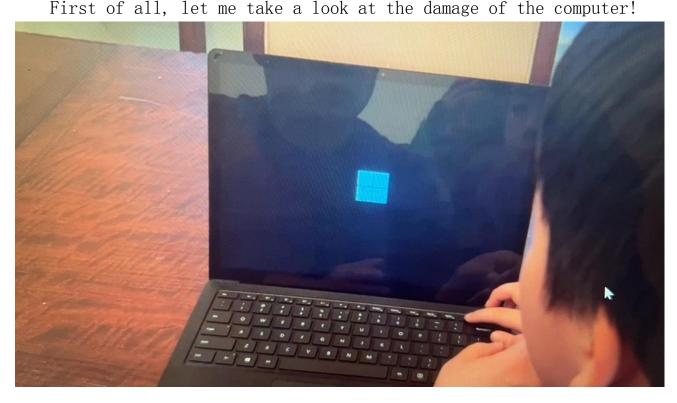
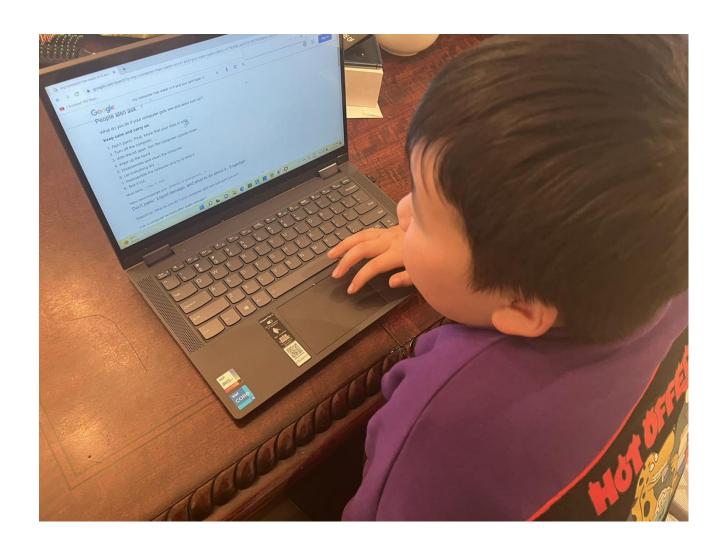
Team 1140A disassemble Microsoft Surface 3 Laptop - Repair Black Hole

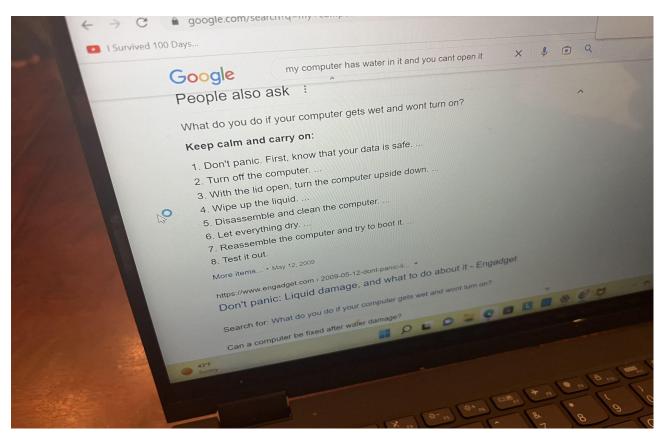
Hi, My name is Devin and I am in Grade 5. I like to explore broken devices, so for this challenge I choose my broken microsoft surface and tried to explore.

On the first day - I decided to disassemble a laptop, that was damaged by a drop in the water while swimming four months ago. It is a Microsoft Surface 3 Laptop, my favorite ever. Given that I once took apart a petrol engine, I thought it would be SO EASY to fix it!



Step 1: This is a picture of the laptop after booting, it turns on, but shuts down quickly and cannot be started. I feel that the damage is not very serious, and there is more information behind this. My dad also told me that when he was young, he also disassembled and repaired computers, and he would help me when encountering problems. my new computer yearns to wave again! Step 2: Check online how to repair



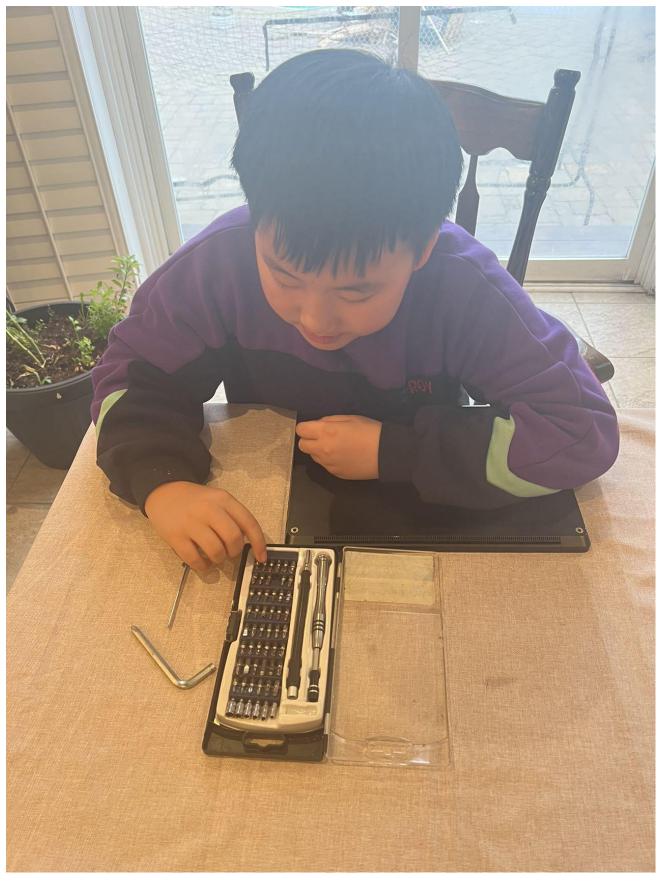


The third step is to prepare the tools, look at this super small screw, Only a very small screwdriver can do the job, preparing......

