s;
cursor: pointer;
}
p {
font-family: "itc-avant-garde-gothic-pro", Helvetica, sans-serif;
font-size: 25px;
color: grey;
text-align: center;
margin: 200px 0 0 0;
}
#btn-red {
background: #E5448;
}
#btn-blue {
background: #0598FF;
}
#btn-yellow {
background: #F9DC5C;
}
#btn-green {
background: #7FFF98;
}
#text-box {
position: absolute;
bottom: 60px;
display: flex;
flex-direction: row;
justify-content: space-between;
align-items: center;
padding: 75px 150px 0px 150px;
}
h1 {
font-size: 100px;
text-align: center;
margin: 200px 0 0 0;
}
```



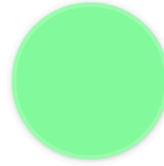
FIRST AID



DEFENSE



RESPONSE



LOCKDOWN

fortify.

Thank you for contributing to your classroom's safety!

08: Audios

The audio recordings were Katrina's voice, done with a zoom recorder and directional microphone, and edited in Audacity. The audios function as a way to emphasize the corporate nature of fortify, and to package the message in a clear and concise way, as well as clear up any confusion with the way fortify is intended to be experienced. The audios also further emphasize the satirical approach we took with fortify. There are five scripts-- one introductory/onboarding script, and four role and item specific scripts. They read as follows:

Introduction

"Welcome to fortify. Thank you for your attention. We're so glad you and your university have decided to join us in creating a safer campus and learning environment.

Did you know that in the last decade, there have been over 500 school shootings in the United States? The federal government sends its thoughts and prayers, but little else, leaving America's students to fend for themselves. We at fortify are committed to providing students with tools to prepare them for an emergency situation, because even the smallest effort is still more help than anything Congress has done.

Each day when you walk into your classroom, fortify will be here, ready to provide you with what you need. First, you will obtain your randomized assigned "role" badge from the dispenser. Then,

You will then tap the button with the color that corresponds with your role badge, where you will receive your assigned tool. Don't feel intimidated by the complexity of your item! By following detailed instructions on our provided website, we'll show you exactly how to use it.

At fortify, we hope that our provided tools will eliminate any need for policy changes and additional laws. With one fortify protected classroom at a time, we're here to ensure a brighter future for you, and our future generations.

Thank you for contributing to the safety of your classroom!"

First Aid (item: kids' bandages)

"Welcome to the first aid team. Your role is, in the rare case that our other protection methods have not been successful, to provide injured students with treatment for any wounds with our durable medical supplies. We have given you bandaids to cover up any large cuts, bruises, or booboos. To lighten the mood, we made sure to select bandages with some classic children's cartoon characters for your enjoyment. Good luck!"

Defense (item: "sharp" pencils)

"Welcome to the defense team. You have been assigned the bravest role. You must be prepared to defend yourself and your classmates from attackers who seek to cause you harm. We have provided you with sharp pencils to fight back with in any method you like. We recommend throwing and stabbing. Good luck!"

Response (item: envelope & stamp)

"Welcome to the response team. Your role is to notify the authorities of your emergency situation, so the police and security can take action within a timely manner. We understand that in these situations, every second is crucial, so we have provided you with envelopes and stamps to mail out your call for help. Please allow two to three business days for your message to be received. Speed is key. Good luck!"

Lockdown (item: scotch tape)

"Welcome to the lockdown team. Your role is to make sure that your attackers have no possible way of entering your classroom. We have provided you with scotch tape to tape down and secure your doors, windows, and any other possible points of entry. We understand the fragility of tape, so we recommend doubling up and using two layers. Good luck!"

