Professional Internship at Codacy

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(Learning report)

Abstract—This is a report describing all that I learned while being a trainee at Codacy. It describes the difficulties and the lessons I learn along this past six months. There were a lot of situations from which I learned new and singular things that in other situation I would never had the opportunity. I learnt how to fight hard for a project (that was only an internship at the beginning and became more after a while), I learned about everything, from gaining experience on writing code, to prepare a product pitch or interviewing possible candidates for a position in Codacy. Besides that I learned how to give value to small achievements and despite I didn't had much experience, that should only give me more motivation to learn and that each accomplishment is a very valuable victory.

Index Terms—Motivation, Learning, Meetings, Achievements, Team work, Responsibility.

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1 INTRODUCTION

THIS report contains a summary of the lessons acquired during my internship at Codacy. The internship had the duration of six months and was done with the objective of testing the new capacities I developed during my degree at Instituto Superior Técnico (IST), and be able to gain more experience in a real work environment. In the internship I intended to participate in all kind of activities of Codacy, be able to, see how everything happens and contribute for the product that is being developed.

2 THE BUSINESS WORLD

Since Codacy is a product being developed by a startup the environment is not exactly the same as in a big company but it is at least a soft version of it. It still requires some integration, possibly in a more unstable environment, and it required me to understand the objectives of the company, its mission, its culture, its history and

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even its strategic position. When arriving at the company, there were already work methodologies, internal communication processes and other common practices which I had to learn and start using. Some of them were explicitly transmitted to me, although others I only discovered after some time working on the project. It was a very informal environment, with direct communication among all the people in the team, the small number of members eased all the process and the adaptation was very quick. All of us got very fast in sync and what could had been a long process became a simple team increment that rapidly became productive.

3 WORKING REMOTELY

During the internship I had the opportunity to travel to London in a one week business trip. Basically it was a week to get to know Seedcamp (the first Codacy investor) and to have some meetings with possible future investors. Since the team was physically separated between Lisbon and London we had to arrange forms of communication and organization to allow both sides to stay in sync. Skype was used to communicate in a closest way that allowed to schedule of tasks. Jira

		LEARNING				DOCUMENT						
(1.0) Excelent												
(0.8) Very Good	CONTEXT x2	SKILLS x1	REFLECT x4	S+C x1	**SCORE**	Structure x0.25	Ortogr. x0.25	Gramm. x0,.25	Format x0.25	Title x0.5	Filename x0.5	**SCORE**
(0.6) Good												
(0.4) Fair	1.8	1	3.2	0.8	6.8	0.25	0.2	0.18	0.25	0.5	0.5	1.88
(0.2) Weak												

served to keep record of the entire set of activities, so everybody could manage the overall work. HipChat, was used to communicate for shorter questions such as small group conversations. Even using these tools together it was hard to organize the whole team. Working remote involves many uncommon challenges: Requires a great ability to communicate and to be able to express ourselves trough writing, since most of the communications are made by email or instant messaging, also requires a large capacity transmitting ideas by means not involving live interaction (text mainly, as already mentioned above, or other means such as telephone or diagrams), requires a strong will by the employee, as not being constantly controlled by the boss. Another important aspect is the synchronization of hours of work, which in this case was facilitated since both locations were in the same time zone. In short, working remote implies challenges that usual work doesn't imply, but in the end, with the right organization it can be a great approach and can help us develop more self organization and better managing capabilities.

4   WORK DIVISION

Since the beginning, we were always four programmers, so the division of work was always done in a partially liberal way. Seems a bit risky, but having the power to choose what you will do next can have a lot of influence on the productivity and confidence in what we are doing. For some months at Codacy we followed Scrum, but that brought a lot of overhead since we had to plan everything before hand like write extensive explanations, estimate the cost for a task and even choose what tasks to select for each sprint. This was causing a mess for several reasons. We always had to add new tasks to the list during the sprint, just because of a bug or because something more important appeared. Other problem happened at the end of the sprint because we would never be done in the exact day of the sprint end so we would need to expand it. To solve this the Chief Technology Officer (CTO) decided to start using Kanban. It is a more flexible methodology since it lets us plan on

the go and do releases as needed. With this we were able to keep track of the work and more frequent releases. We kept a set of tasks that were prioritized and in the end we could choose the one we liked more, except if there was a very blocking task to do.

5   DEMOCRACY AND ROTATION

Another very important factor for the success of the internship was the democratic environment and high rotation that existed in the group. This means that most of the decisions about the product were made by all the team. In the same line of ideas everyone was exposed to all layers of the product which allowed a general knowledge of all the code base. With this the whole team was also on track of everything so anyone could opine on the subject.

