User Testing: Virtual Reality Computer Assembly
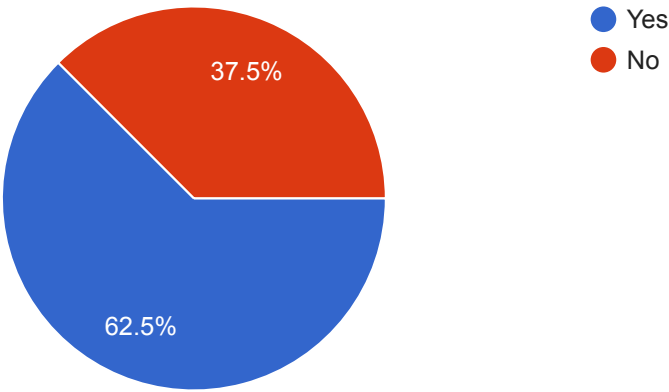
8 responses

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Have you built a personal computer (PC) before?

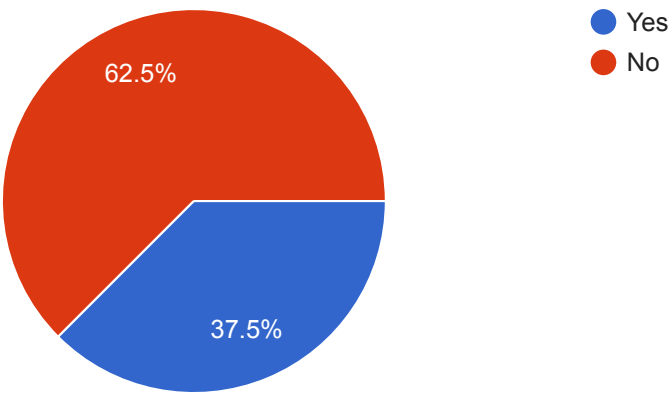Copy

8 responses

- Yes
- No

37.5%

62.5%

Have you used virtual reality (VR) before?
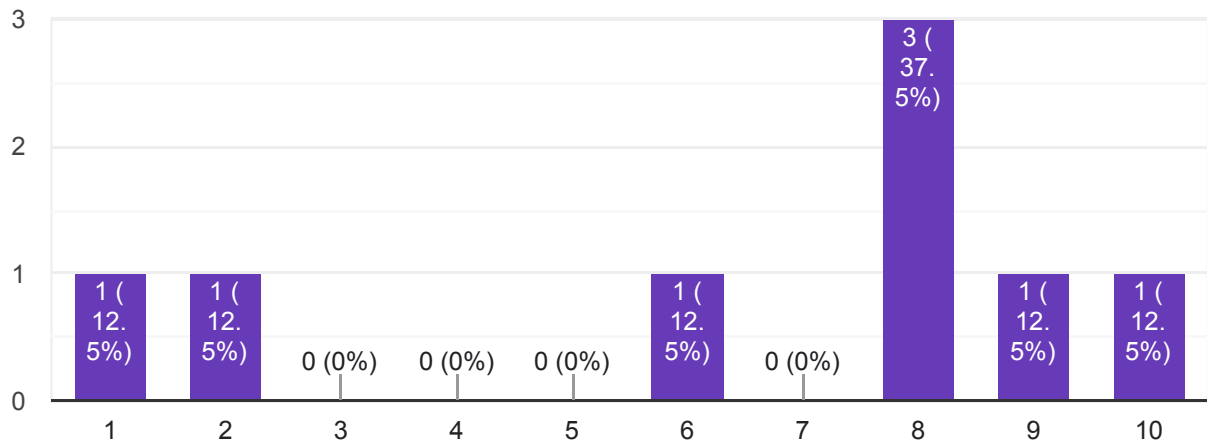
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8 responses