09: Physical fabrication

Bill of Materials

To complete our project, we used:

- 1x Elegoo Uno R3
- 1x 6V Battery Pack
- 4x 1.5V AA Batteries
- 2x Breadboard
- 1x 10k Trimmer Potentiometer
- 6x 24"x48", 1/8" Plywood Sheets
- 2x 12"x24", 1/8" Plywood Sheets
- 1x 18"x30", 1/8" Acrylic Sheets
- 4x FS90R Continuous Rotation Servos
- 4x Momentary Switch Buttons
- 1x 16x2 Character LCD Display Module
- 4x IR Obstacle Avoidance Sensors
- 1x 32.8ft, 2mm diameter Copper Aluminum Wire
- 4x M3 x 10mm Hex Bolts

- 4x M3 Hex Nuts
- 8x M1.5 x 10mm Hex Bolts
- 8x M1.5 Hex Nuts
- 4x ¼" x 1" Bolts
- 4x ¼" Hex Nuts
- Red Vinyl
- Green Vinyl
- Blue Vinyl
- Yellow Vinyl
- Black Vinyl

Laser cutting process

We converted the 47 laser cut components from the SolidWorks model into .ai files on 24"x48" artboards and cut over a few days as availability permitted in Jacobs Hall on the red laser cutter and on the Trotec laser cutter in the Invention Lab. In order to fit the plywood onto the Trotec, we had to saw the 24"x48" plywood down to fit the Trotec's 24"x38" plate.

Unfortunately, we had to recut some pieces due to some of the plywood being intensely warped, which slowed our process down quite a bit and compromised the integrity of the structure until we redid it.

We also laser cut the role badges on plywood, and the badge dispenser on plywood and acrylic.

3D printing tray

The tray for the bottom of the vending machine where the items come out was 3D printed to have more of a natural, curved geometry. It was split into two parts to accommodate for the size of the Ultimaker 3D printers in the Invention Lab. The parts were designed to print without support material to make the prints faster and to enhance the aesthetic quality of the resulting pieces. The tray was printed in white to complement the natural color of the plywood that we used to create the housing of the vending machine, and the two sides were attached with wood glue and clamps.

Construction

Through a delicate balance of clamps, wood glue, sanding, hot glue, and screws, we slowly put the different components of the vending machine body together, making sure not to attach the item trays with glue or screws to ensure their removability for wiring and loading items. We also used aluminum coils, which we wrapped around a water bottle to create consistently sized and spaced out coils for the items to sit in. After item tray construction was completed, we attached plastic snap in pieces to the servos, and hot glued the coils to the plastic piece to create the spinning effect. The buttons and LCD screen on the front of the vending machine were screwed into place.

For the sake of brevity in this writeup, a link to a 35-page assembly instruction document that was compiled to assist in building the vending machine once all parts were cut, can be found here: tinyurl.com/fortify-assembly-instructions.

Vinyl cutting

To color code the role badges, we vinyl cut borders in red, green, yellow, and blue for the front of the badges, and used the inside leftover pieces for the back. We also vinyl cut our logo, “fortify.”, in black vinyl and placed it on the front of the machine.

Loading Items

Items were purchased from Walgreens or found in our homes. Initially we loaded the items as is, but we had a lot of trouble with them getting stuck on the coils, so we switched to packaging them. We laser cut small medallions with the symbol for each role category on them and placed them in plastic bags along with the items in an attempt to make it easier for the coils to move around them.

10: Deployment

We had two ideal deployment concepts, the first being in a classroom, where it would be onboarded and used as the product states. We would have loved to see students’ organic reactions to such an invasive presence in the classroom, especially how they might respond to it after the second or third class in a row with the machine. The second deployment concept we entertained was the idea of taking it to a professor or administrator and pitching it to them as a possible new tool to incorporate into the classroom to see how (un)realistic of a solution they might see it as.

Unfortunately, both of these were not feasible for a couple reasons, the first being the amount of time it took to build the machine to a point where it was consistently functional enough to deploy and stable enough to transport. We were only able to get it to such a point by the Jacobs design showcase on December 13 with a substantial number of hours of work being put in each day. The second reason deployment was not feasible for us was largely a result of the project time frame; classes had finished for the semester several days before the project was due, and it was simply not possible for us to have it finished before the beginning of RRR week.

