



First Internship Report

By Christopher Phillips (cphillip)

Introduction

Hello! My name is Christopher (Chris is fine). I'm writing this to tell you about my first internship.

Going through the internship is everything you've probably imagined it to be! It's both exciting and intimidating at times simply from the sheer amount of learning you'll do. But this is part of a challenging yet highly rewarding career that you're working towards.



The emotional roller-coaster you'll be subjected to requires you to channel the persistence you've picked up at Hive. And the hours of research and learning you'll put in to keep afloat demand a strong level of fortitude. In the end, I'm here to tell you that it's all worth it. The experience is invaluable!

Some background about myself. I'm currently 43 years old so not much of a spring chicken anymore. I was one of the older students attending Hive at the time. I'm one of the guinea pigs since I was part of the first Hivers to attend when the school opened. Programming represents a career change for me. I wanted this change more than anything and I put in the time and dedication to make it happen. During the piscine, I logged 90-hour work weeks to absorb everything I possibly could. I got an achievement for working stupidly long hours but they removed it from those of us who got it because they didn't want to encourage burnout. My work ethic today is exactly like it was during the piscine, only with fewer hours. Hours like that aren't sustainable.

But the attitude remained: I wanted this more than anything and I was going to continue dedicating myself to learning the craft.

About Logmore

Logmore's core business is providing data-logging solutions for a variety of industries. Currently, we're primarily focused on pharmaceuticals. Our products are dynamic QR code loggers that can record and track:

- Temperature
- Light
- Shocks
- Humidity
- Scan locations



That's great, but what does that mean? Suppose you're shipping Covid-19 shots. The shots have specific conditions, such as temperature, that need to remain within acceptable tolerances for the duration of shipment otherwise they could potentially be ineffective. The Logmore data loggers can show you exactly that kind of information.

Check out the quick demo. Scrolling controls demo progress.

<https://www.logmore.com/demo-2022/pharma>

What was I involved with?

The main project is something we call Ops-center. Logmore will start charging for API usage and there wasn't anything in place to do that. The solution we needed to create was an internal platform for customer service to use to be able to see their client's API subscription information (at the very least) and relay that to them. We've incorporated several other metrics as well but this is the main one.

The wonderful thing about the project is that I was been able to experience every facet of its creation. From the overall architecture design to something as seemingly meaningless as an icon. That gave me tremendous perspective. More attention was given to the overall design so that refactorings were minimal and less of an issue as we progressed.

Some of the main tasks I performed during the project:

- Created endpoints and wrote the logic for those on the backend.
- Set up the frontend visually with functionality and linked it to the backend.
- Performed code reviews of others.

The technologies I used



Go was chosen as the backend language for Ops-center because it was used in other areas of Logmore. From my perspective, that was very favorable because I had used it a little bit in the past. Go is super fast to learn, easy to read, and has amazing libraries to choose from. It is also widely used in the industry which makes researching solutions quite easy to do since there will be plenty of others asking the same questions.

Vue was chosen for the frontend. Before my internship, I was building a side project using React so I was slightly familiar with reactive applications. I love apps built on those platforms. It's fun to see boilerplate HTML morph into visuals of data obtained from the backend. Vue is written in TypeScript so coming from C, I was used to declaring data types on my variables. That's not to say I knew everything about it though. I still had my fair share to learn. Of course, HTML was extensively used as well. I've built quite a few sites in the past using HTML/CSS so this was easy to jump into. We wanted to avoid as much raw CSS as possible and to accomplish that, we used Bootstrap.

Our database was built on PostgreSQL. The extent of my database knowledge in the past has been simple SQL queries. For our application, we used database migration scripts to set things up. This is essentially version control on the database because it provides a means to roll back changes. Most of my interactions with our database came from the application side versus querying it directly.

Other technologies I used which don't specifically relate to Ops-center have been Git, GitHub, and CI/CD. I'm still quite not well versed in CI/CD but that's mainly because our senior developer was the person responsible for all implementations of that. Git was familiar to me coming from Hive but when I started working in a team, I had to learn additional commands such as rebasing. That was intimidating because of horror stories I've read concerning junior developers screwing up code bases. I definitely didn't want to be a part of that statistic! GitHub was quite easy to jump into since I have been using it for personal projects all along.

