

| Code | Segment |
|---|--|
| comments on toolkit design\try different materials | It's really fun to like trial different materials like, I don't think I ever tried a stretch sensor and the fact that you can like translate it to sound is really interesting. |
| experience on textile sensor making | P1(P6)inter |
| experience on textile sensor making | P2 inter |
| experience on textile sensor making | P3 inter |
| Gestures, control\easy control | I wanted to make sure that it was something that I can hold and not have to worry so much about the different sensors |
| Gestures, control\find sensors match the input control | So the first thing I remember doing was just a kind of go through and figure out what kind of sensor I thought matched each particular input. So you know you know, listening to it initially on the slide as and trying to come up with some kind of link between what kind of action that might be, which is |
| Gestures, control\Inspiration Sources of Gesture Design\find | So the first thing I remember doing was just a kind of go through and figure out what kind of sensor I thought matched each particular input. So you know you know, listening to it initially on the slide as and trying to come up with some kind of link between what kind of action that might be, which is |
| Gestures, control\Inspiration Sources of Gesture Design\map | So the first thing I remember doing was just a kind of go through and figure out what kind of sensor I thought matched each particular input. So you know you know, listening to it initially on the slide as and trying to come up with some kind of link between what kind of action that might be, which is |
| design thinking\Repeated testing ideas | And then why I kind of got hung up on this one was a bit of I don't really know how to do this. I wanted it to be the stretch or the flex sensor, but I didn't find the mapping to be so natural. So I kind of liked spending this, but basically I just wanted to figure out which sensor went well with each |
| Gestures, control\difficult control | And then, it was I have to control three sensors with two hands. So how I can do this in a way which is comfortable, I don't know. |
| Gestures, control\Inspiration Sources of Gesture Design\la | So how I can do this in a way which is comfortable, I don't know. I kind of like the idea of holding on to like a larger physical objects, so to started playing around with them, the cube and then trying to figure out how some kind of natural position. |
| design approach\start from exploration of materials | So I was just holding the the cube naturally at the beginning and then trying to attach the sensors where I thought they might be really easy to play by hands, trying to free up the action, so I can do everything on it once. |
| Gestures, control\easy control | So I was just holding the the cube naturally at the beginning and then trying to attach the sensors where I thought they might be really easy to play by hands, trying to free up the action, so I can do everything on it once. |
| Gestures, control\Inspiration Sources of Gesture Design\la | So I was just holding the the cube naturally at the beginning and then trying to attach the sensors where I thought they might be really easy to play by hands, trying to free up the action, so I can do everything on it once. |
| Relationship between Design Decisions and | And then from there i, just kind of was moving around. I swap this one out a couple of times is trying to figure out what I like the best. |
| Relationship between Design Decisions and | Because it's a little bit more robust than the and then the flex sensor, the stretch sensor and I can also still kind of end it. |
| Gestures, control\easy control | Because it's a little bit more robust than the and then the flex sensor, the stretch sensor and I can also still kind of end it. |
| Gestures, control\easy control | I thought for this because they're bit more of like a simple action sort of. So I really do with my thumb is just push down. I can vary a little bit, but it's not crazy control. |
| Relationship between Design Decisions and Materials\look the | I looked through the different textures on the pressures sensors a little bit. I just wanted to find something which I again felt like it would be a bit easy to play. I like the foam because it doesn't feel like you need to press so hard down on it. If i'm doing my right hand, and then this obviously, if I want to |
| Relationship between Design Decisions and Materials\chose | I looked through the different textures on the pressures sensors a little bit. I just wanted to find something which I again felt like it would be a bit easy to play. I like the foam because it doesn't feel like you need to press so hard down on it. If i'm doing my right hand, and then this obviously, if I want to |
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| Gestures, control\easy control | I just wanted to find something which I again felt like it would be a bit easy to play. I like the foam because it doesn't feel like you need to press so hard down on it. |
| Gestures, control\find sensors match the input control | I think when I started just trying to figure out how to combine the different sensors for the the kinds of input, like I said, I wanted to make sure that I could control everything a little bit. |
| Gestures, control\Inspiration Sources of Gesture Design\find | I think when I started just trying to figure out how to combine the different sensors for the the kinds of input, like I said, I wanted to make sure that I could control everything a little bit. |
| Gestures, control\Inspiration Sources of Gesture Design\la | I think when I started just trying to figure out how to combine the different sensors for the the kinds of input, like I said, I wanted to make sure that I could control everything a little bit. |
| Gestures, control\easy control | I guess that with this, because it's a bit softer. I don't need to push so hard. And I thought I think if I have more time, I would do some more like a little rushing measures, but just kind of softly on it is quite nice. |
| Gestures, control\Inspiration Sources of Gesture | And then with this one, again, like I said, I liked the idea of having something that was a bit more flexible. So I think, again, the material meant I could push on it a bit as well. And this one I could push a bit more with not just my thumb, but my whole hand or something I really wanted. And then I can |
| Gestures, control\Inspiration Sources of Gesture | And then with this one, again, like I said, I liked the idea of having something that was a bit more flexible. So I think, again, the material meant I could push on it a bit as well. And this one I could push a bit more with not just my thumb, but my whole hand or something I really wanted. And then I can |
| Gestures, control\Inspiration Sources of Gesture Design\la | I think they were pretty well in terms of how to actually control everything and make it feel quite natural like this is pretty comfortable for me to just hold it and interact with it like this. I think that works really well. |
| Gestures, control\difficult control | I think I struggled with a little bit trying to figure exactly how to gesture. |
| comments on toolkit design\Constrained but Open-design thinking\design digital control and physical interface | Yeah, but I don't know if it's that I was limited by the patch and more. So like, I think when I design interactions like this between like a digital control and a physical interface, I tend to tweak on both sides of the same time. |
| Relationship between Design Decisions and | Yeah, but I don't know if it's that I was limited by the patch and more. So like, I think when I design interactions like this between like a digital control and a physical interface, I tend to tweak on both sides of the same time. |
| design thinking\design digital control and physical interface | I find something that I like to do physically like this is a really cool movement, or I like the way that this feels. But i'm not kind of getting the response that I want. |
| comments on toolkit design\Constrained but Open-design thinking\lover-thinking sometimes | I guess, just in a normal context, I would probably go back and forth a bit so. That was a bit strange for me to try to figure okay i, can't do anything with that. |
| comments on toolkit design\good kit for rapid | I think this is always a really nice open ended exploration. And sometimes it's just kind of, it's fun to explore. So I was excited to start out that way. |
| comments on toolkit design\suggestions\need a | So it's quite easy to use and to do a bit of like a rapid prototyping and switching out sensors. |
| comments on toolkit design\Constrained but Open-design thinking | It's a lot you need to be working for a lot longer. I think that was also with the time. |
| comments on toolkit design\lover-thinking sometimes | And it's sometimes nice, I guess, in this situation to enforce a kind of artificial constraint when you want to learn about how somebody's moving. I could sit here forever and just play around with everything for a couple of days, probably. So it's good to just focus on one thing. And it gives you, I guess, But then at the same time, it's kind of refreshing in a way. I always find that when I'm looking at the physical interfaces, I maybe run the risk of over thinking them a little bit like wanting it to be perfect. |

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| design thinking\new ideas | But then at the same time, it's kind of refreshing in a way. I always find that when I'm looking at the physical interfaces, I maybe run the risk of over thinking them a little bit like wanting it to be perfect. |
| comments on toolkit design\Constrained but Open- | So let's use that. It feels a bit more freeing in a way like you're not so worried about the medium to start with, which I think a lot of the instruments that I've designed. It takes me a while to get started, because I'm like, I want to do this, and so I need to do this first and. Instead of just like, here's a |
| comments on toolkit design\Constrained but Open- | So let's use that. It feels a bit more freeing in a way like you're not so worried about the medium to start with, which I think a lot of the instruments that I've designed. It takes me a while to get started, because I'm like, I want to do this, and so I need to do this first and. Instead of just like, here's a |
| comments on toolkit design\suggestions\need a | It would be really cool if you gave it to people to take home and then see what they kind of do after thinking about it for a while. It's cool. |
| comments on toolkit design\Constrained but Open- | like if you had somebody do exactly this and then I wonder what would happen if you then gave me like a different sound and said play the same instrument but using a different sound how that might change the gesture without changing the interface. |
| comments on toolkit design\good kit for rapid | So having a time constraint is kind of nice in some way, because it leads you to form the idea very quickly. |
| comments on toolkit design\form ideas quickly | So having a time constraint is kind of nice in some way, because it leads you to form the idea very quickly. |
| Relationship between Design Decisions and Materials\look the | With my ball idea, I was looking for something that would be nice to squeeze. Is that like that one is quite nice, but then it's a bit like not quite a right shape for the ball to like wrap around. Yeah, so like this one, you can like really feel that much kind of tactile response when you press it. |
| Relationship between Design Decisions and | With my ball idea, I was looking for something that would be nice to squeeze. Is that like that one is quite nice, but then it's a bit like not quite a right shape for the ball to like wrap around. Yeah, so like this one, you can like really feel that much kind of tactile response when you press it. |
