



Intra Report

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COMPREHENSIVE INTERNSHIP REPORT

Table of Contents

Introduction	3
Company Structure	4
Duties Performed	5
Knowledge Gained	7
Theory vs. Practice	8
Conclusion.....	8
About Guidewire Software	9

Introduction

My job title at Guidewire was 'Software Development Intern'. During my term of employment I worked in two separate departments doing two very different jobs. The internship was split into two halves.

The first half I spent working in the Guidewire Services Center, working as a remote configuration consultant for a large insurance company from the UK called Direct Line Group. The second half of the internship was spent working in the European Development Center as a software engineer.

In the EDC I worked as part of the Guidewire labs. Guidewire Labs is where (figuratively) we conduct explicit experiments with the intent to learn or try alternative approaches. The purpose of Labs is to give us freedom to explore new ideas without jeopardizing production code.

Company Structure

Guidewire Software Inc. is a software publisher based in Foster City, California. It offers core back-end software for property and casualty (P&C) insurance carriers in the U.S. and worldwide. The company was established in 2001 founded by six people: Ken Branson, James Kwak, John Raguin, and Marcus Ryu and John Seybold and Mark Shaw.

They are a recurring revenue software company as they sell term licenses. Its three main software products are ClaimCenter, PolicyCenter, and BillingCenter, each servicing a major component of a P&C insurance carrier. There are also four add-on modules, Rating Management, Reinsurance Management, Client Data Management, and Standards-based Templates. Guidewire designed it's own programming language named "Gosu", and this is used to develop the products. It is similar to java with some more functional programming elements added to it.

The Dublin office is the largest outside of the headquarters in Foster City. It is located in Blanchardstown Corporate park in Dublin 11. There are currently 170 members of staff working out of the Dublin offices but this number is growing weekly.

The offices casual dress code, stocked kitchen and recreation area (made up of pool tables, foosball tables, Xboxes & PlayStation's) makes for a relaxed yet productive work environment.

Duties Performed

As mentioned above the internship was split into 3 months in the in the Guidewire Services Center (GSC) and 3 month in the European Development Center (EDC). Both departments work out of the office in Blanchardstown.

Our first two weeks was split between 'Guidewire University' a collection of mini lectures as well as practical workshops introducing us to some of the technologies and methodologies (version control using git, agile software development, gosu language, platform infrastructure to name a few) we would be practicing during the internship, and practical work on the 'Federator' project.

The 'Federator' project is a web application written using Spring MVC. It is an internal search engine used to quickly look up information from all of Guidewire repositories (mailing Lists, internal wikis etc.). This was a great introduction to working with angular.js as well as collaborative software development.

After 'Guidewire University' we each took part in product training. This took shape in the form of PowerPoint lectures followed by a practical exercises to solidify our knowledge. I took the fundamentals training course followed by the exam and then the 'Policy Center' training course.

Upon completion of our training each intern was assigned to a different team working on the Direct Line group project. Direct Line are an umbrella corporation from the U.K. which encompass numerous British insurance firms including Churchill and Green Flag to name a few. I joined the Policy Center team and from day one I was working on active user stories (an agile development term to encapsulate pieces of work) which would be rolled out as part of the final implementation of the project. Theses user stories were generally made up of a lot of research and a small bit of code to be written or changed.

While joining any new project can seem daunting at no point was I made feel helpless, every member of the team made a point in taking time out of their own busy schedule to help me whenever I was stuck. Upon joining the team I was assigned a mentor who was my point of contact for any queries. My mentor was always there to point me in the direction of resources that would help me get the job done.

Throughout my time in the GSC I gained some great experience working as part of a team as well as directly with clients. I often had to confirm user story requirements with business analysts as well as demonstrate completed functionality with business analysts and testers. This was done via WebEx (conferences call style virtual meetings).

Guidewire strive to promote a social ethos within the office. There's numerous clubs which sporting activities as well as travel and social events. During the course of the internship there was numerous nights out which helped me integrate well into the team.