11: Challenges & workarounds

To allow this project to come to fruition, there was a notable amount of problems that prevented a smooth fabrication and execution of the project. To begin, we were extra cautious about the way we framed our project in conjunction with the topic that we had chosen due to the sensitivity around the subject. The possibility for viewers to misinterpret our intentions of employing satire to ultimately execute resensitization to the topic and instead see it as an insensitive way to frame a heavy topic was very apparent. Because of the already existing

“solutions” (safety kit, safety training for teachers that seem ridiculous) that reveal a flaw in the misdirection towards a fix to the issue, rather than propose our own solution, which could easily be criticized as another insensitive look at shootings, we took a different direction to resensitization. The satire embedded in the seemingly nonsensical methods of preparation would provoke participants to partake in a means for change in the already established system, hopefully inspiring them to take up measures forwarding change.

In the fabrication of our project, we ran into challenges centered around resources: time and materials. The preexisting time commitments of all our group members was an inevitable obstacle but evermore obvious as we had to make up for the disparity in each teammates' backgrounds. While we each were able to contribute one thing or another to the group, the bulk of the discrepancy came when having to handle arduino as well as 3D rendering, something that only one person was fully skilled at. In addition, while assembling everything, expenses added up with the wood leading into additional problems and sacrifices that were made that compromised the fully optimal structure of the exterior; for example, using warped wood which spilled over into proper assemblage and lining up of different parts. The resources that we were provided to be able to create the project were very limited: the makerspace laser cutters being fully booked for the entire week, not having access to IR sensors that disrupted the user flow. While the usual mechanisms of a vending machine is to simply press a button for an item to be vended out of the machine, we had to clarify to some people that they needed to hold the button until the item was dropped.

Time was also a huge limited resource given the time frame in which we were given for the product. As a result, the effects were visible especially when handling the amount of wires, having to spend a significant amount of time soldering them to make them longer as well as properly organizing them after hooking all of them together. The limitation was also experienced as parts broken multiple times that affected functionality (broken servos, buttons) and the overall workings of the machine. This was especially pressing as different components that were supposed to work under one thing failed to properly execute. For example, we ran into a problem of the LCD and servos not working when powered from one arduino. Fixing this issue also took additional time, but dealt with by running servos on a separate battery pack and powering other components from the arduino.

13: Final reflection

Future directions

Were we to continue iterating on this project, we would definitely allocate ourselves more time to fabricate. Given the limits of time, cost, and ability, we could only build a machine that holds four items, but expanding that number is definitely something we would be interested in doing. We also would've loved to have added on more small touches, like spray painting the vending machine and generally refining the appearance.

One concern we had and attempted to combat with the audio was the number of individual components involved in the overall experience. In future iterations, we would definitely look for

a way to consolidate those components into one interface, like integrating the badge dispenser into the side of the vending machine, and having the website with instructions embedded in the machine through a tablet or something to that degree. In doing so, we could more easily point out the steps the participant is meant to take in a more intuitive way. Based on some really positive and encouraging feedback at Jacobs showcase, we are considering applying for an Innovation Catalyst grant from Jacobs Hall to potentially make these changes a reality, as cost is a very real barrier and any of these changes actually taking place.

Final thoughts

Though this project was *extremely* time intensive (about a week and a half straight of 8+ hour workdays), and at times overwhelming, we all genuinely enjoyed this project and are so proud of what we were able to create. Though the abilities and backgrounds we each brought to the table definitely varied a lot, we all put in the work and truly did as much as we could. We all learned a great deal throughout this project, and were able to make the vast majority of our initial vision into a reality, which was so empowering for those of us with such a minimal technical background working on such a technically complex project. As a team, we all got along amazingly well and it helped to facilitate such a great working environment, which motivated us to work even harder. This experience overall has been such a wonderful one, and we would like to thank all the people who helped make it happen, starting with Zeke Medley and Cameron Chaney, our classmates who helped us work around the issue of laser cutter unavailability and gave us helpful advice and support with materials and extended lab hours. We would also like to thank Kuan-Ju Wu, the CITRIS Invention Lab manager, who lent his electrical prowess to us when we were troubleshooting and was infinitely helpful.

Lastly, and most importantly, we would like to thank our professor and GSI, Jill Miller and Brian Bartz, whose guidance, teachings, and encouragement were hugely helpful and much appreciated. They created a classroom environment with Critical Practices that allowed this project to come to fruition, and we are so grateful for that. Thank you!