| Relationship between Design Decisions and | Yeah, so like this one, you can like really feel that much kind of tactile response when you press it. |
| Gestures, control\Inspiration Sources of Gesture | so like this one, you can like really feel that much kind of tactile response when you press it. |
| Gestures, control\find sensors match the input control | I was thinking that like the more like force you put in, the like more response you should get, that could be like in terms of like loudness or in terms of modulation. But just like a bit different, like I wouldn't necessarily want to... naturally I don't necessarily like map forced to pitch, but that's something I |
| Gestures, control\Inspiration Sources of Gesture Design\find | I was thinking that like the more like force you put in, the like more response you should get, that could be like in terms of like loudness or in terms of modulation. But just like a bit different, like I wouldn't necessarily want to... naturally I don't necessarily like map forced to pitch, but that's something I |
| Gestures, control\Inspiration Sources of Gesture Design\find | naturally I don't necessarily like map forced to pitch, but that's something I can do with my fingers. |
| Relationship between Design Decisions and Materials\chose | So this one, as I mentioned before, has this soft response of surface. I don't like try this out. The other ones for the flexible one. Maybe in retrospect, I would have used this one because it's more than the... but like they're quite small I don't know. |
| Relationship between Design Decisions and | has this soft response of surface. |
| Gestures, control\Inspiration Sources of Gesture Design\find | It's more natural to do something, or at least maybe like having as a single piece, rather than like two things that you control separately. |
| comments on toolkit design\suggestions\need a | I think I would spend more time trying to make the pitch thing working. And maybe like try out that original idea I had. |
| comments on toolkit design\Constrained but Open- | Yes, because like when you change the different sensors, the rangers differ. |
| Gestures, control\Inspiration Sources of Gesture Design\map | It's really fun to like trial different materials like, I don't think I ever tried a stretch sensor and the fact that you can like translate it to sound is really interesting. |
| Gestures, control\find sensors match the input control | like as I have a bit of experience on fm, I pretty much know what to expect from the ratios of the parameters, or the function of the parameters in the framework, sonic framework that we were using. |
| Gestures, control\Inspiration Sources of Gesture Design\find | like as I have a bit of experience on fm, I pretty much know what to expect from the ratios of the parameters, or the function of the parameters in the framework, sonic framework that we were using. |
| Relationship between Design Decisions and | Somehow, with the tools that we have here, I tried to build a percussive interface that would accommodate the parameters into a way that is useful by using percussion. This is my original intent. The final prototype doesn't work like that a lot, but at least I think it has some of the percussiveness. |
| Gestures, control\find sensors match the input control | And my idea was like for the three controls, like the stretching part of the control was more like something that I could control, but I could control when things from a good producer, sometime it wouldn't. is important because why is like the carrying fm is running. |
| Gestures, control\Inspiration Sources of Gesture Design\find | And my idea was like for the three controls, like the stretching part of the control was more like something that I could control, but I could control when things from a good producer, sometime it wouldn't. is important because why is like the carrying fm is running. |
| Gestures, control\control not fine | So yeah, and the idea was that with the stretchy thing, this one, I wanted to control it, but I the control didn't have to be that fine. |
| design approach\think about the gesture control | My process was, I had already some constraints imposed by my previous experience with the FM. So I just said i'm gonna sign some roles to these parameters. And where do I want them to interact. My design process was, I know the function of these three parameters. I know that I like the growing. |
| Gestures, control\fine tune control | That means the harmonic ratio to be percussive. I want to have a small, like a not a very big, like a close control on the output of the carrier. And I want to have like a finer control on the brightness of sound. That is the modulation index. |
| design approach\think about the body position | So I thought, let's do something with the growing percussion. So then I found the cube there. For me, the cube was nice to hold it, and somehow it also relates with the shape of the pads that are also square. So it's for me, it was very inviting to use this originally. I tried to put like some kind of like |
| Relationship between Design Decisions and | I tried to put like some kind of like rough surface here, but didn't work very well, but anyways, i'm happy with the output. |
| Relationship between Design Decisions and Materials\ignoring | not at all I saw they were different colors, but this is as much as I saw, colours. and not I didn't even realize that the fact that they were different material. |
| Relationship between Design Decisions and Materials\ignoring | I pick this one, because it was the first one in this type. I did no consideration of it. I had no consideration. |
| design approach\think about the gesture control | Then with the other materials, I took this one, because I really wanted the value to be in 0 at some point. I wanted to be able to control whether the instrument is producing sound or not. So I thought in this case, this was the most viable thing, not something that I can keep on and then off, now the |
| Gestures, control\easy control | So I thought in this case, this was the most viable thing, not something that I can keep on and then off, now the parameter is clapped here, but I wish I thought I was gonna have more control over it, a finer control. But it didn't require such a finer control. I designed this gesture here, the one with the |
| Gestures, control\fine tune control | So I thought in this case, this was the most viable thing, not something that I can keep on and then off, now the parameter is clapped here, but I wish I thought I was gonna have more control over it, a finer control. But it didn't require such a finer control. I designed this gesture here, the one with the |
| Gestures, control\easy control | Then I designed this gesture because I wanted something. The modulation index, I wanted modulation index to be kept at the particular value. So I need this one to be on this one to keep playing. And then just I decided that it would be nice to just to move the form of my hand to vary that a little bit |
| Relationship between Design Decisions and | Okay, due to the problem that we have with the parameters, I found it difficult to control with this. Maybe we have a better amplitude, but I think this is a very traditional or like very common. It's just a problem on digital musical instruments, you have the sensors. You can embody your sensors, but there's |
| Gestures, control\difficult control | Okay, due to the problem that we have with the parameters, I found it difficult to control with this. Maybe we have a better amplitude, but I think this is a very traditional or like very common. It's just a problem on digital musical instruments, you have the sensors. You can embody your sensors, but there's |
| Gestures, control\fine tune control | Okay, due to the problem that we have with the parameters, I found it difficult to control with this. Maybe we have a better amplitude, but I think this is a very traditional or like very common. It's just a problem on digital musical instruments, you have the sensors. You can embody your sensors, but there's |
| Relationship between Design Decisions and | In other projects, I just wanted to say. But originally, I was picturing something in a different range, but also with a different sensitivity than the one that I achieved here. But I just decided it's still a percussion instrument, so I think it's better to control it with my hand. |
| comments on toolkit design\Constrained but Open- | If you don't constraint, then you don't find your way out. But if you can bump into some walls, then you can find the way out, maybe. But if you are completely the darkness that you don't know, you have no idea what to go. |

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| design approach\think about the gesture control | i like this one, I like the stretching for the volume, I like the pressure, but for the harmony ratio. |
| Gestures, control\Inspiration Sources of Gesture Design\map instrument design ideas\ideas from interacting with materials design approach\test ideas | i like this one, I like the stretching for the volume, I like the pressure, but for the harmony ratio. And I didn't like the idea that I had with the bending sensor, although I couldn't use it. It was not very, no mechanically stable. maybe where I fail is, because like I explore the synth and the and the sounds but they explore it from the computer and not from the instrument. Or maybe I was worried about the time, I don't know, but no, I wasn't worried about the time I really wanted to see this, build up and I. That's why like I got very excited about. That's why I'm saying I was very excited about building the thing. So he was like, let's do it. It's like the sensors there who can I really like it. I think it's very fun to take some time and work in something material and try to understand the process of generation of sounds with the mapping of these controls to something that kind of inspiring to some instrument, but at the same time, it's it's nice to see how the train of thought like. |
| instrument design ideas\inspiring new instrument instrument design ideas\ideas from interacting with materials experience on textile sensor making | I really like it. I think it's very fun to take some time and work in something material and try to understand the process of generation of sounds with the mapping of these controls to something that kind of inspiring to some instrument, but at the same time, it's it's nice to see how the train of thought like. P4(P11) inter(no) |
| instrument design ideas\experimental music Gestures, control\easy control | basically there was like to push the fingers in this way to actually have the structure sensor and then like through performance, how can you stress how you should stress, but it depends on you can basically press like these, or you can like try and explore this part. And I thought it was best to actually put in this diagonal direction. So you can actually, it was basically easier to actually stretch it from only one side, because through the sound, I actually figured it doesn't matter where you start. |
| design approach\think about performance Gestures, control\link to the performance not sound itself | And also I feel like, for example, using the bigger sensor in this case is, actually part of the performance is that it doesn't matter where you press, but exhibition like some kind of movement that you can do that it's not linked to do to the sound itself, but it's more linked to the way you perform. If you're And also I feel like, for example, using the bigger sensor in this case is, actually part of the performance is that it doesn't matter where you press, but exhibition like some kind of movement that you can do that it's not linked to do to the sound itself, but it's more linked to the way you perform. If you're |
