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Hottman
Period 5

As the end of last school year was nearing, I was talking to someone. Yes, I hadn't scared them off yet. Ha ha. Very funny. We were talking about science research projects, as we were both planning on going to NWSE, a well-known science fair. They mentioned that they had an internship at the Reed College Nuclear Reactor over the summer, and that there was a chance I'd be able to do a STEM internship too. They introduced me to the ASE program, which stands for Apprenticeships in Science and Engineering. It's an intermediary organization that helps high school-aged students get in contact with people wanting interns in the STEM industry. Naturally, I was hooked. Just getting the opportunity to work with industry professionals in a real-world environment is amazing, but actually getting paid for it (albiet $3.40/hr) was something else. It's a pretty competitive program — over 600 apply each year, with there only being 150 or so available intern positions, so I didn't have high hopes of getting in, but I decided to try anyways. After filling out the bloated application, trimming the three paragraphs supposed to completely describe all aspects of myself to just under the maximum 500 words, getting a paper copy of my transcript, and, for whatever reason, fulling out a full medical history, I was ready to apply. I applied for three internships; one in Corvallis working in their robotics laboratory, one at IBM migrating their wikis, and one at Intel, working on cloud computing software. Being a Freshman, I never would've though I'd get accepted to a summer migrating web pages, let alone working at Intel, but thankfully I was wrong.

One month later, during the second to last week of school, I was sitting in Beaver Lodge. It was Friday, and I had nothing to do, so naturally I was playing Nexuiz, a fun little Quake-style arena FPS video game, when checked the time on my phone. Looking at the screen, I had a missed message and voicemail from somebody at the ASE office telling me to call them back. After realizing the implications, I quickly explained my position to my Beaver Lodge teacher.

“Mrs. Munley!”

“Yes, Solomon?”

“Hi- uh- so- uh-“, I stammered, “There's this thing! And an internship! And I need to go call someone”

“Uh, go ahead, then.”

I practically ran out into the hall, while simultaneously dialing my phone, deeming a potential internship more important than the school's oddly strict Beaver Lodge policy. After all, if you take more than 180 seconds to call them back, they offer the internship to someone else, right?

I called them back, then was informed (and subsequently had to stop myself from screaming) that I was accepted into a summer internship at Intel. As the program coordinator at ASE was dictating the next, extremely arduous steps that I would have to take to confirm my internship, one of the hall monitors was simultaneously telling me to go back to my (loud) classroom — at the time, my iPhone's speaker was stuck at 10% volume — or they would call security. A conundrum, to say the least. I demonstrated my aptitude in quick, rational decision making by deciding that it would be better to risk being dragged (literally) to the office than interrupt the person on the other end of the phone to explain my current situation to the hall monitor. Thankfully, I was able to explain through hand gestures and

mouthing that this phone call was Very Important and I would prefer not to get security sicced on me. Although, looking back, maybe I should've just asked the ASE director to hold for ten seconds.

A month later, I was sitting on the Max Blue Line to Hillsboro, eagerly awaiting my first real day at Intel's JF3 campus, the previous two being spent on setting up computers and getting everyone their ID cards. After taking an extremely awkward five seconds to get my RFID badge to be detected (and making a mental note that the longer walk from the other entrance to the labs would be worth never having to look this particular security guard in the eyes again), I was walking towards the labs and setting up my gear for the first real day on the job.

The next few days were devoted to fixing some of the problems we were having with setup. Lessons were learned. Ones like, “Don't give a high school intern an prototype beyond-next-gen netbook that literally can't get through the Windows 10 installer without crashing,” “Make sure that the dev environment is network agnostic,” and my personal favorite, “make sure the interns don't have to download 8 GB of files over a 150 KB/s guest network.” At least the food was good.

Over the last two days of the week, we worked on actually setting up Openstack, which is what we'd be working on for the next month or two. Openstack is what's known as a scalable node-based cloud computing platform. Sounds complicated, but it's actually pretty easy to understand. Openstack is an open-source platform to run cloud-based applications and processes on. It's node-based, meaning it can work with many different servers connected in a network, and it's scalable, meaning it can bring servers online or shut them off depending on the needs of the network. Say I own an online flower shop business, and host the page on an Openstack network. During the year, we might not have an extremely high amount of customers, so Openstack would shut down servers and only have a bare minimum running. But when more people are connecting to the website and ordering flowers, possibly near Mother's Day, Openstack would detect the increased server load, and would dynamically boot up servers and connect them to the network, never using more than what is needed. Being open source, anybody can download and set up Openstack for their own cloud network, as well as contribute and make derivatives of it. Now, you might be asking why Intel would put so many resources into an open-source project. After all, anybody can download it, so they can't make any money off of it. In reality, Intel is trying to make it easier to set up servers. If anybody can, without much effort, create server clusters, then more Intel CPUs will be sold, as they are what is typically used in servers, both making Intel money, and benefiting the open-source community.

Over the next couple weeks, my routine morphed into a pretty ideal one. Wake up at 7, catch a train to Intel at 8, and, until noon, work on a new patch or feature for Openstack. Then, the other interns and I would go have lunch, then play some RTS (real time strategy) video games until one or so, then we'd work until four before heading home.

The next seven weeks passed with little to no incredibly notable events to anyone who doesn't want to sit through a page and a half of in-depth explanation about the difference between the near-identical commands `sys.stdout.flush()` and `obj.print()`, and their effects on `systemctl` processes when using Golang and Python 2.7 in conjuction. At the end of the internship, we all were invited (forced)

to attend and present at a symposium with all the 150-some other interns who also completed an internship through ASE. Of course, this meant mountains of paperwork, and general ineptitude by the ASE staff. One of the other interns almost couldn't get into the symposium because one of the ASE volunteers didn't get back to us with some paperwork.

All in all, it was an extremely interesting and educational experience, with myself and the other interns walking out of this experience with new skills, programming languages under our belts, and a healthy appreciation for the Starcraft II metagame. I'm looking forward to what I'll be able to do in the future with everything I learned from this summer.