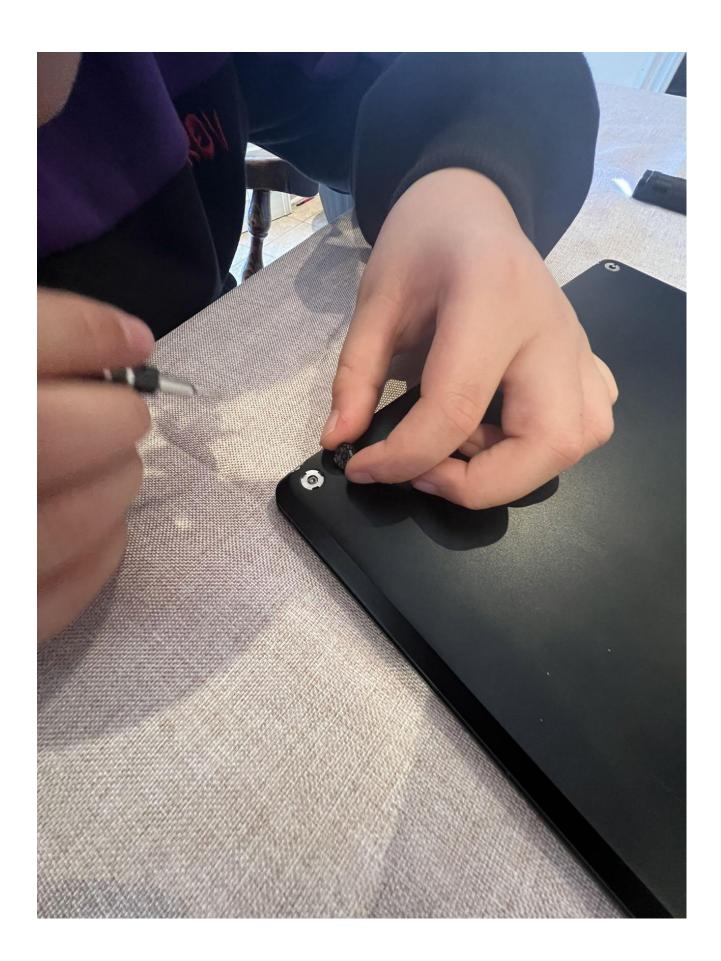


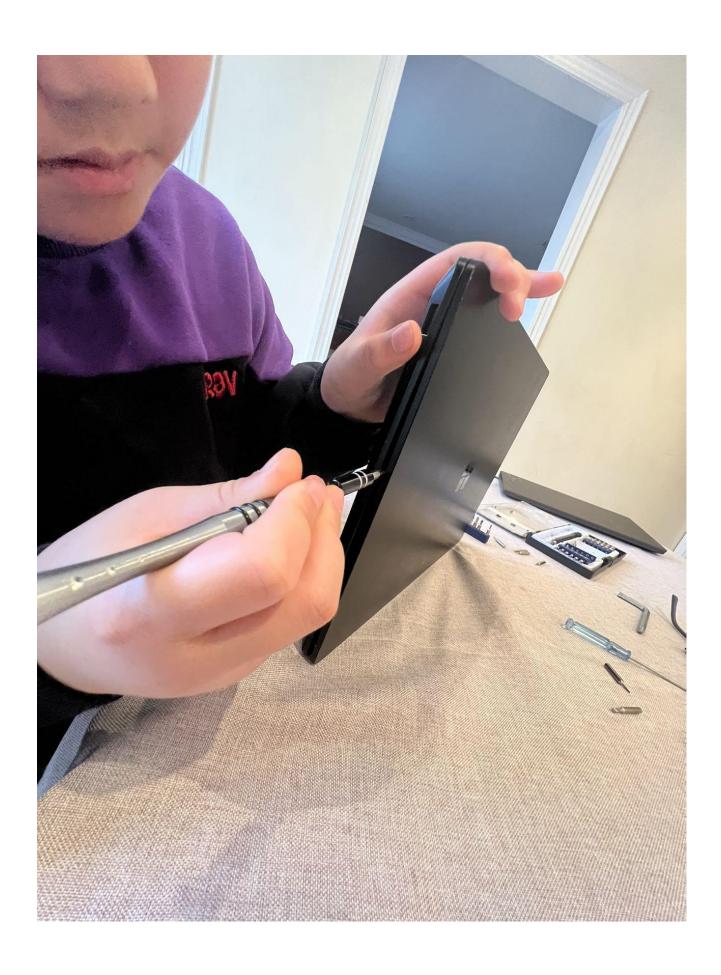
The next day, start disassembling

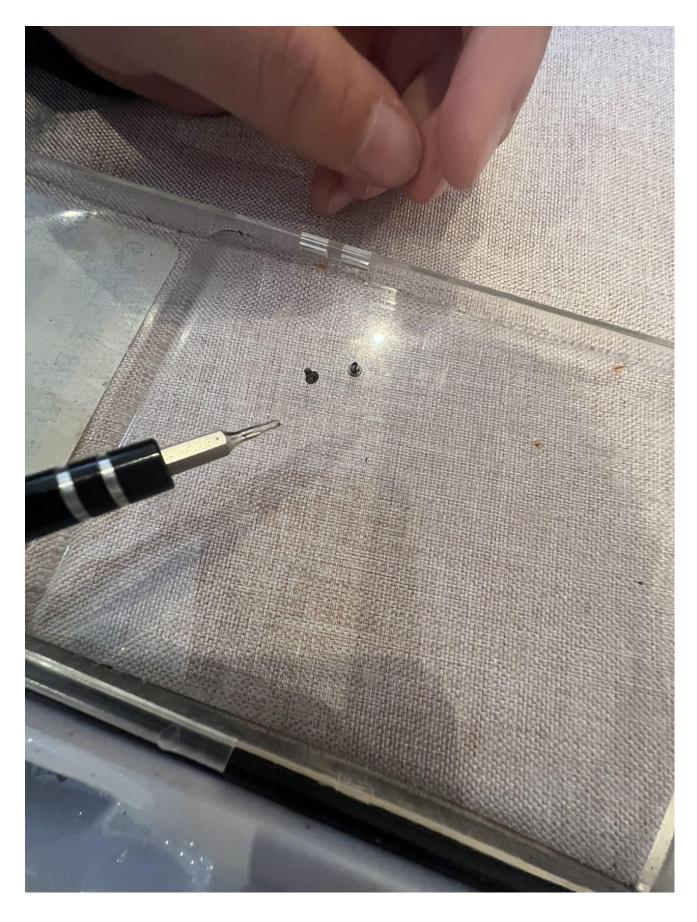
Step 1: Prepare My small screwdrivers in various sizes,