| Gestures, control\find sensors match the input control Gestures, control\easy control | And it loses part of the performance at less for me. This basically was the idea was going for like some kind of like a shape or I could put like really functional idea of putting the sensors and putting sensor in a way. It was really easy for me to control and to control multiple parameter with the best And it loses part of the performance at less for me. This basically was the idea was going for like some kind of like a shape or I could put like really functional idea of putting the sensors and putting sensor in a way. It was really easy for me to control and to control multiple parameter with the best |
| design approach\think about the gesture control Gestures, control\Inspiration Sources of Gesture Design\map | This basically was the idea was going for like some kind of like a shape or I could put like really functional idea of putting the sensors and putting sensor in a way. It was really easy for me to control and to control multiple parameter with the best fine tune that I could actually figure out. And then I chose |
| Gestures, control\fine tune control design approach\think about the body position | And then the last sensor came actually what is the best way to control the other part of the instrument without losing control on the stretch sensors and like and keeping a good fine tune and a good way to actually use the instrument. initial idea was to have, basically, my initial idea was as these sewer buttons. I thought this sewer buttons. So I could actually put it somewhere, for example, on my arm and just stretch the muscle like any mg because i'm used to that. So I was trying to go for something I know, probably basically in |
| Gestures, control\Design body movement Gestures, control\Inspiration Sources of Gesture | initial idea was to have, basically, my initial idea was as these sewer buttons. I thought this sewer buttons. So I could actually put it somewhere, for example, on my arm and just stretch the muscle like any mg because i'm used to that. So I was trying to go for something I know, probably basically in |
| design approach\think about the gesture control design approach\think about performance | Basically, the design process, I would say, was like try and find an easy control for the most basic part of the instrument that was the amplitude. Then put yourself a constraint for something you like, something you want to experience something and. It's good for you, but because you like to perform and that was a stretch sensor. And then find other sensors, there were good to actually with the gestures. So I have the gesture in mind, what |
| instrument design ideas\put yourself a constraint design approach\think about the gesture control | Then put yourself a constraint for something you like, something you want to experience something and. It's good for you, but because you like to perform and that was a stretch sensor. And then find other sensors, there were good to actually with the gestures. So I have the gesture in mind, what because I the first thing I saw was like I loved this, I want to use it. |
| Relationship between Design Decisions and Materials\look the design approach\think about the gesture control | because I the first thing I saw was like I loved this, I want to use it. And then basic just kind of research the stretch sensors, either using muscle for textiles, or you have like stretch your whole arms something, or either you control it with your fingers. |
| Gestures, control\Design body movement instrument design ideas\put yourself a constraint | And then basic just kind of research the stretch sensors, either using muscle for textiles, or you have like stretch your whole arms something, or either you control it with your fingers. In this case, once you have this the basic gesture in mind, then everything else comes. Maybe probably more natural, because you have one constraint. |
| Gestures, control\Inspiration Sources of Gesture Design\la Relationship between Design Decisions and Materials\look for | In this case, once you have this the basic gesture in mind, then everything else comes. Maybe probably more natural, because you have one constraint. Actually, the point is that for me, the choice was based on the material that was most likely to give me the sensation back that I was looking for. |
| design approach\try all the materials find the expected Gestures, control\fine tune control | So I was looking for fine tune, basically. And that was achieved by these ones, the sensors. like the ones we like, the two velcro like patches. Because I felt like, I tried them all, because I connected them all when I try the pressure sensors, I connected them all. I felt this was the one I was feeling best So I was looking for fine tune, basically. And that was achieved by these ones, the sensors. like the ones we like, the two velcro like patches. Because I felt like, I tried them all, because I connected them all when I try the pressure sensors, I connected them all. I felt this was the one I was feeling best |
| Relationship between Design Decisions and Materials\find Relationship between Design Decisions and Materials\look for | And so I tried them all and I was okay, this is the one that I feel the most like good in this kind of because I felt like for example, like this one for me at least was too soft. It's like you were kind of like going down, but not able to go back with a good fine tune. And this one was basically like two. I didn't And so I tried them all and I was okay, this is the one that I feel the most like good in this kind of because I felt like for example, like this one for me at least was too soft. It's like you were kind of like going down, but not able to go back with a good fine tune. And this one was basically like two. I didn't |
| Relationship between Design Decisions and Materials\look the Relationship between Design Decisions and Materials\material | for example, like this one for me at least was too soft. It's like you were kind of like going down, but not able to go back with a good fine tune. So part of it is like it's not probably real. And part of it maybe is, I don't know, but like for me, this was the best material that I was looking for in, because I used only pressure senses because I was like, I don't like personally and I was not interested in using the flex sensor. |
| design approach\test ideas Gestures, control\Inspiration Sources of Gesture | So probably like I looked at the sensors that I had like as soon as you showed me what there was, I was already okay. What I want to do as soon as you explain me to task you'll have to design the instrument. But being like having a knowledge, I prior knowledge of what the sensors basically like are So probably like I looked at the sensors that I had like as soon as you showed me what there was, I was already okay. What I want to do as soon as you explain me to task you'll have to design the instrument. But being like having a knowledge, I prior knowledge of what the sensors basically like are |
| Gestures, control\control not fine Gestures, control\difficult control | I feel that probably is because this is the thing I use the most in my life, so I already know it. And knowing it, you you already know what is the gesture like, how much you can fine tune, know how much you can press and everything. The stretch sensor, I post some more problems on one side because I feel that probably is because this is the thing I use the most in my life, so I already know it. And knowing it, you you already know what is the gesture like, how much you can fine tune, know how much you can press and everything. The stretch sensor, I post some more problems on one side because |
| comments on toolkit design\potentiao for experience on textile sensor making | Awesome. It's definitely awesome. I love it. I love to build instruments. I love to like these most performances, a lot of ongoing music, a lot some synthesis like digital instruments. I think it is lovely. So sure. Super nice. P5 inter.no |

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| Relationship between Design Decisions and design approach\explore sensors | But initially, so this stretch sensor here, is the major movement within this instrument. So this one is controlling the amplitude which keeps the sound on and off on and off. Because overall, the sound I can generate here, I haven't found one sound that's I really like. It's better to keep them silent while I'm |
| design approach\starting from the sound | First of all, when I first get to know this, what I have in mind is I will try on this laptop first like what parameters and tune into different degrees and find certain sound that I like than trying to replicate on the physical instrument. I'm about to design. However, I found, like I mentioned, like there's no sound |
| Gestures, control\like non-linear control | It just looks satisfied. I don't know. But then for the stretch, because I like the range, the stretches are generated and this non linearity. |
| Gestures, control\easy control | So I just attached to the ball, because I when I think of how to generate the different stretch level, without putting too much effort like in a manual way, like doing this all the time. |
| Gestures, control\Inspiration Sources of Gesture Design\la | So I just attached to the ball, because I when I think of how to generate the different stretch level, without putting too much effort like in a manual way, like doing this all the time. |
| instrument design ideas\visually simplified | It's basically the same because the the force is vertical, but having hiding, it makes it like visually simplified. That's the reason I guess. |
| instrument design ideas\from the unpredictable response | I think first thing, when I attached this to the queue, it's more related to the to the large sheet, the shape. I just feel matched here. And for the other like this one, like I said, it's I like the material because it's more unpredictable change. their stretch. |
| Gestures, control\easy control | I just use the smallest pressure. |
| Gestures, control\Inspiration Sources of Gesture Design\la | I think it comes naturally with the stretch, because I'm focusing on the strategy to stretch it is this gesture. |
| Gestures, control\Inspiration Sources of Gesture | I think it comes naturally with the stretch, because I'm focusing on the strategy to stretch it is this gesture. |
| Relationship between Design Decisions and | hasn't because initially it goes completely not in the direction that I want. That's the part that didn't go really well. But in the end, when I abandoned the idea of generate a beautiful sound, it becomes much easier. And I think it's just the fun part. |
| comments on toolkit design\Constrained but Open- | If there is a like a library where I can select different sample, it would be good. But this is fm sentences. |
| comments on toolkit design\Constrained but Open- | I think I maybe ii like on a um, higher level, I will add some functionality, enables macro control mhm like combine several different parameters into one channel, |
| instrument design ideas\think about performance | But for life performance, I think only rare. I haven't seen anyone that's doing some design in live performance. |
| comments on toolkit design\try different materials | And you were thinking, how am I going to stretch this? I think it would be nice if I can have, like more experience thinking, what are the possible interactions I can do? Before I start like designing and play, I think that will make me more comfortable. Yeah, like having more control of what I'm doing. |
