I see dead people

Augmenting old photos in virtual reality

Willem L. Middelkoop

Sep. 10, 2024

Imagine seeing your dead family members - not just on a picture, but lifelike and in three dimensions! You can almost touch them. It hits you differently, I can assure you. I'm still in awe: I just saw my dead grandfather, lifelike and for the first time ever in three dimensions! This may be Apple Vision Pro's killer feature, if you allow me the pun, please hear me out.

This photo was taken on October 6, 1983 - only my mom (in white) is still alive

Thanks to some incredible effort of my brother, I have a lot of old (analogue) photos perfectly digitised and tagged. The photo you see above is over 40 years old. It may not mean anything to you, but they are our family's memories. Maybe you have some similar old pictures yourself. It is a snapshot of a moment in history, it will never come back as most persons on the picture are no longer alive. You'll probably understand why a person may hold onto old photos - they allow you to peek into past memories.

What if modern technology could create lifelike representations of these memories? Instead of looking at a picture on a small screen or canvas, you would see your family members in real size - right in front of you. You'll notice much more details, like how a dress or jacket is wrapped around someone's body, how someone's hair is touched by the wind, where somebody is looking at. Give it a few moments and you'll feel as if you're with them.

The author, yours truly, and his late father, about 38 years ago (10 September 1986)

The photo above is another old photo, you're looking at me on my first birthday - a happy little chap - proud new owner of a red truck. It is a nice picture in two dimensions.

Now here's the magic: Apple Photos can analyse (any) photo to infer depth information, using image recognition it is able to add a third dimension. With just one simple tap, it creates a spatial representation taking into account persons, objects and surroundings. This is a nifty feature by itself, but it becomes pure magic when you project these 'spatial photos' using a three dimensional display, like Apple Vision Pro.

Apple Vision Pro is not just a wearable screen, it is a three dimensional projector

Looking the chap right in the eye, right here in my little apartment almost 40 years later

Now here's the thing, you're probably reading this on a two dimensional display. Both photos above may seem similarly flat to you. Possibly even small, especially if you're looking at this from your smartphone. For me, using Vision Pro, **IT IS NOT**. It is big, lifelike and touchable. It hits you differently, substantially, and *much* deeper. I do not really understand how, but my brain no longer thinks of the thing I see as an image, it becomes much more than that.

Random photos from the past now act as portals into different worlds and eras. It works on any photo, there is no special requirement to the input material. Without a doubt I expect modern camera technology (with stereoscopic lenses and lidar) to further enrich spatial images. But, the key thing is that **it works right now**, with everything you've already have. That's kind of a big deal, when you're talking about people that are no longer with us.

Even further in the future, given more digital input material (like text and voice recordings), one could expect computer models to become able to generate interactive

representations. I don't think there is any technical reason why a computer wouldn't be able to learn how to write, talk, sound, move and look like any person (given enough training material). With our digital legacies ever growing (email, photos, videos, social media), this isn't that far fetched for future generations. Maybe someday holographic Willem may read his grand grand grand children bed time stories, who knows?

Conclusion

It is very difficult to convey in two dimensions what I have experienced in three, the only thing I can urge you to do is: try it yourself! Use a personal photo and you'll understand why I wanted to tell you about it.