

Workterm Report: Ericsson Canada Inc

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1 Executive Summary

1.1 Description

This executive summary is an overview of your report. Share with your reader your overall experience, key learnings, and most meaningful reflections. Narrow in on what is most important for the reader to understand your experience.

1.2 Summary

Fall of 2020, I got the chance to become a software developer intern in the Theia team at Ericsson. Being a co-op student here was a truly eye-opening experience for me. It was intimidating at first, working in a big open-source project with nearly 180 active contributors from all around the world. However, with all the available resources and a helpful, encouraging team, it turned out to be a super valuable learning experience for me. During the internship, I got to learn and work on many interesting projects with different tools and technologies. For me, it was never a boring moment and two days are never the same because everything is constantly evolving in the project.

2 Intro to self and the workplace

2.1 Description

Tell the reader about you and your work. Include relevant features of yourself, including your learning objectives for this internship, if your background and prior experience had an impact, etc, and include relevant features of your work (role title & supervisor title, how your unit fits within the organization, location of the internship (e.g. local or international), describe your role and key activities as if to someone unfamiliar with this field, etc).

2.2 Content

2.2.1 About me

I am currently a third-year Computer Science student at Concordia. My focus area in the field is Software Systems. With the nature of my study, I am eager to learn about the software development process in depth, from developing to shipping the final product. Before the internship, mostly I was doing personal projects on my own and sometimes in teams to learn and improve my own skill set. I also enjoy participating in Hackathons since it is a great chance to meet like-minded people and work on something interesting.

2.2.2 About Theia team at Ericsson

Ericsson is a multinational networking company and is also a major leader in the domain of telecommunications technology, headquartered in Stockholm. Theia team fits in the organization as a software team mainly is responsible for maintaining and developing project Eclipse Theia (<https://theia-ide.org>) which is a framework to develop Cloud and Desktop IDE (Integrated Development Environment). Along with the main repository (codebase), the team also works on a variety of support tools.

- Main repository: <https://github.com/eclipse-theia/theia>
- <https://github.com/theia-ide>
- <https://github.com/eclipse-theia>

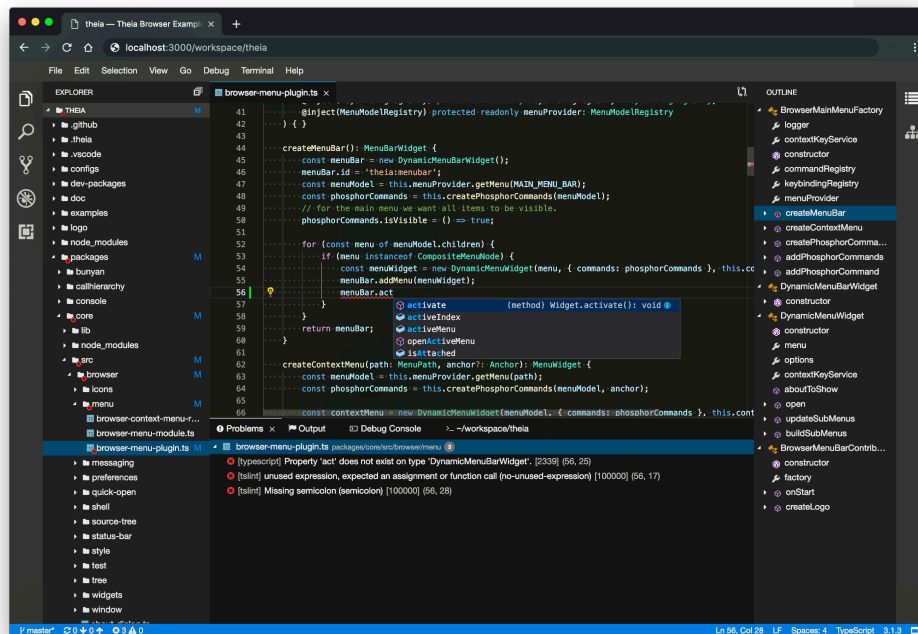


Figure 1: Theia Framework Browser Example

The project is open-source, hence the code base is public and available on GitHub. With the nature of open-source projects, contribution comes from anyone. Theia team at Ericsson is only one of the teams contributing to the project, alongside many other companies such as Typefox, SAP, RedHat, Huawei, and more.

With the current COVID-19 pandemic and Canada regulations, all the activities in the internship were done **remotely (work from home)**

2.2.3 About my role in Theia team

My role as a Coop Software Developer is to test, investigate bugs, develop, and enhance features in the framework. Other than that, I also participate in code review for both team members and community contributors. The team is usually flexible on the tasks I can work with, so I often work on the issues that I find interesting.