| comments on toolkit design\good kit for rapid | And you were thinking, how am I going to stretch this? I think it would be nice if I can have, like more experience thinking, what are the possible interactions I can do? Before I start like designing and play, I think that will make me more comfortable. Yeah, like having more control of what I'm doing. |
| comments on toolkit design\suggestions\need a | And you were thinking, how am I going to stretch this? I think it would be nice if I can have, like more experience thinking, what are the possible interactions I can do? Before I start like designing and play, I think that will make me more comfortable. Yeah, like having more control of what I'm doing. |
| comments on toolkit design\Constrained but Open- | And you were thinking, how am I going to stretch this? I think it would be nice if I can have, like more experience thinking, what are the possible interactions I can do? Before I start like designing and play, I think that will make me more comfortable. Yeah, like having more control of what I'm doing. |
| comments on toolkit design\Constrained but Open- | And you were thinking, how am I going to stretch this? I think it would be nice if I can have, like more experience thinking, what are the possible interactions I can do? Before I start like designing and play, I think that will make me more comfortable. Yeah, like having more control of what I'm doing. |
| experience on textile sensor making | P6(p12) inter.no |
| Relationship between Design Decisions and | so at least the way of hoping it will work is that you have three different textile pads for the three parameters on the left side, its amplitude. So the harder you press the louder it gets. That works really well. on the right side is the the modulation. This thing is supposed to control harmonics. a tiny little |
| Gestures, control\link to the performance not sound itself | So ideal is that basically, I can use this play this with the like the bottom of my hands, kind of my bottom of my palms. |
| Gestures, control\easy control | So ideal is that basically, I can use this play this with the like the bottom of my hands, kind of my bottom of my palms. |
| Gestures, control\difficult control | So ideal is that basically, I can use this play this with the like the bottom of my hands, kind of my bottom of my palms. |
| Gestures, control\Inspiration Sources of Gesture | So ideal is that basically, I can use this play this with the like the bottom of my hands, kind of my bottom of my palms. |
| Gestures, control\Inspiration Sources of Gesture Design\map | I guess first I looked at what the individual parameters do, and then decided on whether I want something that is. kind of on/off, but I definitely wanted to have the possibility to switch off the amplitude to have like no sound and then have a like louder in a linear way. |
| Gestures, control\like non-linear control | It would be good to be able to switch off the modulation altogether and increase it in the linear fashion, then for the harmonics, because the harmonic ratio is not really a linear parameter, and it's not something you can switch off in that way. |
| instrument design ideas\think about performance | So I thought it would be interesting to have something that behaves in a little bit of an unpredictable way. And even though it doesn't really work, I was hoping that depending on how I bend it, it will create like somebody weird, crazy sounds. So maybe just, I would need some more tweaking. And I used |
| instrument design ideas\from the unpredictable response | So I thought it would be interesting to have something that behaves in a little bit of an unpredictable way. And even though it doesn't really work, I was hoping that depending on how I bend it, it will create like somebody weird, crazy sounds. So maybe just, I would need some more tweaking. And I used |
| Relationship between Design Decisions and Materials\look the | Didn't think so much about the materials. It's fabric. It just feels kind of nice on the hands. There's no particular reason why I chose this smooth material for the bending sensor. I think it's just because it was next to me, honestly. I didn't think so much about the materials, more about what the individual |
| Relationship between Design Decisions and Materials\ignoring | Didn't think so much about the materials. It's fabric. It just feels kind of nice on the hands. There's no particular reason why I chose this smooth material for the bending sensor. I think it's just because it was next to me, honestly. I didn't think so much about the materials, more about what the individual |
| Relationship between Design Decisions and | Yeah, I was hoping that if I put this on here that I can bend it over the edge, and I will give me more control, which didn't work out. And I also didn't really like how it would look, because it seems like it's it has kind of a loose end so prefer this because it seems more just contained. It has a ground |
| design approach\previous instrument knowledge | So I just basically decided that I just want to use my hands. I shortly thought about maybe something could be controlled with a feet or different parts of a body. But I felt like in a short time, it would be difficult to come up with something. So I'm familiar with playing instruments with my hand. So it's my goal |
| design approach\time pressure | So I just basically decided that I just want to use my hands. I shortly thought about maybe something could be controlled with a feet or different parts of a body. But I felt like in a short time, it would be difficult to come up with something. So I'm familiar with playing instruments with my hand. So it's my goal |
| Gestures, control\difficult control | So I just basically decided that I just want to use my hands. I shortly thought about maybe something could be controlled with a feet or different parts of a body. But I felt like in a short time, it would be difficult to come up with something. So I'm familiar with playing instruments with my hand. So it's my goal |
| Gestures, control\Inspiration Sources of Gesture | So I just basically decided that I just want to use my hands. I shortly thought about maybe something could be controlled with a feet or different parts of a body. But I felt like in a short time, it would be difficult to come up with something. So I'm familiar with playing instruments with my hand. So it's my goal |
| Gestures, control\fine tune control | So I thought, these pressure sensors are really simple. Basically. I just need something to put pressure on them. So I felt even using my thumb, so i just have one thing. And then because for the bending, I feel you need a little bit more intricate control, at least that's what I expected that you might want |
| Gestures, control\Inspiration Sources of Gesture | So I thought, these pressure sensors are really simple. Basically. I just need something to put pressure on them. So I felt even using my thumb, so i just have one thing. And then because for the bending, I feel you need a little bit more intricate control, at least that's what I expected that you might want |
| Gestures, control\fine tune control | So I think the pressure sensors worked really well, especially for the amplitude, like I feel like I can really control it and even make like a rhythm with it. So, it's actually really nice. Because I think that's something, for example, if you have a midi controller, that's not that easy to do. Have this kind of. quite |
| Relationship between Design Decisions and | I think the same is actually true for the modulation, but it's just the bending sensor doesn't seem to be working that well so you can't really hear what the modulation does. |

| | |
|---|--|
| comments on toolkit design\suggestions\need a | Yeah, I think I would need more time, I think more like two or three hours to really. I was thinking more about the control. I think that was because even for just trying sounds out. I felt it was really difficult to do it without actually having the instrument, because how can I control of these things at the same |
| comments on toolkit design\suggestions\training on | Yeah, I think I would need more time, I think more like two or three hours to really. I was thinking more about the control. I think that was because even for just trying sounds out. I felt it was really difficult to do it without actually having the instrument, because how can I control of these things at the same |
| comments on toolkit design\try different materials | It's really fun because you feel like you can very easily put pins in it and take them out and rearrange things. So I like the flexibility of the material that I feel like I can't really, everything is reversible and I can't really break something. So it gives me a lot of freedom. And i'm not like worried that I will break |
| comments on toolkit design\good kit for rapid | It's really fun because you feel like you can very easily put pins in it and take them out and rearrange things. So I like the flexibility of the material that I feel like I can't really, everything is reversible and I can't really break something. So it gives me a lot of freedom. And i'm not like worried that I will break |
| comments on toolkit design\Constrained but Open-experience on textile sensor making | P7(p14)int no |
| Gestures, control\find sensors match the input control | the first thing I wanted to do is figure out what the things on the patch did, what it sounds did. And I tried to be systematic in that. There're so many things you can plug in, which I noticed. So because there're so much things I can plug in, I had to ended up not using the modulation index, because I |
| Gestures, control\difficult control | the first thing I wanted to do is figure out what the things on the patch did, what it sounds did. And I tried to be systematic in that. There're so many things you can plug in, which I noticed. So because there're so much things I can plug in, I had to ended up not using the modulation index, because I |
| Gestures, control\Inspiration Sources of Gesture Design\map | the first thing I wanted to do is figure out what the things on the patch did, what it sounds did. And I tried to be systematic in that. There're so many things you can plug in, which I noticed. So because there're so much things I can plug in, I had to ended up not using the modulation index, because I |
| Gestures, control\easy control | And then I decided I didn't actually like that at all because I wanted to do this as well because when I listen to the piece, so it was like... kind of thing. I wanted these volume. I'm a guitar player. You'd imagine you'd hold down a note. You'd roll up the volume, and it goes well. But I was trying to do that. |
| Gestures, control\Inspiration Sources of Gesture | So I thought I might try stuff with the rubber bands, but then the two under one just didn't quite work. Then I something like, a bomb went off my head. And I thought you could use the sticks. So like get more control, you can get different values on both that are just a fixed. They're not both mapped to |
| Relationship between Design Decisions and Materials\find | I did through the way, but I didn't find, I think my favorite of the square pads, were still felt the one I broke. this one here. I don't think I broke. It was my favorite. I think this was too sponge and soft. This one I had to push down really hard. It's not like an aggressive rock piece. On these. I just picked |
| Relationship between Design Decisions and Materials\look for | I did through the way, but I didn't find, I think my favorite of the square pads, were still felt the one I broke. this one here. I don't think I broke. It was my favorite. I think this was too sponge and soft. This one I had to push down really hard. It's not like an aggressive rock piece. On these. I just picked |