- Yes
- No

62.5%

37.5%

How would you rate your knowledge of computer assembly **prior** to using the VR platform?
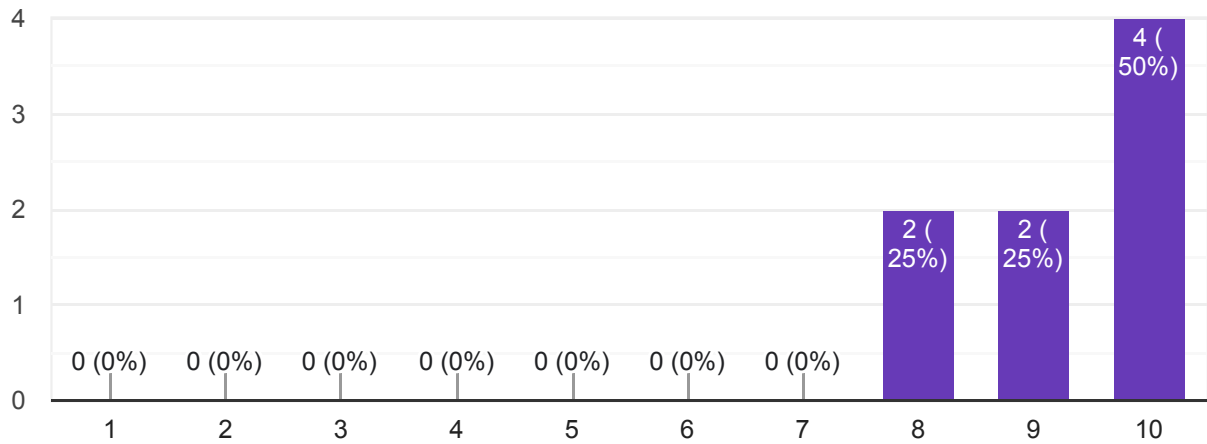
8 responses

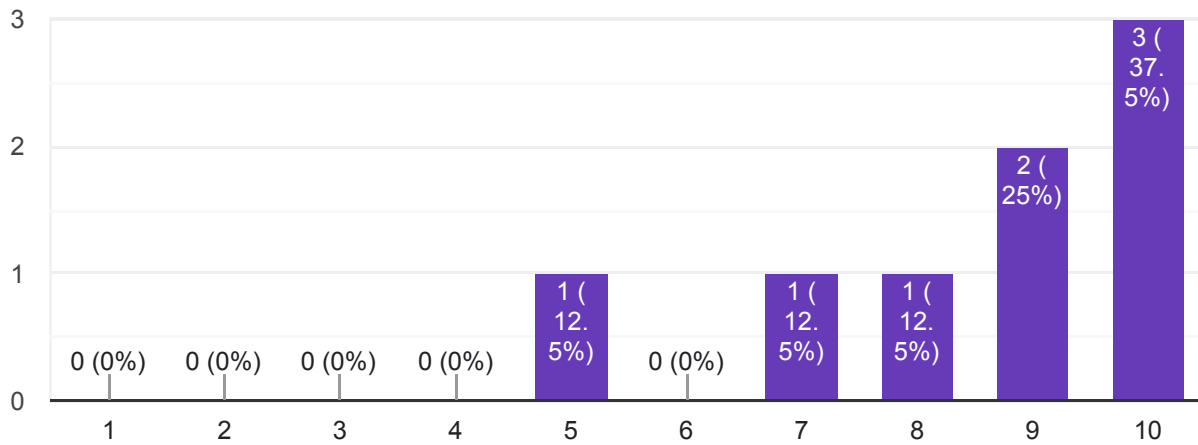## User Experience: How satisfied are you with the overall VR computer assembly experience?

8 responses

User Experience: Rate the ease with which you could navigate and interact with the hardware components in the VR environment.
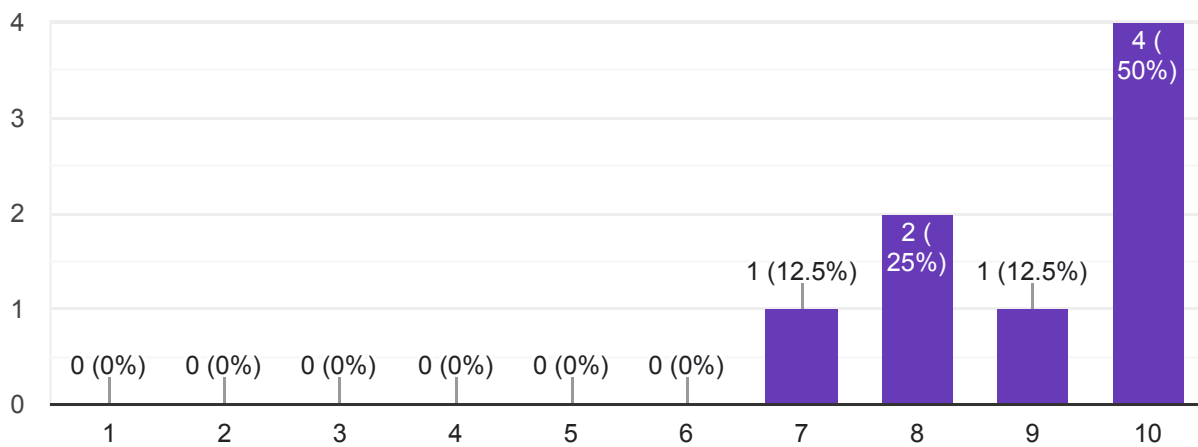
8 responses

