Dear ███

First, I'm sorry to hear about your grandma's house. I am sure that was hard for you; even with friends supporting you with a place to stay, that's a lot to go through. I hope everything is a little quieter and calmer with the winter holiday and that you and your family are safe now. I know it hurts when things can't go back to normal, but hopefully 2019 will bring a new normal that's good for you.

Regarding cookies and computer science: I spent a while thinking about why I like baking so much. Aside from the fact that I really like eating cookies, I think the process itself is fun: once I learn some principles about how cookies work (like how much flour makes sense to put into different kinds of cookies, or what happens if you use white sugar instead of brown sugar or forget the salt), I can start to experiment with new things and ideas. It's a lot of what I also like about studying computer science, and what I've liked about math as I've gotten older: once you learn some rules about how the world works, you get to start using those rules and your own ideas to make new things. I thought maybe using cookies to convey some of that could be cool and a bit more fun than the computers are on their own. You might be a better judge of that.

Regarding stickers: I am a fan, though I don't really have much method to my collecting. Lots of people come through campus with stickers to give away, as do a lot of the businesses around Ithaca, so I grab them when I can. Do you put stickers on your board? I put mine on my laptop: below's a picture of what it looks like these days. I realized when I looked at this that I actually have an awful lot of my life story buried on here: my high school (Forest Ridge) is in the middle, my college (Harvey Mudd) is scraped off a little just behind the pony, and my current school for my PhD, Cornell, is just above the rocket ship. I've also worked at Yelp (the red flower) and Microsoft Research (which had a super ugly sticker so all you can see is the "Re" of Research by Montreal).

I mentioned a little bit in my first letter where I went to college, but I wanted to talk about that a little more this time. When I was in middle and high school, I got pretty good grades, but I changed my mind a lot about what kind of thing I wanted to do. For a while I really wanted to

work in mission control for NASA, then as a marine biologist, then as a geologist. Because I was excited about science, I decided it would be good to go to a school that cared about science a lot, but also one where it was okay if I didn't know exactly what I wanted to do yet. Some colleges would have wanted me to pick a major, or the kind of science I wanted to study as soon as I started. I ended up picking a school that didn't do that, Harvey Mudd College, so I could make up my mind later, which I think worked out really well: I got to find out more about computers while still studying a lot of literature and other random stuff I liked, and in the end, I got to combine both computer science and literature for what I do now. It's also kind of weird, because for PhDs, they actually pay you to go to school and do research: at this point in school, my "homework" is solving problems no one has solved yet, so it is a lot more interesting to work on and when I "finish my homework" I get to actually publish it and travel internationally to show it to other scientists. I'm only in school for another 6 months, though. Right now I'm applying for jobs as a professor, which is a whole other complicated world…

That's cool that you're interested in animals! I bet being good at drawing is useful for that; I remember in school that they'd ask us to draw things we saw in labs, and I wasn't really good at drawing animals then (I'm only slightly better now). Do you think you'd like doing a job where you worked with animals? One of the people I do martial arts with studies insects, which I thought sounded pretty gross at first, but I've talked to her more about it and it's starting to sound really cool! In your science class, do they talk about a "control" – where you run one version of an experiment with everything set in some usual way to compare to the new thing you want to test? With big animals and people, it's hard to have a control: whales and horses and humans have so many things going on in their bodies at once, so even if you can tell that the "change" you made was what caused a difference for a human, it can take a long time to figure out how much difference some change makes. With flies, they're not so complicated, so it's easier to measure what's happening to them, and you can see 100 generations of flies go through their whole lives in 2 years.

I also put some stickers in here, in case you want them:

- YouTube and Chrome stickers from when Google came to campus,
- A Cornell Computer Science sticker (that's where I work and go to school),
- A Gimme! Coffee sticker because they have the best coffee in NY and a good logo, and
- An Octocat sticker from Github (when I write instructions as code for computers, I usually save it online, and Github is the website I use for that).

Happy New Year, and looking forward to hearing from you again!