| Relationship between Design Decisions and Materials\chose | I did through the way, but I didn't find, I think my favorite of the square pads, were still felt the one I broke. this one here. I don't think I broke. It was my favorite. I think this was too sponge and soft. This one I had to push down really hard. It's not like an aggressive rock piece. On these. I just picked |
| Relationship between Design Decisions and | I did through the way, but I didn't find, I think my favorite of the square pads, were still felt the one I broke. this one here. I don't think I broke. It was my favorite. I think this was too sponge and soft. This one I had to push down really hard. It's not like an aggressive rock piece. On these. I just picked |
| Relationship between Design Decisions and | I did through the way, but I didn't find, I think my favorite of the square pads, were still felt the one I broke. this one here. I don't think I broke. It was my favorite. I think this was too sponge and soft. This one I had to push down really hard. It's not like an aggressive rock piece. On these. I just picked |
| Gestures, control\link to the performance not sound itself | I didn't try to do anything difficult. I just did. When I was playing with these felt things, I just wanted to, because I think the bends almost there where you can really hit a difference. And I just wanted a way to control it where my hand movement is just intuitive. So I went for a like a duck and I found |
| Gestures, control\Inspiration Sources of Gesture | I didn't try to do anything difficult. I just did. When I was playing with these felt things, I just wanted to, because I think the bends almost there where you can really hit a difference. And I just wanted a way to control it where my hand movement is just intuitive. So I went for a like a duck and I found |
| Gestures, control\Inspiration Sources of Gesture | I didn't try to do anything difficult. I just did. When I was playing with these felt things, I just wanted to, because I think the bends almost there where you can really hit a difference. And I just wanted a way to control it where my hand movement is just intuitive. So I went for a like a duck and I found |
| Gestures, control\easy control | So initially, I was just trying to make it a little bit more linear, up and down. That was really for the gestures. I remember one point I was using the pads. I found two fingers were better than trying to press loads down, but I did an amusement at the end. |
| design approach\explore sensors | I did some random dropping of the ball on the pad that didn't do anything. I think the big thing that made a big difference between as soon as I got aa larger range on the pitch to play with. If I could add to it, i'd make it so very discreet. So you follow the scale because it's down between, that's a bit |
| design approach\test ideas | I did some random dropping of the ball on the pad that didn't do anything. I think the big thing that made a big difference between as soon as I got aa larger range on the pitch to play with. If I could add to it, i'd make it so very discreet. So you follow the scale because it's down between, that's a bit |
| Relationship between Design Decisions and | I did some random dropping of the ball on the pad that didn't do anything. I think the big thing that made a big difference between as soon as I got aa larger range on the pitch to play with. If I could add to it, i'd make it so very discreet. So you follow the scale because it's down between, that's a bit |
| instrument design ideas\experimental music | I get it discrete. one thing I wanted to try and set up a few was only get along, because I have spent the ball in the middle to a strict range and that was working quite well. Because you can always build a piece that they gradually the balls get bigger. Maybe there's some sort of way of designing it so |
| Relationship between Design Decisions and | Probably? Because I knew what I was doing more. Right? I like differently. So i've learned it more. So I wouldn't waste time doing the stuff. I was trying to figure out the first place. Yeah, I guess I wouldn't waste time with these things, cause what I called for a stretchy ones, because I guess when the |
| comments on toolkit design\form ideas quickly | Yes, you controlling pitch, you've got loudness, you got the modulation index that I didn't play with because I didn't own of hands. |
| comments on toolkit design\suggestions\training on | Yes, you controlling pitch, you've got loudness, you got the modulation index that I didn't play with because I didn't own of hands. |
| comments on toolkit design\Constrained but Open-instrument design ideas\ideas from interacting with materials | Yes, you controlling pitch, you've got loudness, you got the modulation index that I didn't play with because I didn't own of hands. |
| comments on toolkit design\Constrained but Open-design thinking\design digital control and physical interface | It's very fun. I didn't really do stuff with electronics. I like to do it on computers. It was a lot of fun but hard to control. When I write music, I like to sit at notation because I like to no everything that i'm doing, where this was a bit more freeing, where to go. So, it's just a different kind of workflow. |
| design approach\based on ears and feelings | It's very fun. I didn't really do stuff with electronics. I like to do it on computers. It was a lot of fun but hard to control. When I write music, I like to sit at notation because I like to no everything that i'm doing, where this was a bit more freeing, where to go. So, it's just a different kind of workflow. |
| experience on textile sensor making | It's very fun. I didn't really do stuff with electronics. I like to do it on computers. It was a lot of fun but hard to control. When I write music, I like to sit at notation because I like to no everything that i'm doing, where this was a bit more freeing, where to go. So, it's just a different kind of workflow. |
| instrument design ideas\wearable instrument | But it was enough, for me, I could use my ears and feel it as opposed to, I don't know. I didn't need to read any technical documentation. |
| Gestures, control\Design body movement | P8 inter no |
| design approach\start from exploration of materials | I mapped, I used my deflection of my arms, basically, of my two arms. My left arm would map into the harmonics, I guess. While the right one is the amplitude, and the left one to harmonics. And then I use the stretch sensor in between my hands. So it was, I felt like all of them connected in a way. |
| instrument design ideas\ideas from interacting with materials | I mapped, I used my deflection of my arms, basically, of my two arms. My left arm would map into the harmonics, I guess. While the right one is the amplitude, and the left one to harmonics. And then I use the stretch sensor in between my hands. So it was, I felt like all of them connected in a way. |
| Relationship between Design Decisions and Materials\get | I was very, let's say, provoked by the elements. And I kind of, as I studied this, I know this is kind of material oriented, I left myself like instead of having a first idea from the beginning that I prefer to like touching those things, the materials, and how do they work? They gave me the ideas. |
| Relationship between Design Decisions and Materials\chose | I was very, let's say, provoked by the elements. And I kind of, as I studied this, I know this is kind of material oriented, I left myself like instead of having a first idea from the beginning that I prefer to like touching those things, the materials, and how do they work? They gave me the ideas. So basically, |
| Relationship between Design Decisions and | But as soon as I had this already thought about, I thought it was going to be easy to grab that thing at the same time wouldn't be bothering me, right? It would feel very natural. |
| Relationship between Design Decisions and | But as soon as I had this already thought about, I thought it was going to be easy to grab that thing at the same time wouldn't be bothering me, right? It would feel very natural. |
| Relationship between Design Decisions and | But as soon as I had this already thought about, I thought it was going to be easy to grab that thing at the same time wouldn't be bothering me, right? It would feel very natural. |

| | |
|---|---|
| Gestures, control\Inspiration Sources of Gesture Design\ | But as soon as I had this already thought about, I thought it was going to be easy to grab that thing at the same time wouldn't be bothering me, right? It would feel very natural. |
| Relationship between Design Decisions and | To be honest, I didn't think much in the materials, at least consciously. So, maybe like, obviously, here I am thinking about this material, but if you ask me like the materials in a way of the textures of them, I wasn't thinking that much in that. I was thinking more in the what the materials are allowing to |
| Relationship between Design Decisions and Materials\Ignoring | To be honest, I didn't think much in the materials, at least consciously. So, maybe like, obviously, here I am thinking about this material, but if you ask me like the materials in a way of the textures of them, I wasn't thinking that much in that. I was thinking more in the what the materials are allowing to |
| Relationship between Design Decisions and | To be honest, I didn't think much in the materials, at least consciously. So, maybe like, obviously, here I am thinking about this material, but if you ask me like the materials in a way of the textures of them, I wasn't thinking that much in that. I was thinking more in the what the materials are allowing to |
| Gestures, control\to explore the sound | Obviously, but I would say that it invites to just make a very natural movement in music, which is like, let's say, two directions, like this one, like this direction and also in this direction. So I would tell them, you could try, for example, first, just one arm in one direction and this arm in another direction. |
| Gestures, control\Design body movement | Obviously, but I would say that it invites to just make a very natural movement in music, which is like, let's say, two directions, like this one, like this direction and also in this direction. So I would tell them, you could try, for example, first, just one arm in one direction and this arm in another direction. |
| Gestures, control\link to the performance not sound itself | Obviously, but I would say that it invites to just make a very natural movement in music, which is like, let's say, two directions, like this one, like this direction and also in this direction. So I would tell them, you could try, for example, first, just one arm in one direction and this arm in another direction. |
| Gestures, control\easy control | Obviously, but I would say that it invites to just make a very natural movement in music, which is like, let's say, two directions, like this one, like this direction and also in this direction. So I would tell them, you could try, for example, first, just one arm in one direction and this arm in another direction. |
| Gestures, control\Inspiration Sources of Gesture Design\ | Obviously, but I would say that it invites to just make a very natural movement in music, which is like, let's say, two directions, like this one, like this direction and also in this direction. So I would tell them, you could try, for example, first, just one arm in one direction and this arm in another direction. |
| Gestures, control\slow movement | I knew it was like, with the flex sensor. So I thought even the name says like to flex. So that was very led to from the from the flexor itself. And then I realized that this could be... because I was thinking of a more like kind of slow gesture. But I realized that you could kind of leave it a bit loose and it |