User Experience: How intuitive were the hardware installations during the computer assembly process?
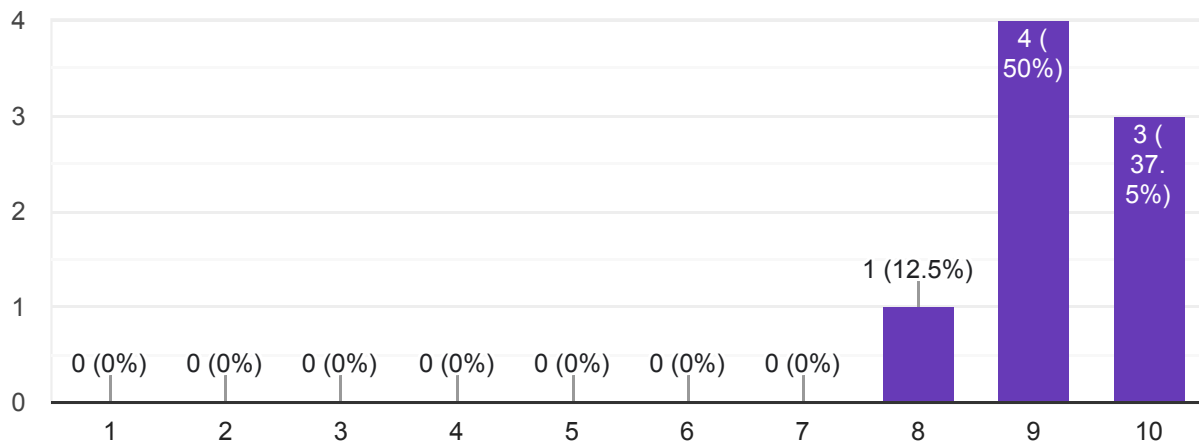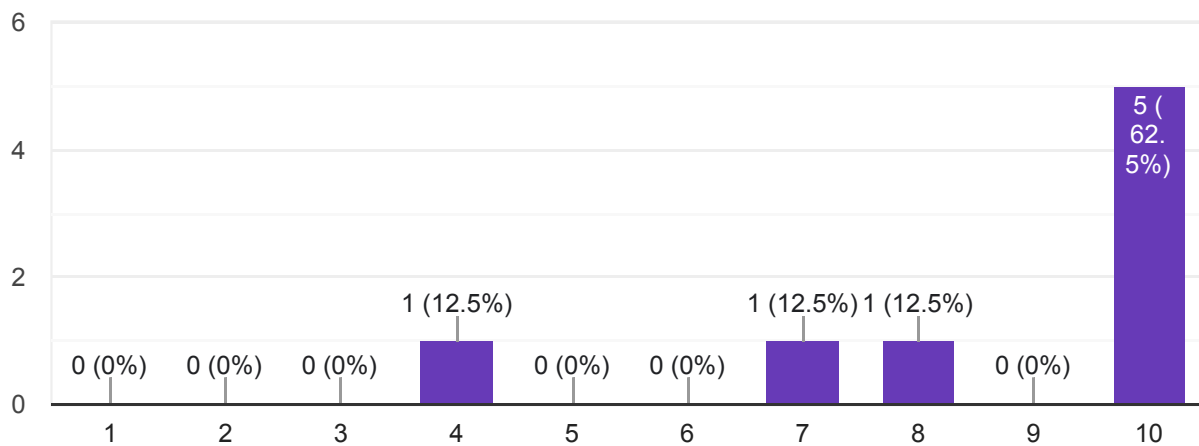
8 responses

User Experience: Rate the performance of the VR platform in terms of responsiveness and smooth operation.

Copy

8 responses

Educational Outcome: How would you rate your knowledge of computer assembly **after** using the VR platform?

Copy

8 responses

Educational Outcome: To what extent did the VR platform help you learn about the hardware components and the computer assembly process?

8 responses

The platform helped me learn about general scale of components and their correct installation, but didn't teach me about incompatible parts nor replace a real-world experience.

It helped reinforced the order of assembling a computer

It helped me go through the motions in order to build muscle memory for when I build a computer in the future

I already knew all of the components of the PC building process.

Introduced me to new concepts I was unaware of, taught me how things went together and what pieces served what functions

I think to a good moderate extent. It told me what each thing did and where it goes and how to install it.

It showed me what some of the components are of a computer and how to assemble a computer.

The VR platform gave it a more "hands-on" feeling. Because of that, it makes it much easier remembering all the small details of the computer assembly process .

Educational Outcome: What educational value did VR add in helping you understand the overall computer assembly process?