6   CLIENT INTERACTION

There were several opportunities where we had to interact with customers. The most common was to give support, for several times I was assigned a customer and I had to help him with any doubt about the product or confirming a problem in the platform, in both cases I exchanged emails or chatted with the client through Intercom, which is a service we used to keep track of users. Other important contact with the costumers was during product testing, in this kind of work we had to prepare a set of questions and tasks to test the user interaction with the product, and while the user was using the product I was taking notes and measuring the time. After that the team used all the information to improve the product.

7   RECRUITMENT

After some time the team felt the need to have another full time programmer, since only two were full time and we had a lot of work to do. To find some good programmer we created a challenge that if successfully passed would take that person into an interview with the team. In the interviews, for the first time, I was in the other side of the table and was asking the questions (with the rest of the team) to someone we needed to test and find if was

the right person for he job. In the interview we asked the candidate about him, what was his background, if he had experience and then we did some code questions to see if he could pass and how he worked under pressure. Interview after interview we kept learning and the next one was always a different whether in the way we approached the candidate or in the questions we asked. After all not only I gained experience interviewing people but also how to be better when I get back in the other side.

8 PRODUCT MARKETING

In November the Chief Executive Officer (CEO) suggested to start targeting possible costumers by writings code articles that would catch their attention and bring them to the platform. The rule was that each teammate needed to write a post each week, and the post was published in pages like HackerNews, Reddit or TheNextWeb. In my case I wrote two, Optimizing Scala [4] and Typed actors with routing [5]. These articles brought a lot of users to the platform and did exactly what they were meant for, still after some time and because they took a lot of time to write we lowered the frequency of release. With this I practiced my English and my capacity to write articles about generic themes.

9 FUNDRAISING

Codacy first started with a symbolic investment from Seedcamp which was received in the initial phase by the CEO. After that it received a bigger amount from two Portuguese ventures, BES and Faber, which gave some traction to the product. When I started working at Codacy I thought it was awesome to receive an investment, although after understanding all the conditions and the responsibility behind it I got a little bit scared. Firstly the investors always try to get the most they can and if we let them they will tear us apart, so we need to go with a lot of confidence and not give to much so we can still have the control of the company. Even in the best deals they will always do a lot of pressure to have what they want and even not being majors it is hard to refuse something.

After all it has some good parts too, things like their contacts and the people to whom they can present us give a lot of advantage to the business.

10 EACH SITUATION A LESSON

When participating in an activity of this caliber, the things that we learn go far beyond what can be read in the books. After six months, there is a big difference in the way I think, because during that time I had the opportunity to do a lot of tasks and to develop all my capacities. I know there is still much work to do, but I increasingly feel more confident, more confident in the tasks I do and more confident with the future of Codacy. The main technical skills I improved were at the level of Scala [2] because it was an unfamiliar language and I had to learn from scratch, but it was also very enjoyable to learn. Also improved a lot my knowledge about Javascript [1], which I already had worked with but never had the opportunity to do something that big. Finally I also learned a lot about Play! Framework [3] which was the framework behind Codacy backend, and it was so useful that I even used it in a project last semester. The next sections describe the rest of the lessons.

11 CONCLUSION

After six months and many lessons learned, I can make an analysis of what happened. I think that could not have been better to catch the opportunity and work with several great engineers with a lot of experience and thus manage to learn things that would never be able only during the course. Furthermore the internship was a great addition to my personal experience. I learned a lot from this activity and I am excited with the upcoming ones.

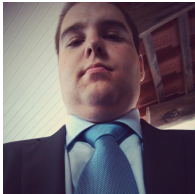Neste tipo de documentos (Técnico) a CONCLUSÃO deve começar com um Resumo do assunto abordado e depois deve Nalçar os resultados

one, always available and that made the internship a unique experience. I would also like to thank Nuno Teixeira (Software Engineer) how also always helped me when I needed. Without all of them them this experience could never have been the same.

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Rodrigo Fernandes Here I am, pursuing my Information Systems and Computer Engineering course at IST and working as a Software Engineer at Codacy.

APPENDIX
STATEMENTS OF EXECUTION

COMPROVATIVO

Venho por este meio comprovar que o aluno 69637, Rodrigo Tavares Fernandes realizou um estágio profissional nas funções de Software Engineer na empresa Codacy entre 13-Set-2013 e 10-Fev-2014, tendo em média trabalhado 10 horas por semana durante a duração do estágio.

No âmbito do estágio foram desenvolvidas várias actividades relacionadas com o desenvolvimento de software tais como planeamento, programação e manutenção, entre outras.

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