| Gestures, control\fine tune control | I knew it was like, with the flex sensor. So I thought even the name says like to flex. So that was very led to from the from the flexor itself. And then I realized that this could be... because I was thinking of a more like kind of slow gesture. But I realized that you could kind of leave it a bit loose and it |
| instrument design ideas\opportunity in the | This is interesting because in the beginning it was something that it was upsetting, this is not linear. So in the beginning was like, what can I do if the mapping is getting to an area where everything gets confusing. And in the end, that was an opportunity in the performance because it was like cool, |
| Gestures, control\like non-linear control | This is interesting because in the beginning it was something that it was upsetting, this is not linear. So in the beginning was like, what can I do if the mapping is getting to an area where everything gets confusing. And in the end, that was an opportunity in the performance because it was like cool, |
| Gestures, control\fine tune control | This is interesting because in the beginning it was something that it was upsetting, this is not linear. So in the beginning was like, what can I do if the mapping is getting to an area where everything gets confusing. And in the end, that was an opportunity in the performance because it was like cool, |
| Gestures, control\Inspiration Sources of Gesture Design\ | That didn't work that well for me. But the control in general of the parameters, was very clear. So that worked well. I would say the kind of physical that it was very low-fi, but it still worked well. I mean usually when you prototype is that low-fi that you are have to be concerned and attaching, again, the |
| design approach\think about performance | Maybe if I would have more time, because see that is a prototype, maybe in a second iteration, I would have said, let's focus on this. So maybe put a mark there or something. So it would have influenced, they didn't, because it was just first prototype. It was more in the, how was I playing the |
| comments on toolkit design\Constrained but Open- | For example, I was more engaging with the first sounds you showed me like the kind of sampling sounds. I always find this kind of in digital music instruments that they go very... And sometimes, for me, it's a bit not that wide for exploring, and I always find more fun to change to that. |
| instrument design ideas\ideas from interacting with materials | So I would do that. I would go there like exploring that. And I guess and this is goes more with my actual development of an exploration in my phd actually. in the end, what you try to do and the important part is like to develop certain neutrality between the physical gesture world with the sound |
| comments on toolkit design\potentiao for | So I would do that. I would go there like exploring that. And I guess and this is goes more with my actual development of an exploration in my phd actually. in the end, what you try to do and the important part is like to develop certain neutrality between the physical gesture world with the sound |
| design thinking\design digital control and physical interface | So I would do that. I would go there like exploring that. And I guess and this is goes more with my actual development of an exploration in my phd actually. in the end, what you try to do and the important part is like to develop certain neutrality between the physical gesture world with the sound |
| Gestures, control\fine tune control | Maybe just for fun, I would explore a variation. But as I have this knowledge, maybe what I would try, I don't know what I would do different to be honest. I think I would go more in the calibration part if possible, with these sounds, maybe for fun I would explore now like what if I ... I think I would |
| comments on toolkit design\Constrained but Open- | So I get the feeling here that it's open enough to be an experiment, but at the same time, a creation, creative process that it's open enough, to create fun stuff, it's not like just press this ball, put two buttons. And I guess the fun part is goes with this more like kind of, for example, this is very important |
| comments on toolkit design\try different materials | As soon as you see these and all these things, and i've done your other experiment, you feel kind of more open to that process I guess. The only fact of watching that there are fabrics, for example, makes you put into a more creative part. And that's fun because I was thinking in my case if you are |
| experience on textile sensor making | P9 inter no |
| Relationship between Design Decisions and | So there's two of these little pressure sensors. One is just felt and the other is kind of robbery. And this the robbery, one is the amplitude, whether it's making any sound at all um and then the felt one changes the pitch. |
| design approach\starting from the sound | Sure. So first I listen to the sound of the synthesizer. I tried all the different parameters to see what the option was sonically. Then I tried to figure out which parameters do I want to play with. For me, it was important that I could turn on and off the volume at all. That way I have control of whether |
| design approach\think about the gesture control | Sure. So first I listen to the sound of the synthesizer. I tried all the different parameters to see what the option was sonically. Then I tried to figure out which parameters do I want to play with. For me, it was important that I could turn on and off the volume at all. That way I have control of whether |
| Gestures, control\fine tune control | The second aspect was I wanted to be able to control some sort of if not pitch, like at least some sort of noticeable shift in the quality of the sound. So even if it was the timbre, so I just didn't really do too much worrying exactly whether to connect to one or two of three. Like I knew three was the |
| Relationship between Design Decisions and Materials\look the | Frankly, I didn't know like it took me a while to even realized the felt one is different to the rubber one. I quite like the size of these small ones. And I didn't really try them all out and think I want that or not. I just kind of went for the next thing I would try, because if that didn't work, then I'd say I'd want |
| Relationship between Design Decisions and Materials\Ignoring | Frankly, I didn't know like it took me a while to even realized the felt one is different to the rubber one. I quite like the size of these small ones. And I didn't really try them all out and think I want that or not. I just kind of went for the next thing I would try, because if that didn't work, then I'd say I'd want |
| Gestures, control\difficult control | I would say this one here is about turning it on and off and this one here is about changing the pitch, but be careful because a very small gesture changes the pitch a lot. So you might find you're only doing a very tiny gesture to change the pitch. |
| Gestures, control\fine tune control | I would say this one here is about turning it on and off and this one here is about changing the pitch, but be careful because a very small gesture changes the pitch a lot. So you might find you're only doing a very tiny gesture to change the pitch. |
| Gestures, control\Inspiration Sources of Gesture Design\map | I started to play with the balls, and I thought, wouldn't it be nice to have the balls? But then I realized these senses are so sensitive, though, that I don't need more control of that. And I wanted the musical outcome to be melodic and controllable rhythmically. |
| Relationship between Design Decisions and Materials\find | So for that, I didn't want to complicate the interface to be more explorative in a physical gesture kind of way. I just wanted it to work. So I just went for what works and what works is this simple control. I keep my hands still, and it's more about pressure of my fingertips and the moving of the tiny gesture |
| Gestures, control\easy control | So for that, I didn't want to complicate the interface to be more explorative in a physical gesture kind of way. I just wanted it to work. So I just went for what works and what works is this simple control. I keep my hands still, and it's more about pressure of my fingertips and the moving of the tiny gesture |
| Gestures, control\fine tune control | So for that, I didn't want to complicate the interface to be more explorative in a physical gesture kind of way. I just wanted it to work. So I just went for what works and what works is this simple control. I keep my hands still, and it's more about pressure of my fingertips and the moving of the tiny gesture |
| Gestures, control\learning through the process | It did work really well at turning it on and off and choosing the pitch until I went to go to the performance. And all of a sudden, I couldn't repeat what I tried to do previously. And then I guess what I must have been doing is adding a bend to the sensor without knowing it. Like maybe it was something |
| Gestures, control\repeatable ideas | It did work really well at turning it on and off and choosing the pitch until I went to go to the performance. And all of a sudden, I couldn't repeat what I tried to do previously. And then I guess what I must have been doing is adding a bend to the sensor without knowing it. Like maybe it was something |
| comments on toolkit design\try different materials | I'm really liking this. It feels like felt, I don't know what it, is it's material, the rubber, whatever. But this felt feeling is nice. And it makes me think it would be kind of fun to make a squishy toy or something. You can play this particular thing where it's only one and the other. But you could just play with a |
| Relationship between Design Decisions and Materials\get | I'm really liking this. It feels like felt, I don't know what it, is it's material, the rubber, whatever. But this felt feeling is nice. And it makes me think it would be kind of fun to make a squishy toy or something. You can play this particular thing where it's only one and the other. But you could just play with a |
| Relationship between Design Decisions and Materials\chose | I'm really liking this. It feels like felt, I don't know what it, is it's material, the rubber, whatever. But this felt feeling is nice. And it makes me think it would be kind of fun to make a squishy toy or something. You can play this particular thing where it's only one and the other. But you could just play with a |

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| Relationship between Design Decisions and design approach\explore sensors | I'm really liking this. It feels like felt, I don't know what it, is it's material, the rubber, whatever. But this felt feeling is nice. And it makes me think it would be kind of fun to make a squishy toy or something. You can play this particular thing where it's only one and the other. But you could just play with a |
| comments on toolkit design\Constrained but Open-instrument design ideas\put yourself a constraint | No I think I quite like what I ended up with, and because it was a process of exploration, I stopped when I liked what I did, so it's not like I aimed to for something, but I just was playing. I came to what I liked by saying that doesn't need to change anymore. |
| comments on toolkit design\Constrained but Open-instrument design ideas\put yourself a constraint | No I think I quite like what I ended up with, and because it was a process of exploration, I stopped when I liked what I did, so it's not like I aimed to for something, but I just was playing. I came to what I liked by saying that doesn't need to change anymore. |
| comments on toolkit design\give new ideas | I enjoyed the activity. I like doing things with constraints. So I like that you already made aspects of the synthesizer so that then I could only play with certain aspects of it. To me, creativity comes from constraints. So you could open up a daw and you could put any instrument in and you could connect |