8 responses

VR was incredibly helpful in helping me understand the overall computer assembly process. The platform made it seem cool and easy - I loved that there was a list at the beginning and numbered steps along the way!

Building a PC in VR is immersive as opposed to watching a youtube tutorial or following instructions online.

It helped physically guide me through the processes

I have built PCs in the past, the VR process was helpful in refreshing me on certain aspects, but I knew most of the information already.

It was great! I feel like I have a base understanding to work with if I wanted to build my own

I think it helps me understand the big picture a lot more.

Assembling a computer in vr provided me a hands-on and interactive learning experience.

Seeing the informational text on screen then being able to immediately apply what I learned via VR gave me a greater overall understanding of building a PC. I can see how each step builds on each other.

Educational Outcome: How confident do you feel about researching/preparing for the computer assembly process after using the VR platform?

8 responses

Bar chart showing responses on a scale of 1 to 10:
- 1: 0 (0%)
- 2: 0 (0%)
- 3: 0 (0%)
- 4: 0 (0%)
- 5: 1 (12.5%)
- 6: 1 (12.5%)
- 7: 1 (12.5%)
- 8: 0 (0%)
- 9: 1 (12.5%)
- 10: 4 (50%)
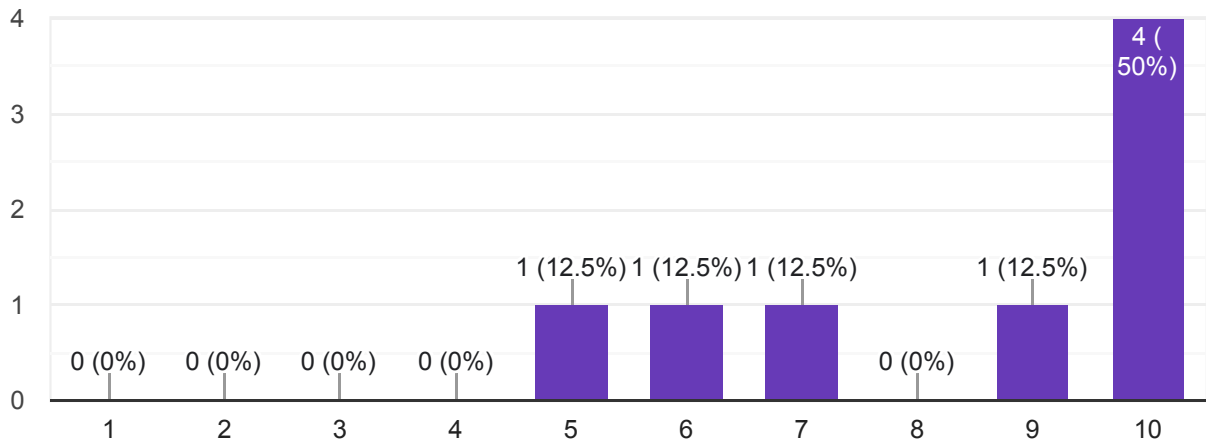
Educational Outcome: Are there specific aspects of the VR computer assembly platform that you found challenging or unclear?

7 responses

My biggest complaint would be a skip button for the tutorial videos ("press A to skip" type of thing). It's super simple to go back and forth between steps/sub-steps, but sometimes the tutorial videos were really long. If I wanted to repeat a scene just to practice the motion or what it looks/"feels" like, I would have to sit through the entire cutscene, at times back-to-back, without the option to skip. I doubt it will come up, as the "restart", "go back", and "skip" blocks are all small and pretty easy to miss/ignore, but I would like it if I wanted to repeat a step.

I also thought it was weird that when you initially grab something, the player's hand model rotates without their actual hand moving, making reorienting one's hand to the intended position unnatural and difficult. This took some getting used to. I think I understand why this is a feature, in order for the components and objects to not clip through the table or surface, but it was still disorienting and a little frustrating.

The scale of everything was constantly changing, and that made it hard to really gauge the true size of components or how to naturally move my body when building.