The challenges of the internship

For me, one of the biggest challenges I had was dealing with the sheer amount of new things I needed to learn. In the previous section, I noted which technologies I had used before. But my experience levels with the ones I had only dabbled in didn't quite make me confident in my ability to utilize them extensively. To combat that, I chose to learn the material outside of work hours too. I mainly used Udemy and YouTube. This helped quite well and I wholeheartedly feel that if you're having these same difficulties, immerse yourself in the material you need to learn as much as possible. I'll put some links at the end of this report.

Having a lot of learning on my plate gave rise to another challenge: establishing a strong mental resistance against the feeling of imposter syndrome. Try to recall how you felt during the piscine. Remember how little you knew and how at times you just felt like a complete moron? This is typical when learning new things and amplified when it's very important to you. That feeling of success seems very distant. It may not have felt like it, but each day I was expanding my knowledge in whatever technology I was using. I specifically looked for things to learn. By the end of my internship, I was able to rely less on the senior developer for advice.

Success from an attitude standpoint

We come from Hive learning a decent amount of C. Some of us have prior experience in other technologies as well. But still, there are languages that we may not be familiar with but are expected to use. Having a great attitude towards learning these as well as the strength to admit shortcomings are important traits to bring to a team.

My biggest success was establishing a good rapport with the team and giving them the confidence that despite my lack of knowledge in a particular technology, I was going to be persistent in my approach to solving the problem. In doing so, I earned a fair amount of respect from them.

Learnings

Becoming more proficient in Go and learning Vue was very rewarding during the internship. I was mainly creating backend endpoints so there wasn't complex Go code to write. Each line of Go code can be read very easily and because of that, you can create a very efficient logical flow. You can also declare and initialize multiple variables at the same time (type inference is such a blessing!). This makes error checking immediate and simple. For example, you could have a function that returns a string and an error. From the caller function, you could declare two variables to hold both the string and the error. And then right away, check for an error. Buttery smooth. I've learned that writing code in a smooth logical flow like this, with descriptive variable and function names, makes for highly readable and flexible code.

Vue's basics were relatively easy to pick up but overall still presented some challenges. Through the reviews and assistance of others, I strove to write better code with a focus on best practices. One example is to structure components in such ways that you don't end up with a bloated, overly complex, single component that does multiple things. I've been forcing myself to apply the KISS principle with component creation.

How did Hive prepare me for the internship?

C wasn't used on the job so that didn't directly help me for my internship. However, it did help me indirectly. Every language has its own syntax. But every language shares similar constructs: variables, conditionals, loops, data types, models, etc. Of course, the syntax of those specifically can vary as well but once you've learned the syntax of one language, it's pretty easy to pick up additional languages.

Another strong area where Hive helped me was with my approach to problem solving. Specifically, asking for help, and doing my research. The feeling of sink or swim is a powerful motivator. During Hive, each project presented significant challenges. It could be how a specific algorithm worked, how to write better code, refactoring, debugging nested memory leaks, etc. To accomplish those challenges without knowing the most efficient way, or best practice, we had to rely on our ability to research the how. And through repetition, came more efficient ways to perform our research. We learned better terminology for asking questions and writing search phrases. TLDR: Hive taught me how to learn better!

Final thoughts

By far the most enjoyment I had with this internship was experiencing the real world as a coder. I loved interacting with my co-workers, getting advice, attending team meetings, etc. I welcomed the challenges and celebrated the successes regardless of the magnitude. Like I said earlier, this is a career change for me and I've fully embraced every aspect of it. And since Logmore hired me full time, my career change transition is complete. It's a wonderful feeling!

I encourage you to find your passion in programming. Make a plan with small daily goals that in the grand scheme of things, propels you toward your end game.

Remember this powerful quote I recently heard: "One day, or Day One".

I wish you all the best in your journey!

Resources that helped me

- The Net Ninja: <https://www.youtube.com/@NetNinja>
- Web Dev Simplified: <https://www.youtube.com/@WebDevSimplified>
- TechWorld with Nana: <https://www.youtube.com/@TechWorldwithNana>
- Traversy Media: <https://www.youtube.com/@TraversyMedia>
- CodinGame: <https://www.codingame.com/start>
- Frontend Mentor: <https://www.frontendmentor.io/>
- Leetcode: <https://leetcode.com/>
- FreeCodeCamp: <https://www.freecodecamp.org/>