| comments on toolkit design\try different materials | I enjoyed the activity. I like doing things with constraints. So I like that you already made aspects of the synthesizer so that then I could only play with certain aspects of it. To me, creativity comes from constraints. So you could open up a daw and you could put any instrument in and you could connect |
| comments on toolkit design\Constrained but Open- | I really liked it. I think what you've made here is really cool. I've never seen people connect safety pins to I guess it's an e textiles method. It's really cool. |
| Gestures, control\difficult control | I really liked it. I think what you've made here is really cool. I've never seen people connect safety pins to I guess it's an e textiles method. It's really cool. |
| instrument design ideas\ideas from interacting with materials | I really liked it. I think what you've made here is really cool. I've never seen people connect safety pins to I guess it's an e textiles method. It's really cool. |
| Gestures, control\difficult control | I used bend sensors because these are like I can press and shake them at the same time. Like these pressure sensors, I think like it's not very easy to find trying to just tap it one hand. I'm not that precise, but if i'm shaking it, I can control the my wrist and my arm in a way that I can create a rhythm. |
| Relationship between Design Decisions and Materials\find | And also like I can create a constant notes, but with this, like I need to like apply a lot of pressure and keep it there. And while applying pressure, I cannot cut the notes very precisely, but I can switch with me like pressing this and shaking it. And I can do the same thing with this. I like the weight of |
| Relationship between Design Decisions and | And also like I can create a constant notes, but with this, like I need to like apply a lot of pressure and keep it there. And while applying pressure, I cannot cut the notes very precisely, but I can switch with me like pressing this and shaking it. |
| Relationship between Design Decisions and Materials\look for | I like the weight of this like a rubber thing. And this gives me different feeling than these like lights, spongy things. So I like this for amplitude. And when there's more weight on it, it's like easier to shake and get the feedback from material. |
| design approach\think about performance | I like the weight of this like a rubber thing. And this gives me different feeling than these like lights, spongy things. So I like this for amplitude. And when there's more weight on it, it's like easier to shake and get the feedback from material. |
| design approach\starting from the sound | And when there's more weight on it, it's like easier to shake and get the feedback from material. |
| design approach\start from exploration of materials | And I think these stretch sensors I could use them, but I didn't wanna like take too long to create like a physical setup so that I can control the ben. But ideally, I wanted to make something maybe like um something like this, then stretch that over, then use my hand to control like one of the parameters. |
| Gestures, control\find sensors match the input control | And I think these stretch sensors I could use them, but I didn't wanna like take too long to create like a physical setup so that I can control the ben. But ideally, I wanted to make something maybe like um something like this, then stretch that over, then use my hand to control like one of the parameters. |
| Relationship between Design Decisions and | I just like, listen to the backing track. I try to understand like the phases, and I listen to your pd patch. So I thought about like, what can I play with this and felt like, there's no like a melodic instrument on top. So I thought maybe I could play something a bit more melodic or just extra, because there are |
| Gestures, control\Inspiration Sources of Gesture Design\find | So I thought I can do actually whatever I want, because there's a lot of space. I listening to your backing track and listening to the your pd patch, then trying to come up with something with the sensors that I like. |
| Gestures, control\Inspiration Sources of Gesture | So I thought I can do actually whatever I want, because there's a lot of space. I listening to your backing track and listening to the your pd patch, then trying to come up with something with the sensors that I like. |
| Gestures, control\Inspiration Sources of Gesture Design\map | I think like if I had a lot of time and I could change maybe the initial values or like the values in your pd patch, maybe I would use different sensors. But I like, when I try to pressure sense that I found myself like pressing really hard, and I cannot do that precisely for a long time. And maybe if i'm playing |
| Gestures, control\difficult control | I think like if I had a lot of time and I could change maybe the initial values or like the values in your pd patch, maybe I would use different sensors. But I like, when I try to pressure sense that I found myself like pressing really hard, and I cannot do that precisely for a long time. And maybe if i'm playing |
| Gestures, control\difficult control | I think like if I had a lot of time and I could change maybe the initial values or like the values in your pd patch, maybe I would use different sensors. But I like, when I try to pressure sense that I found myself like pressing really hard, and I cannot do that precisely for a long time. And maybe if i'm playing |
| Gestures, control\fine tune control | But if i'm doing this after tapping, there's nothing I can change about it. That's why I think that the bend sensors are good, because you can press and shake at the same time. There are like two different ways of creating input. Yeah, that's why I chose actually bend sensors. |
| design approach\starting from the sound | But if i'm doing this after tapping, there's nothing I can change about it. That's why I think that the bend sensors are good, because you can press and shake at the same time. There are like two different ways of creating input. Yeah, that's why I chose actually bend sensors. |
| Relationship between Design Decisions and Materials\look for | Yeah that was mostly like that because I don't know what results I would get from your system. Using like these three different kind of sensors. And when I realized I have more control using these than that I like know that would affect the music that I make, because if I use just pressure sensors |
| Relationship between Design Decisions and | Yeah that was mostly like that because I don't know what results I would get from your system. Using like these three different kind of sensors. And when I realized I have more control using these than that I like know that would affect the music that I make, because if I use just pressure sensors |
| Gestures, control\fine tune control | Yeah that was mostly like that because I don't know what results I would get from your system. Using like these three different kind of sensors. And when I realized I have more control using these than that I like know that would affect the music that I make, because if I use just pressure sensors |
| design approach\based on ears and feelings | Not strictly. When I listen to your backing track, I realized there's a lot of space. And this your instrument sounds like a kind of I can control the timber of it. So I can make something like maybe some things like talking on top of it or just like wrapping on top of your breaking track. So when I listen to it a |
| instrument design ideas\experimental music | No, like for shaking, this felt more precise than the like a lighter sponge ones. If, for example, like this soft pressure pad would give me a lot of control, like when I, press like touch it, and I hear a sound and like, maybe like this, even this light, I can get some sounds. And if i'm pressing harder, I can like |
| Gestures, control\fine tune control | No, like for shaking, this felt more precise than the like a lighter sponge ones. If, for example, like this soft pressure pad would give me a lot of control, like when I, press like touch it, and I hear a sound and like, maybe like this, even this light, I can get some sounds. And if i'm pressing harder, I can like |
| Relationship between Design Decisions and | No, like for shaking, this felt more precise than the like a lighter sponge ones. If, for example, like this soft pressure pad would give me a lot of control, like when I, press like touch it, and I hear a sound and like, maybe like this, even this light, I can get some sounds. And if i'm pressing harder, I can like |
| comments on toolkit design\Constrained but Open- | I wouldn't tell anyone not how to play something that I haven't designed, but because like i'm not the master of this instrument, I'm following my intuition. |
| comments on toolkit design\Constrained but Open- | But I would say the same things that I just told like i'm like why I pick these because of the like volume control with this is more precise than like I would maybe like demo the instrument like I played for your experiment, then I would just let them do whatever they want to do. |
| instrument design ideas\experimental music | But I would say the same things that I just told like i'm like why I pick these because of the like volume control with this is more precise than like I would maybe like demo the instrument like I played for your experiment, then I would just let them do whatever they want to do. |
| comments on toolkit design\try different materials | That didn't work? I tried the stretch sensor just once. I didn't hear much and like I didn't want to use it just because I didn't wanna spend like a lot of time on like building something that I can do this. I could have maybe like attached this to something. And I can could just pull. But I was thinking using |
| instrument design ideas\inspiring new instrument | So I was thinking initially like, what can I do with maybe like same gesture or similar gestures with like one hand. So I think stretch sensor would limit me in that sense. So I think that the fact that this doesn't respond to being stretched and only like these, like when you're changing, is a limitation of these |
| instrument design ideas\inspiring new instrument | What would I do next? I would change the sounds because this is your instrument. Everybody has different ideas about what they wanna create. Do you mean like if I have the same sensors, but I like or if I can change everything. |
| instrument design ideas\inspiring new instrument | I would change the pd patch a lot. I would try to come up with like a lot of different. I would probably design something that I can be like really rhythmically precise, like much more precise than this, maybe kind of come up with something that's like performable densible. |
| instrument design ideas\inspiring new instrument | I would change the pd patch a lot. I would try to come up with like a lot of different. I would probably design something that I can be like really rhythmically precise, like much more precise than this, maybe kind of come up with something that's like performable densible. |
| instrument design ideas\inspiring new instrument | Because like these days, I to a bit like experimental, like making like techno kind of performances with experimental music is like, what i'm interested in these days. |
| instrument design ideas\inspiring new instrument | I think it's really fun. It's like, not often you have a lot of like different materials to work to create an instrument. |
| instrument design ideas\inspiring new instrument | And when i'm like making something, creating something, I usually think about the sounds that I want to make first. That's my like focus always, because that's the most important and most interesting for me, rather than how I can play things. But this is like this gave me a different perspective |