There wasn't a list of things that you need besides the components (no screwdriver set specifically)

No case fans for ATX/EATX case? That's going to be an unhappy CPU & GPU :(

No

Some parts of the project were difficult to see, such as the screws on the other side of the CPU cooler

no

I was struggling with the GPU assembly because I couldn't really tell where it was supposed to go
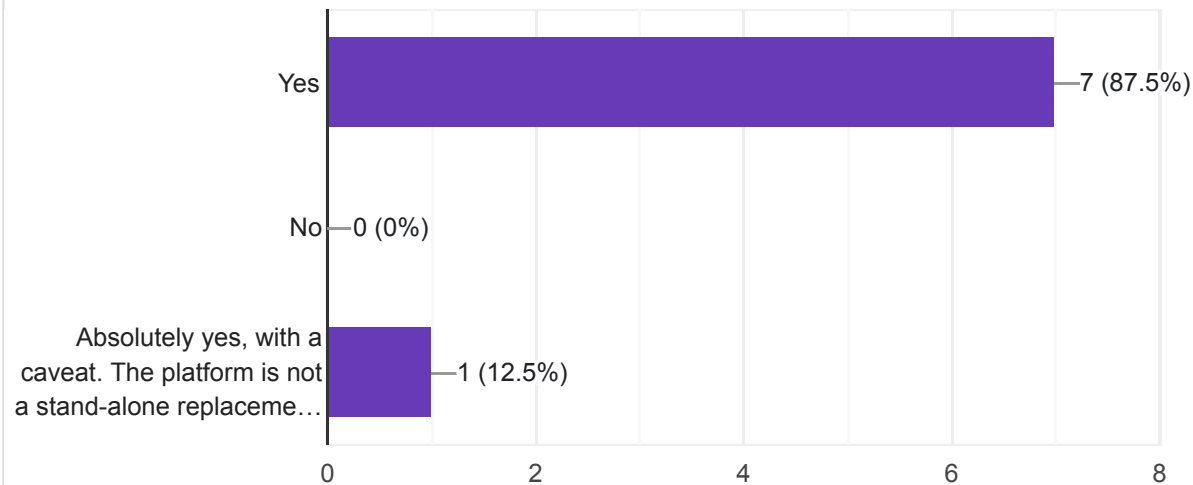
All instructions were clear.

I feel like the section of the VR computer assembly where you had to install the cables to the motherboard was too oversimplified. People unfamiliar with the computer building process might be confused as to how to organize the cables, how it connects to the PSU, etc.

Educational Outcome: Would you recommend this VR computer assembly platform to others as a learning/preparation tool?

8 responses

Response	Count
Yes	7 (87.5%)
No	0 (0%)
Absolutely yes, with a caveat. The platform is not a stand-alone replaceme…	1 (12.5%)

Please provide any additional suggestions or feedback for improving the VR computer assembly project.

7 responses

For smaller specific stuff:
- I honestly love all of the bugs, they made the process more fun! There were a couple things that seem like they could be a problem:
1) the GPU in the second step of GPU installation had zero-gravity and could literally fly away from the player if they flicked their wrist too hard, necessitating a restart (this was, however, the FUNNIEST bug in the platform and I really want it to stay :)) ;
2) during the case connection step, the arrows underneath the gpu weren't immediately visible. While that's not a problem on its own, it was really difficult to bend down and access them with the blown-up scale of the PC.
3) Also with connecting case cables, the two on the bottom right were too close and it was difficult connecting them.
4) The screwdriver automatically locking to being underhanded was awkward, as I normally use a screwdriver while holding it overhanded.
5) There wasn't a punishment for screwing screws in too tightly, just the "STOP" prompt. As someone with PC building experience, this could be dangerous if the PC is being transported fully built, especially the motherboard + case (and maybe for the nVME SSD). Perhaps a little soundbite to let the user know they've screwed something in too tightly (I didn't hear any audio during my session, so I'm not sure if there's any audio or not)?

Building a PC in VR is a fantastic tool as it can prepare you for building your first PC or reinforce what you already know.

During the assembly process, the GPU's power connector was not plugged in

Let me throw more things.

This project is super cool! I love that it lets people try out what it's like to assemble a PC because it's not always an option (financially) for every one to just try out in real life.

n/a

If time allows it, I would enjoy seeing a more thorough experience with the cable management aspect as, for me, it was one of the most frustrating parts of building a PC.

Is there anything else you would like to share about your experience?

7 responses

Other general notes:

- I had so much fun, thank you for having me!! This has been by far the most fun, interactive and helpful tool for physically building confidence in building a pc I have ever encountered. Oh man, imagine if this program existed for the software portion of building a pc? Or a comprehensive one for the entire process, from finding parts to setting up the OS and drives???? That would be SO cool!!! Thank you thank you thank you for letting me be a part of this! Really made my day :)))
- It was hard to gauge how long the experience would be, I would have appreciated either the list we saw in the beginning showing progress (checking off a list feels great :)) or a progress bar showing progress through the experience.
- A little audio (like little chimes, soundbites, etc. - audio feedback for actions) or background music would be cool :)
- 11/10 would do it again

The final project feels very polished and should be shared.

Great job!

great job!

It was great!

n/a

Make us be able to throw stuff around! :D