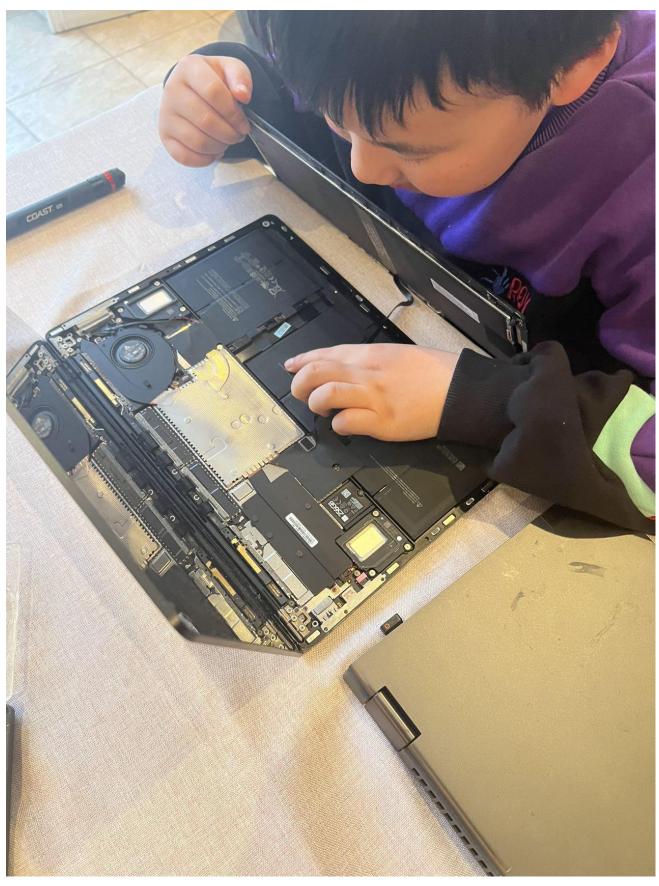
Step 2: disassemble the shell



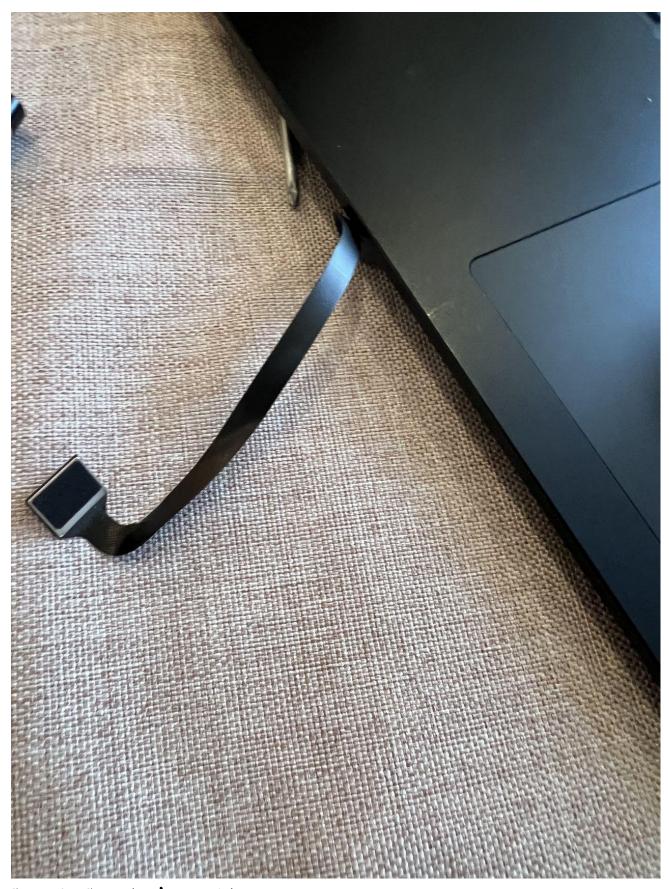




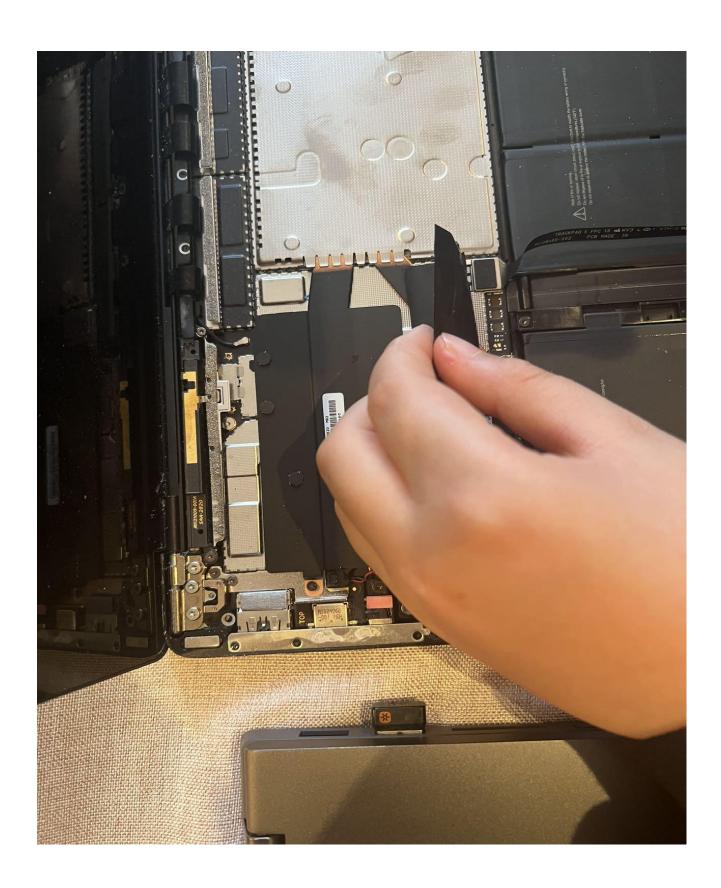
Step 3: Open the Case, so easy!

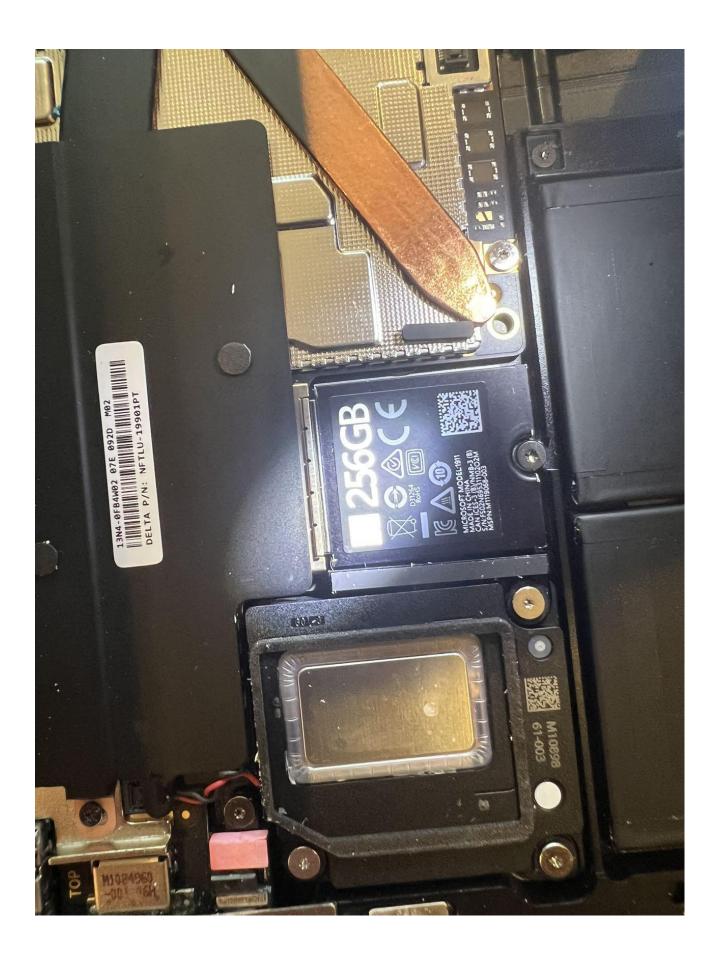


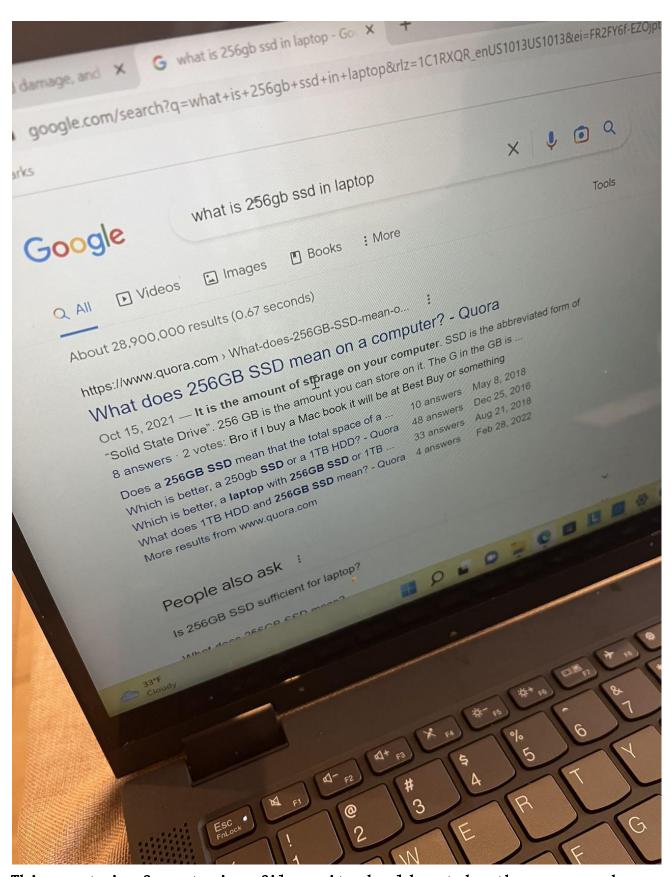
The line below is the connection line between the keyboard and the computer