For the second half of the internship I worked in the European Development Center (EDC). The EDC is where Guidewire extends and improves its core products as well as developing some more experimental projects. Once again I was assigned a mentor to be my point of contact. Upon joining we were presented with a list of potential projects that we could work on. I choose to work on the 'Google for Guidewire Telematics Experiment' project. This is an experimental project made up of a couple of different components. The experiment tries to offer a platform to

keep in real-time sync Policy Center / Claim Center with the coverable assets using the Google Cloud and Android services. An Android application acts as gateway between the monitored coverable (vehicle, building, drones) and the Google Cloud services. The Guidewire platform uses the data persisted in the Google's cloud to quote premium in Policy Center, to validate terms are respected and to open a claim when accidents happen.

I contributed to this project by building a front end web application using angular.js which sends requests to the Google Cloud for geo-location data and then plots this data using the Google maps api. The project itself was very large and ambitious with only myself and another senior member of staff working on it. I finished up my section of the project two weeks before the end of the internship. At this stage there wasn't enough time to take on another significant piece of the project so I went back to work on the 'Federator' project.

Knowledge Gained

While working at Guidewire I gained a huge amount of relevant technical experience. It was a great opportunity to put into practice what I had been learning for the last three years in college. Most of all I have gained a huge amount of confidence in my own abilities as an engineer. I feel like I have the capacity to acquire the knowledge that is required to solve problems even if I don't know how to do it immediately.

Some of the areas I gained experience in:

Gathering Requirements

This involved dealing directly with business analysts working for the client. This was done through WebEx meetings. Often the documents outlining these user stories had some ambiguity about them. The purpose of these meetings was to find out exactly what the business needed to be delivered. This was my first real exposure to representing a company in a professional setting.

Demoing Completed Functionality

In the GSC in order to have stories marked as completed we had to demo them to the business. This usually involved walking through the design document and then showing the functionality in the product. Often these virtual meetings would have multiple business analysts as well as members from the testing team. In the EDC we would have weekly review meetings where all members of the team would show off what they were working on. This was a great opportunity to get comfortable demonstrating what you were working on and explaining the technical reasoning behind your design to a team of highly technical people.

Agile Development Methodology

Both the EDC & GSC both practiced agile development. With daily standup meetings and monthly sprint planning meetings. As well as using story points as a unit to measure work.

Gosu

Is a programming language that was developed by Guidewire and used to build its products. It is based on Java, which we used in DCU, which made it relatively straightforward to pick up. It provides much of the same functionality as Java with some functional programming aspects added it.

Angular.js

I used this on both the 'Federator' and 'G2TX' projects. Guidewire had paid for some online courses which I used to bring myself up to speed. Angular is a front end JavaScript framework used to create dynamic website pages. I was given access to paid online tutorials where I was able to quickly grasp the necessary material.

Version Control

Systems to work collaboratively on large software projects. During my time in the GSC we used SVN and in EDC we used GIT. Both of which are used widely in the industry.

Theory vs. Practice

After spending six months at Guidewire I can see just how big the gap is between academic learning and practical learning. The 'Computer Applications' course in DCU gives students a good understanding of the theory of computer science but I found there were quite a few gaps in my knowledge when it came to actually working in the industry. The module that I found most beneficial was CA213 'Data Structures & Algorithms'. A huge amount of the technologies I used at Guidewire had to be picked up as I went. I found that after studying 'Computer Applications' for three years I had developed the skill set needed to quickly understand and pick up new technologies. This was probably the most beneficial aspect to the degree aside from the theoretical understanding it gave me.

Conclusion

In reflection I would consider my internship at Guidewire to be a hugely beneficial experience. I have gained a lot of technical knowledge as well as experience working with a highly skilled team in a fast paced professional environment. I think getting experience in both departments really helped me decide what kind of career path I would like to follow. There is a really friendly atmosphere in the company and I found everyone to be incredibly helpful during my time here. In conclusion I couldn't recommend the internship highly enough to anyone considering applying.

About Guidewire Software

Guidewire delivers the software that Property/Casualty (P/C) insurers need to adapt and succeed in a time of rapid industry change. We combine three elements – core processing, data and analytics, and digital engagement – into a technology platform that enhances insurers' ability to engage and empower their customers and employees. More than 200 P/C insurers around the world have selected Guidewire. For more information, please visit www.guidewire.com and follow us on twitter: @Guidewire_PandC.

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