

1. What's your favorite video game and why?

The Legend of Zelda: Tears of the Kingdom. Mostly for the beauty of the graphics, but also for building silly vehicles.

2. What gets your blood pumping?

Jogging! I can't wait to get out to the Bay Area and enjoy the lovely jogging weather year-round. (Though I fear the hills.)

3. What are you a snob about? In other words, what are you highly opinionated about or what is something where you think your taste is better than other peoples'?

I've been living in Texas for seven years. Originally from the northeast. I've become a huge snob about bagels. It's so hard to find a good bagel around here, I actually learned to make them from scratch. Home-made sesame seed bagels with cream cheese, lox, capers, and red onion. Perfection!

4. Name a way you changed your environment to make it work for you. This can be a favorite hotkey, any unconventional systems you hooked up or a way you were opinionated about your workflow. Think outside the box!

When I was a teaching assistant for Aerial Robotics, we needed to get a new set of quadcopters up and running for a student tournament at the end of the course. We were having some issues with quads going out of control. We eventually figured out that we needed to swap out the propellers every time they crashed. An imperceptibly-bent propeller can cause absolute chaos. Anyway, I became the self-appointed Chief Safety Officer of the quadcopter lab while we were troubleshooting. The best thing I made was an improvised safety harness; a big loop of cord passed through slits in a floor mat, making two loops sticking out. We could wrap the loops around the quad's arms and command it to hover; if it started accelerating upward too much, the loops would catch it, and it would crash-land on the ground right-side up. It's been a few years, but I think the safety harness is still in use.

5. This is a screenshot of a balloon's altitude profile. Tell me everything you can about the balloon's life:

The balloon was launched on June 2, 2025 at 1:57 AM. Its mission ended two days later, on June 4, 2025 at approximately 2:00 PM. After completing a brief period of vertical profiling between approximately 7,000 m and 10,000 m, it then maintained an altitude of 10,000 m for about 12 hours. It then performed more profiling before ascending to approximately 17,000 m. It began its final descent around 1:00 AM on June 4, 2025, first descending slowly and then more rapidly.

The balloon's altitude profile is shown by the yellow curve. Balloons maneuver by changing altitude to catch favorable wind currents. They ascend by dropping ballast, and they descend by venting gas. I'm not sure about the units for the light blue curve associated with the vents, or the orange curve associated with the ballast, but it is clear that by the end of the balloon's mission, ballast_time has reached a maximum and vent_time has returned

to zero. The blue and red curves, `soft_lbnd` (“soft lower-bound”) and `soft_ubnd` (“soft upper-bound”) likely serve as a conservative altitude envelope. The green and purple curves (“safe altitude”) and (“altitude ceiling”) might be safety-critical bounds, but they occasionally overlap with the soft bounds. The shape of the blue curve at the beginning of the flight is unusual. It doesn’t look like terrain. I wonder why it is necessary to remain above roughly 8,000 m for brief portions of the flight time. Perhaps air space restrictions, though it is unlikely restricted airspaces are soft bounds.

All data is received via downlink. The balloon either contacts ground stations directly or downlinked data is received via satellite relay. It is clear from the plot that the balloon is in almost constant contact with the ground station or is able to save up a data buffer. At least a handful of measurements per hour are recorded.