Step 4: See What's Inside
1. Found the first component, 256G memory



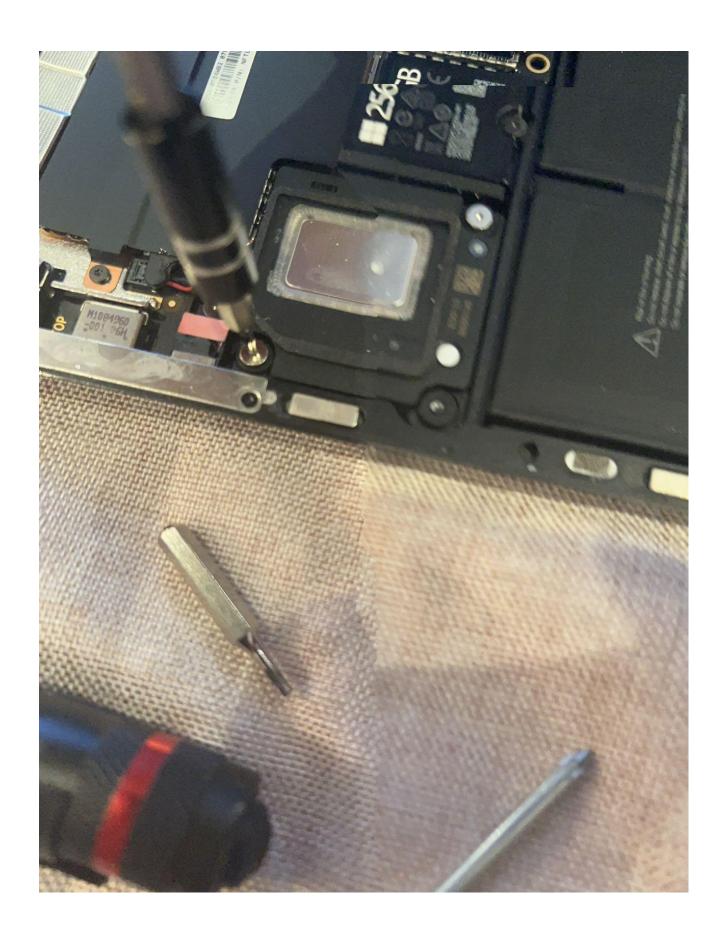




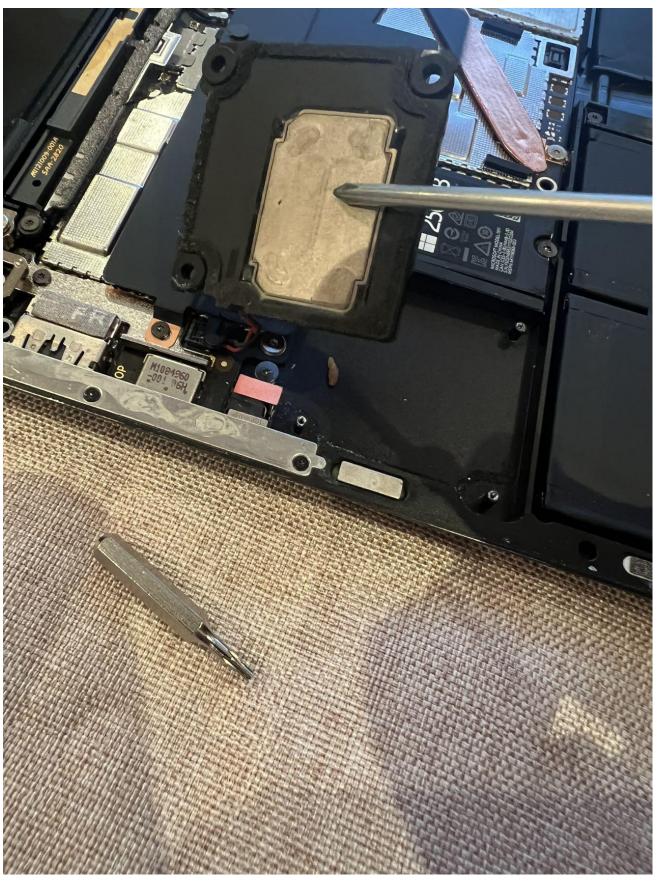
This part is for storing files, it should not be the reason why my computer can't start, continue to filter out problems

2. Found unknown parts





You see, there is still suction.



There is another one on the right, with numbers and QR codes on it, the numbers are very close, only the last numbers before and

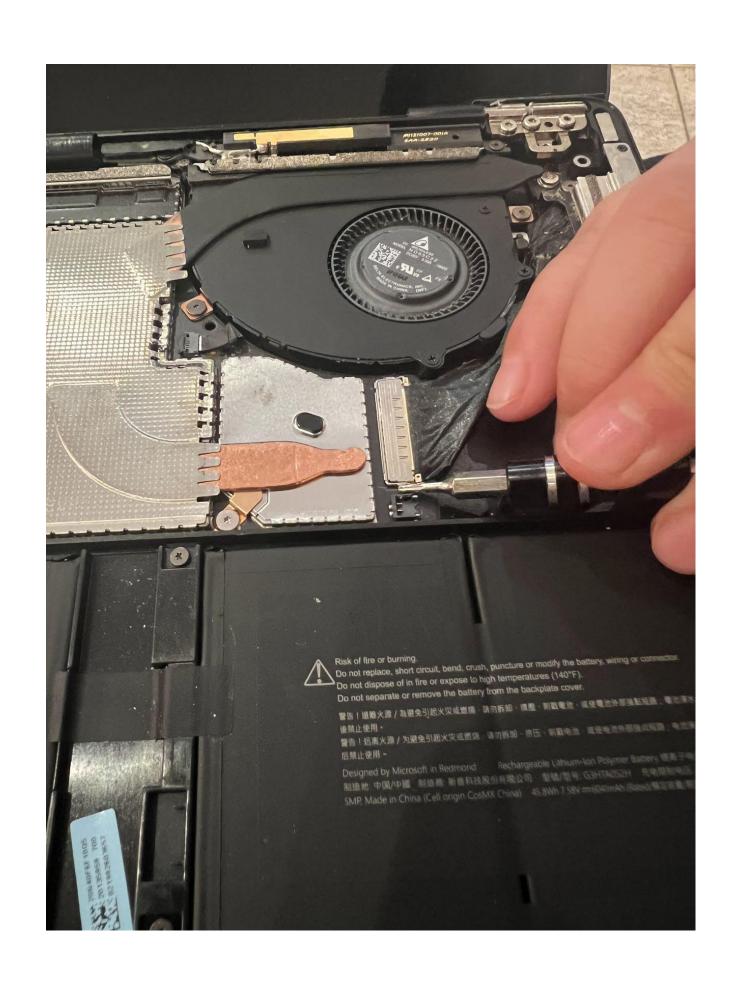
after - are different. Remove them together.

