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VR / AR

Advantages and Disadvantages of Different Platforms

HoloLens: Good for enhancing daily tasks or for aiding people within their occupancies (i.e; A doctor being able to see a patient's information by just looking at them). Good for daily tasks because the visualization doesn't take up the entire view of the user and allows them to remain aware of their surroundings and their own positions. Since it is most beneficial for daily tasks, the head piece is too bulky for these purposes. Furthermore, for a platform intended for daily use the price is too high in comparison to say the VIVE.

CAVE2: Excellent for data visualizations. The Cave2 allows a user to walk through the data and interact with it. The user can begin with a full overview of the visualization and then if they see discrepancies in the data they can walk to that data point physically which will zoom the visualization into that point and display a detailed overview. Most of the user's vision is taken over by the displays but the floor and ceiling so the user still has spatial awareness. The cave2 also allows multiple users to see the same visualization. Good for data visualization, not good for gaming as it is not as immersive. The price is clearly too high for personal use but is great for academia.

VIVE: Best platform for gaming. The VIVE is the most immersive of the VR platforms as it takes the full view of the user which can also cause the user to lose their spatial awareness. This can be dangerous for the user, others, and equipment. Furthermore, the cables can also be a danger or hassle to deal with. The VIVE is the best platform for gaming as the full vision of the user is overtaken by virtual reality which feels the most realistic. The price is also within reason, say to a gaming desktop.

Mobile add-ons: This platform is the cheapest and most available to the common user which makes it good for low-level VR and AR. This is the only platform that I would say is accessible to people of different backgrounds and ages. Yet it is the platform which can lose its usefulness the fastest as it serves no real benefit over other platforms outside of price.