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| comments on toolkit design\give new ideas | And when i'm like making something, creating something, I usually think about the sounds that I want to make first. That's my like focus always, because that's the most important and most interesting for me, rather than how I can play things. But this is like this gave me a different perspective |
| comments on toolkit design\potentiafor for | Yeah maybe, but I need to like... this is like a new territory to me. So if I knew that like people are actually making these kind of little sensors for performance like they are, more robust like I can trust them like not breaking. When i'm performing, I would definitely like if there's a website that I can |
| comments on toolkit design\suggestions\expect | Yeah maybe, but I need to like... this is like a new territory to me. So if I knew that like people are actually making these kind of little sensors for performance like they are, more robust like I can trust them like not breaking. When i'm performing, I would definitely like if there's a website that I can |
| Relationship between Design Decisions and Materials\ignoring | No, I didn't. because mostly I was trying to design studies. And I thought like if people are playing the interfaces, they are more comfortable with, they would be, they would spend less time like just developing a new like set of motor skills to play my instrument, because they don't have time to do that |
| comments on toolkit design\suggestions\the backing | I'm asking these questions because they're gonna definitely ask you like why this pecking track, because it affects like what people do like and what people want to play. Because again, it feels like you are actually playing on Top of something and your like musical decisions. And what you want to |
| Gestures, control\Inspiration Sources of Gesture | I don't know how to put it. Instead of applying so much pressure with just a finger point, if you're able to apply the same onto pressure with the entirety of your hand, and being able to move it along these degrees along the 360 °. There was a lot more control than just a one dimensional degree. The |
| Gestures, control\easy control | The instrument, the big pad controls pitch and the little pad, the medium sized pad controls volume. And I found that was the best way to switch them around because I want more control over my pitch than my volume. A bigger space to be able to control that on was easier than using a smaller space. |
| Gestures, control\fine tune control | The instrument, the big pad controls pitch and the little pad, the medium sized pad controls volume. And I found that was the best way to switch them around because I want more control over my pitch than my volume. A bigger space to be able to control that on was easier than using a smaller space. |
| Gestures, control\Inspiration Sources of Gesture | The instrument, the big pad controls pitch and the little pad, the medium sized pad controls volume. And I found that was the best way to switch them around because I want more control over my pitch than my volume. A bigger space to be able to control that on was easier than using a smaller space. |
| design approach\start from exploration of materials | So I tried out all the materials available to me. And the first part of the process was just genuine, just experimentation, and trying to get some reactions out of using the different materials. |
| design approach\try all the materials find the expected | So I tried out all the materials available to me. And the first part of the process was just genuine, just experimentation, and trying to get some reactions out of using the different materials. |
| design approach\test ideas | So I tried out all the materials available to me. And the first part of the process was just genuine, just experimentation, and trying to get some reactions out of using the different materials. |
| instrument design ideas\put yourself a constraint | I found myself, I decided to limit myself quite quickly to to end up using the pressure pads instead of combining it with a stretch material or bending material, just because you would need two hands to use the bendy or stretching material. |
| instrument design ideas\ideas from interacting with materials | I found myself, I decided to limit myself quite quickly to to end up using the pressure pads instead of combining it with a stretch material or bending material, just because you would need two hands to use the bendy or stretching material. |
| Relationship between Design Decisions and | So I gotta be confused as to when they were useful and when they weren't. I also found that the stretching is, the the range of control of the stretch sensors weren't ideal. |
| Relationship between Design Decisions and Materials\ignoring | Good question. I didn't really choose the material. I didn't really care too much about the the material because they ended up using the balls to can to control. And therefore, my touch with the materials wasn't so necessary. But I did find that I guess the no, I don't think the material itself have informed |
| Relationship between Design Decisions and | Good question. I didn't really choose the material. I didn't really care too much about the the material because they ended up using the balls to can to control. And therefore, my touch with the materials wasn't so necessary. But I did find that I guess the no, I don't think the material itself have informed |
| design approach\explore sensors | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Relationship between Design Decisions and | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Gestures, control\explore the gesture control | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Gestures, control\find sensors match the input control | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Gestures, control\to explore the sound | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Gestures, control\difficult control | I would say, try the two sensors in different hands to see which order works best for you. I would say almost try to define what you have control of in the beginning and quantify how much you can control it by, for example, with the pitch control on the the big pressure pad. |
| Gestures, control\control not fine | with the volume sensor, I guess because there's so much of a on/off aspect with the volume sensor. It doesn't gradually increase from zero. I guess, just consider making using that as a rhythmical aspect, or almost like a percussive aspect, just being able to attempt on and off, because I don't think |
| Gestures, control\fine tune control | Whereas when you introduce the styrofoam balls, you suddenly have a lot more movement and control, control on a bit more detail. And it's also less painful for your hands, so it's less stressful. |
| Gestures, control\difficult control | So things that didn't work really well was the control of the pitch. Because as I said, there's a lot of variants with pitch, even if you keep the pitch, if you attempt to keep the pitch property still it's gonna move up and down a by a few semitones. |
| Relationship between Design Decisions and | But the volume itself, I when I could hear it being activated, there's a relationship between the intensity and how much it pressed down on that. So I wasn't really able to feel that relationship very strongly, or at least it wasn't intuitive. |
| instrument design ideas\from the unpredictable response | exploration including all this? I think the idea of... there was an issue, first of all, with the the fact that if I plugged out one of the pins and plugged it back in the pitch would change. that could have been a cool glitchy type of feature in the instrument, but I wasn't... it is a bit too chaotic. |
| Gestures, control\like non-linear control | exploration including all this? I think the idea of... there was an issue, first of all, with the the fact that if I plugged out one of the pins and plugged it back in the pitch would change. that could have been a cool glitchy type of feature in the instrument, but I wasn't... it is a bit too chaotic. |
| Gestures, control\like non-linear control | Again, if you only have a glitches in the music, then it's not going. And it's not a fun thing to control it more, so it is random. It would have been nice if there is a way to be able to control multiple things at once might be able to press down the pressure sensor while also stretching, but then you went out |
| Gestures, control\learning through the process | I guess it would be nice if you are able to put pressure or if you are able to interact with a with the sensor in a certain way, and then have some kind of switch or latch that allows that to stay the same value once you take your finger off. Because then you can control all three parameters at once. And |
| Gestures, control\difficult control | I guess it would be nice if you are able to put pressure or if you are able to interact with a with the sensor in a certain way, and then have some kind of switch or latch that allows that to stay the same value once you take your finger off. Because then you can control all three parameters at once. And |
| design approach\test ideas | I'd be very systematic about that. So I would probably test out this control at different registers at different pitches. And then do that all the same way with using volume as the main focus or modulation index. |
| design thinking\Repeated testing ideas | I'd be very systematic about that. So I would probably test out this control at different registers at different pitches. And then do that all the same way with using volume as the main focus or modulation index. |
| design approach\try all the materials find the expected | But I learned that you just have to experiment with each shape. That's really the best way to do it with when you're not familiar with the processes and technology involved, just try everything and don't leave any stone unturned. |
| design approach\test ideas | But I learned that you just have to experiment with each shape. That's really the best way to do it with when you're not familiar with the processes and technology involved, just try everything and don't leave any stone unturned. |
| comments on toolkit design\try different materials | But I learned that you just have to experiment with each shape. That's really the best way to do it with when you're not familiar with the processes and technology involved, just try everything and don't leave any stone unturned. |
| design thinking\Repeated testing ideas | But I learned that you just have to experiment with each shape. That's really the best way to do it with when you're not familiar with the processes and technology involved, just try everything and don't leave any stone unturned. |
| Gestures, control\Inspiration Sources of Gesture | In the fact that you could re calibrate each sensor, there was a lot of variance, a lot of things you could change at once. And it was a little kind of overwhelming to get started knowing like to change any of those things. And then the 4th dimension is also being able to control the on screen |
| experience on textile sensor making | But I haven't really gotten to explore the material aspect, not much dynamics and stretchiness, or the deformation. I haven't used that really. |
| comments on toolkit design\suggestions\see the real | I guess I would say as well, it would be comforting to see the the amount of input going into the sensor on some number object or something. When I was squeezing these. It would have been good to see a number go between zero and one. I could see if it indeed was working or if I guess that I just |