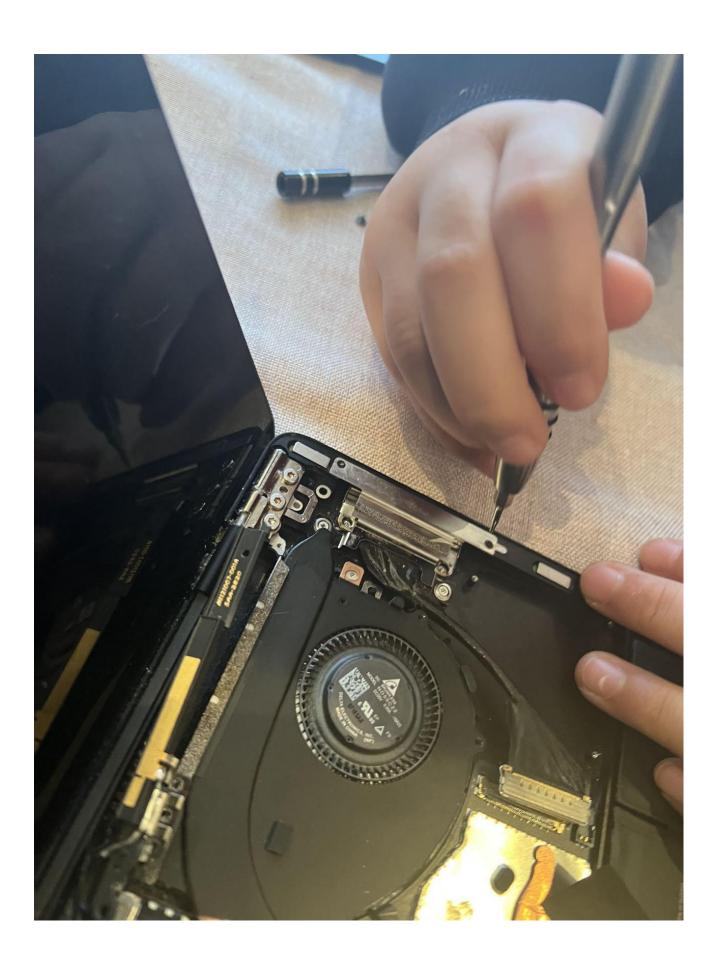


However, whether scanning the QR code or entering the number, i cant find the name of the item or its company, and it cannot be opened. Unknown parts?! Can anyone tell me what this is?



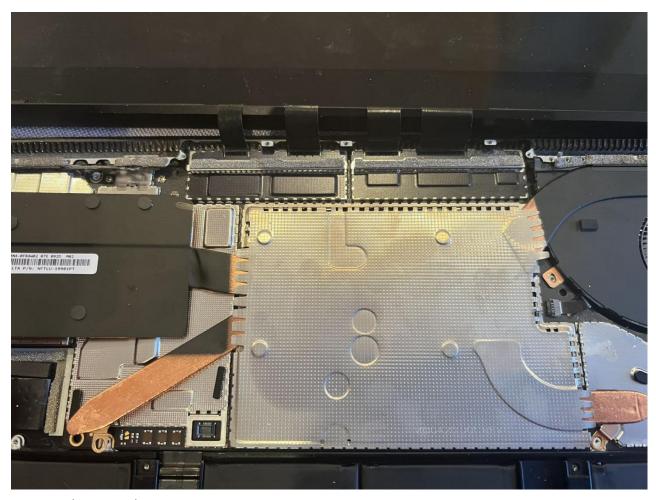
3. Disassemble the charging interface. Next to the charging interface is an electric fan, which is used to cool the computer.



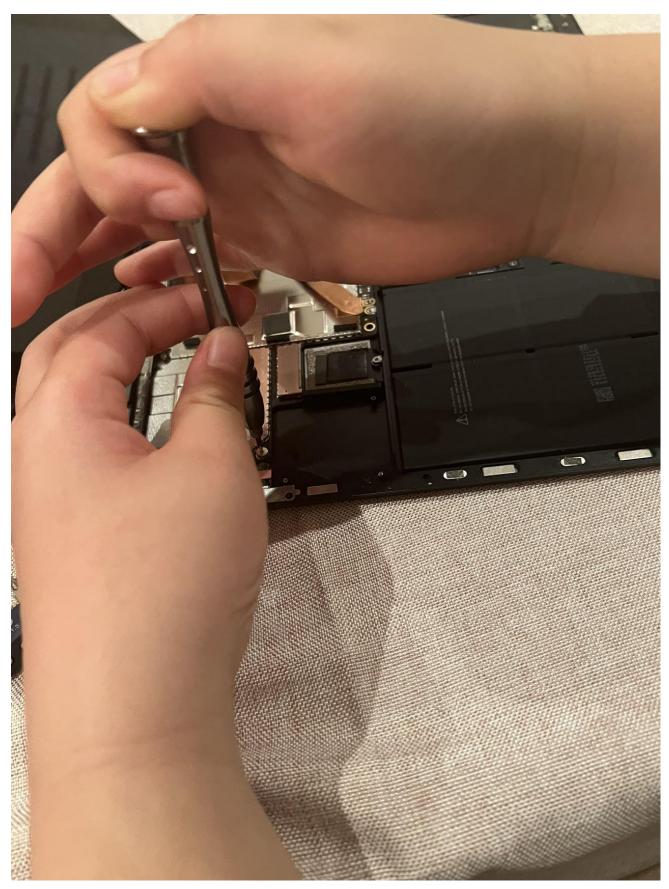




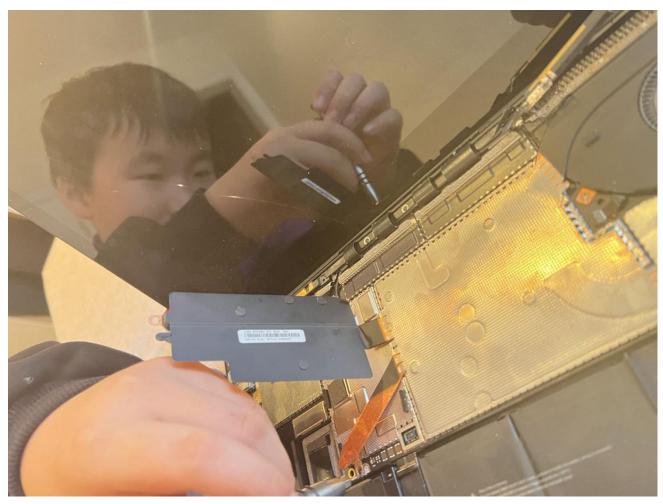
Finished 4. There's a big part in the middle that I'm trying to remove



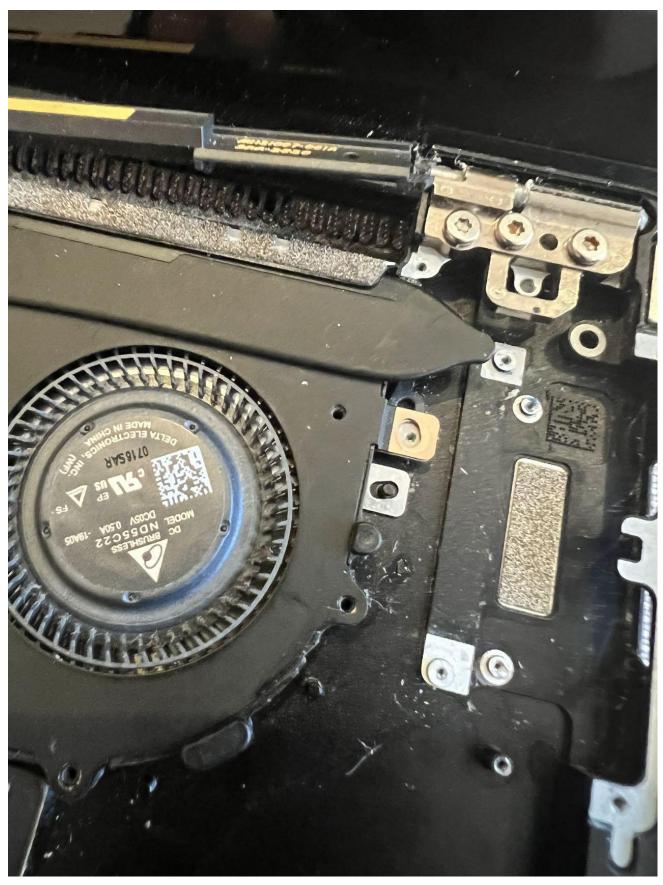
I was dismantling



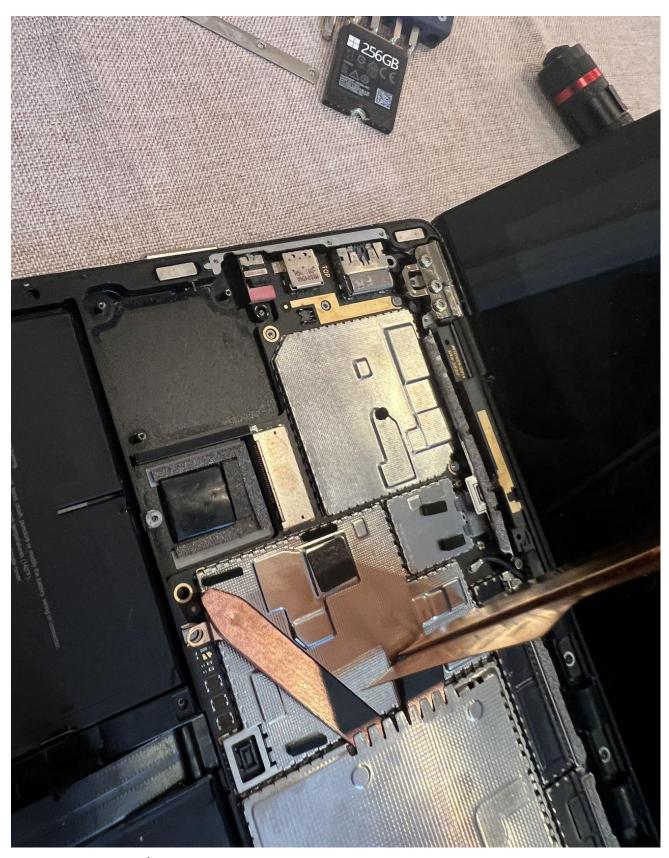
I was dismantling then



I was still dismantling



I was still dismantling then



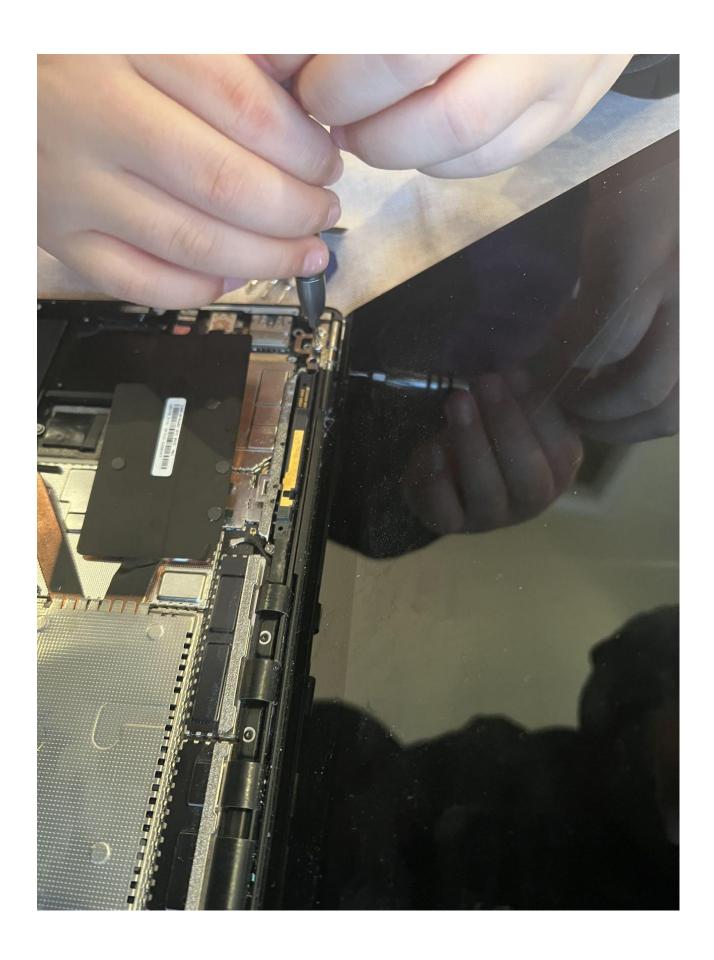
I still hadn't tear it down, I was about to collapse, forget it, let's took a rest.

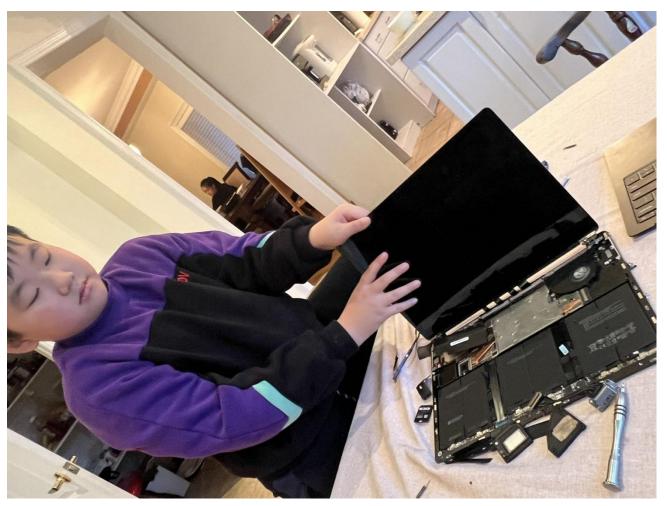
Day 3: Make a final effort

I must.... Forget it, let's try to dismantle some of them first!

I thought about it, because I didn't remove the computer display, the small parts around the display should be able to remove the large parts in the middle. I checked the computer, the computer motherboard and graphics card were inside, and I started to act.

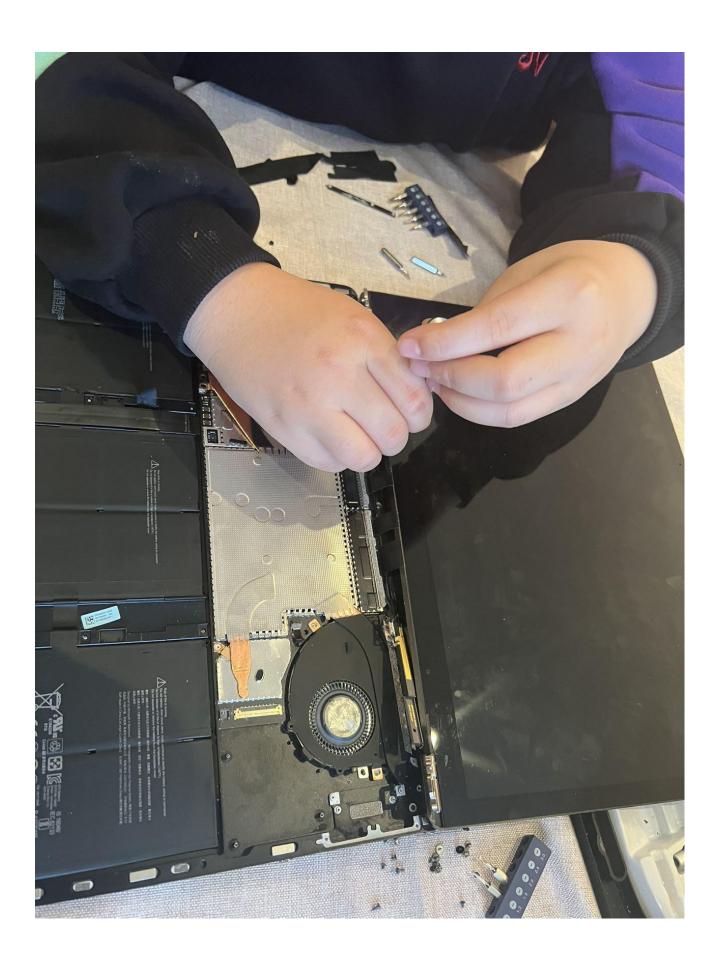
1. Remove the computer screen link part

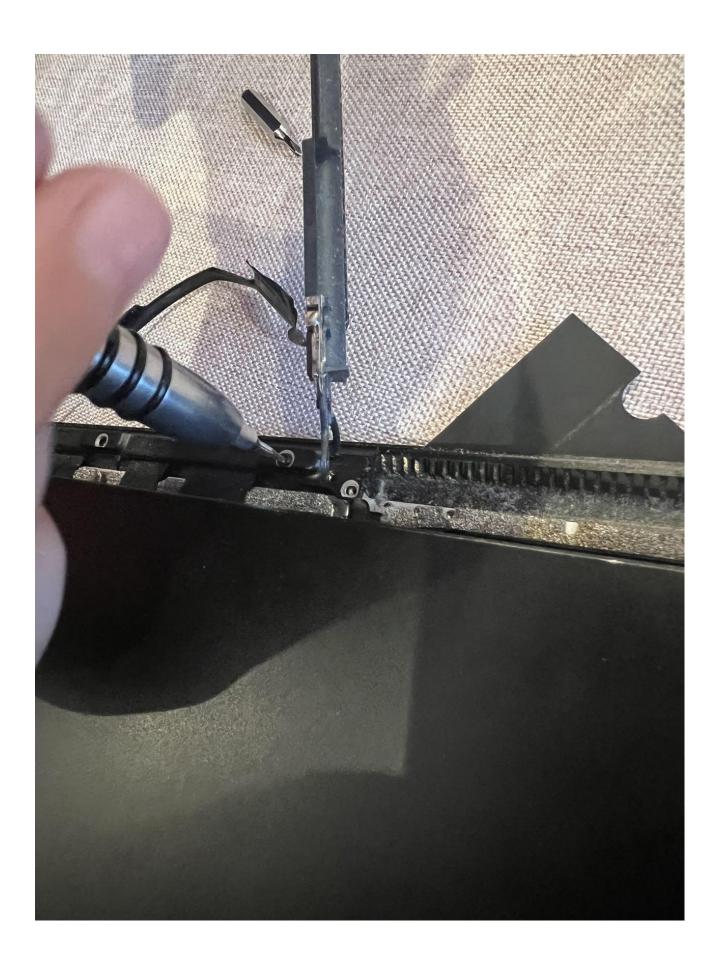


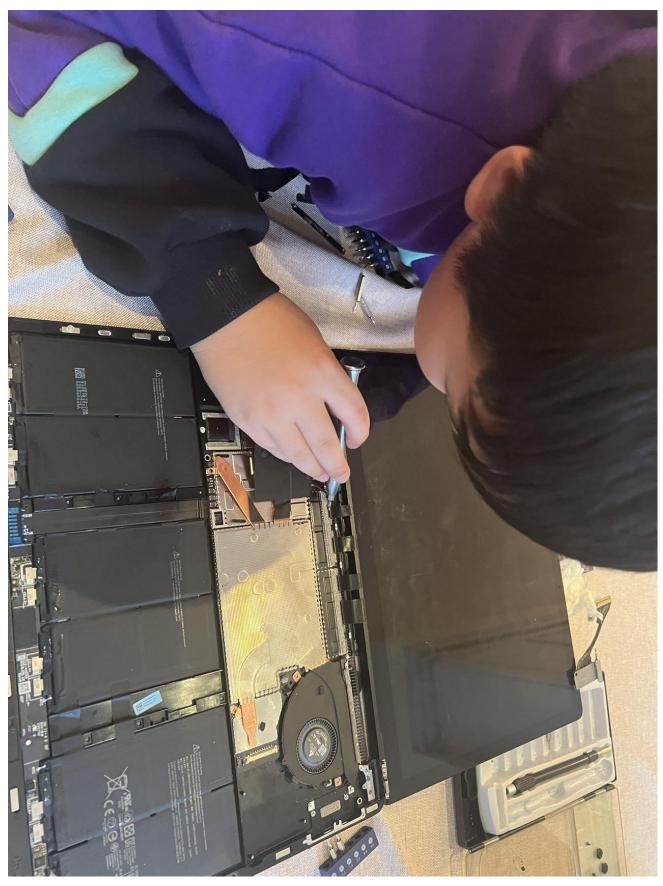


You see, there are four black straps attached to the screen, which Dad said are the power and signal wires.

2. Remove the surrounding small parts

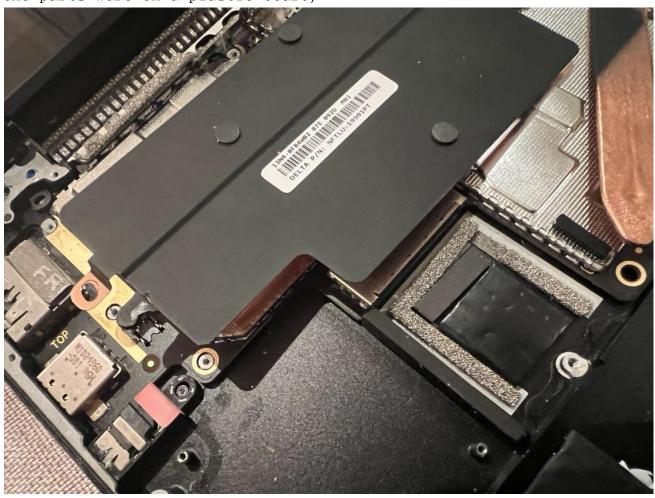


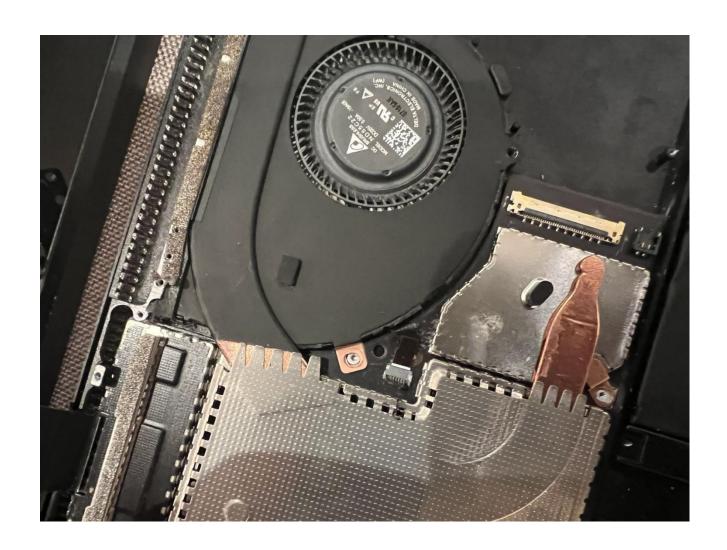


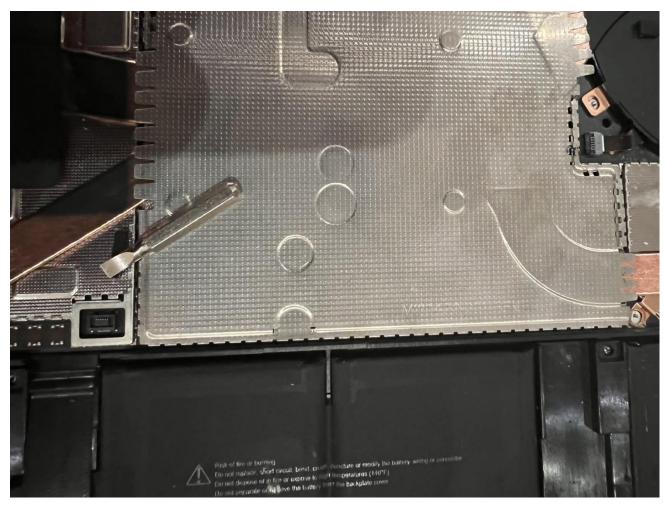


After removing all the surrounding detachable things, the 4 black straps still cannot be removed.

3. Tried to dismantle the large part in the middle again, this time I observed more carefully, the electric fan came out, and the rest of the parts were on a plastic board,



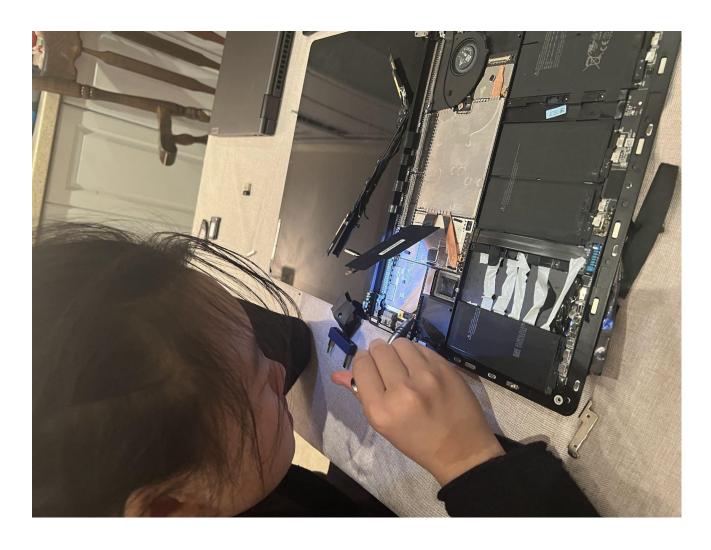




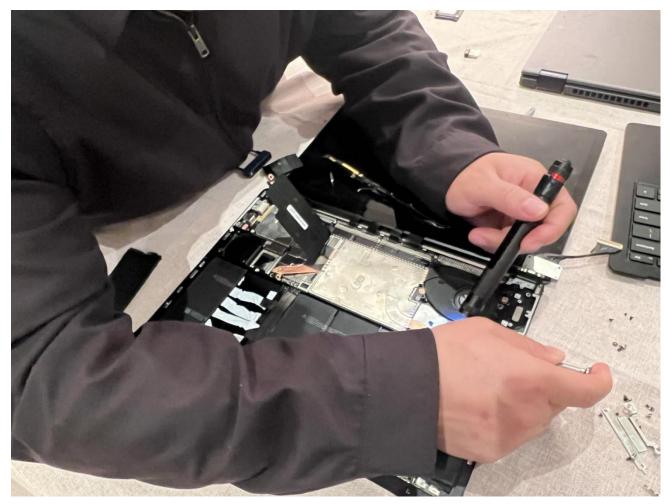
All the screws on these boards have been removed, but they still can't be removed. If I try hard, I feel that these flat metal blocks will break. What should I do? Ask someone for help.

3. Find help

 $sister\ helping\ me\ disassemble$



dad help dismantle



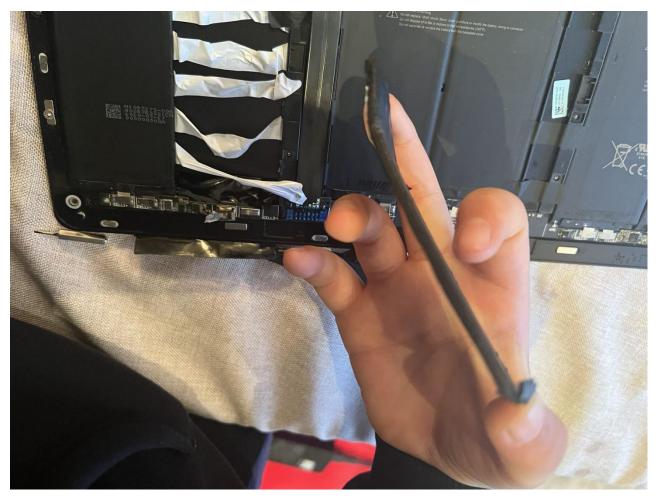
They all said that they failed, and they didn't take it down.

6. Well, what to do now? Dad told me, remove the battery, maybe next time we can build a small plane using it. good idea! Removing the battery is simple.



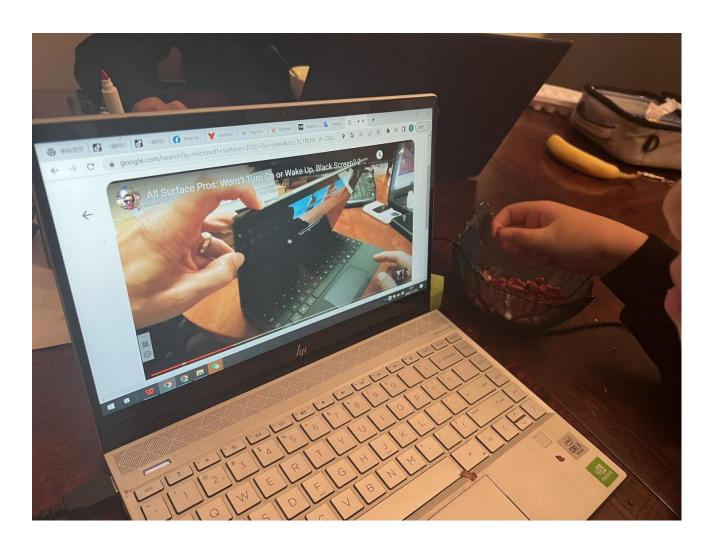
It seems that the wiring is super complicated,





The battery turned out to be soft, and it turned out to be broke into pieces when it was removed. My God, can it still be used?

6. I don't want to disassemble it further now, I will check it online, why is it so difficult?



Professional computer repairers on youtube said: Microsoft Surface Laptop Repair is the Black Hole in the repairing industry. Most of the parts of this computer are sealed and cannot be repaired. The memory can be replaced, but other parts are damaged when removing. It is recommended to replace it with a new laptop.

Wow, I worked hard for three days, and it turned out... I asked my mother, you know what? My mother said to call a professional, and the caller said that this brand is not easy to repair, and it is recommended to replace it with a new one. what!!!! My new computer is hopeless.

Afterwards, my father told me that the computer he repaired was a model 20 years ago, which was different from what it is now, and he couldn't fix it, so let me not be depressed. He also told me that the advances in technology have made computers smaller and more integrated. Factory production is the main production method, and repairing has become more and more difficult. I think i should pay

more attention to knowledges of making those computers. If we can't fix it, let us make it more durable and more usable in the future. This is my experience of failed repair, it is pretty cool to think about!