3 Career reflection

3.1 Description

- What meaningful tasks, projects or initiatives were you involved in? Why do you see them as meaningful? What problems did you solve or make progress on?
- Where did you feel most challenged (stretched) during this internship? Why was this challenging and how did you overcome this?
- What positive feedback and/or constructive criticism did you receive from your colleague(s), supervisor(s)? How did you respond to them? How did you implement the feedback?

3.2 Content

3.2.1 The tasks I involved

- The first component I was working on was the "Save" feature which is responsible for saving the file that users just edited. I improved the feature by adding a new command "Save without Formatting" to the framework, allowing users to save their changes without applying any formatters. After implementing the command, I found other issues in the same module so I proposed to the team, and fixed them.
- Next, I moved to work with "Search-In-Workspace" (SIW) module of the framework which the main functionality is to allow users to search for a term, then displays the results out for review. Here, I made the improvement by adding the ability for the framework to also search un-saved changes from users. Furthermore, I was proposing to the team and asked to extend the functionality of this component even more. In the end, I believe the features I added helps a lot to improve user experience since they now have a search component that is much more dynamic than before.
- Recently, the project is making a migration from Travis CI to GitHub Actions for CI-CD (services for continuous integration and continuous delivery). I proposed to be a part of this effort. As a result, I was working to re-create the pipelines for several projects in Theia:

- <https://github.com/theia-ide/theia-apps>
- <https://github.com/eclipse-theia/theia-cpp-extensions>
- <https://github.com/theia-ide/generator-theia-extension>

It was my first time using CI-CD tool like GitHub Action, but I picked up on the way when I was implementing the pipelines.

3.2.2 Challenges

The challenge I encountered is the complexity level of the codebase. I never worked on such a huge project like Theia before. Also, the project is evolving every day with active contributions coming in daily. This made it difficult to navigate at first. However, Ericsson has a buddy system, where new interns get assigned with an onboarding buddy who will support the ramp-up process. In my case, he was super helpful in guiding me and helping me to understand the project better. In addition, I started the internship by fixing several small issues. Those first steps inspired me to take on more complicated tasks later on.

3.2.3 Feedbacks from colleagues

My colleagues helped me a lot by criticizing my code in a constructive manner. Through that, I have improved myself to write cleaner code and to express my idea by code more efficiently and clearer.

4 Application from classroom to workplace

4.1 Description

- How does this internship experience fit (or not) with your program of study? How did it align with your expectations? Provide concrete examples.
- How did you apply knowledge, concepts or skillsets learned from your coursework, labs or projects during your internship? Which course(s) helped you?
- What challenges did you experience in applying the theories and concepts you learned in class in the workplace? What differences or similarities did you notice? Why do you think this was the case?

4.2 Content

4.2.1 How this internship fits with the program of study

My program of study is Computer Science (Software Systems option). The internship fits with my study and my passion for software. I'm also a fan of open-source culture so working in an open-source project has always been one of my goals.

4.2.2 Knowledge applied to workplace

Before the internship, I've done several web development projects, that helped me on understanding and getting familiar with the job at first. Also, I've had some experience with Docker containerizing before, so I was confident working with the Docker images of theia-apps.

My personal projects and Hackathon experience were the foundation for me to start working with the team. The courses I took so far at Concordia were mostly theoretical. They helped students to understand the basics of computer science, but are not very useful when working in a workplace environment.

5 From Student to Employee Transition to the Workplace (WT1)

5.1 Description

- How was your transition and how well did you integrate the workplace?
- What impact does supervisory style, workplace culture, values and norms have on you personally and professionally

5.2 Content

5.2.1 Transition

It took me about 1 week to integrate into the team, and get familiar with the workflow and the codebase. I still have new things to learn every day, but after that first week, I was more comfortable with working at Ericsson because I understand what resources are available and who to ask when I have questions. The working style is pretty relaxing, I'm allowed to work on things that are interesting to me, and the team members are there to help in case I got stuck at some points. All the meetings have never been stressful and everyone is free to express their own opinions. In addition, both my team lead and my manager are friendly. All of that has reduced the stress of working and make work time an enjoyable time.

6 Moving forward

6.1 Description

- How did this internship help you gain more clarity about your academic and career path? What is your biggest takeaway from this internship experience? What is important to you in a professional work environment?
- Share something you accomplished or are proud of. Why is this important to you? What about this task/project/ experience do you want to repeat after this internship? If you were coaching another student to be successful in this organization/position, what advice would you give them?
- What actions will you take as you plan and prepare for your next internship, study term or career move?

6.2 Content

6.2.1 Career path

I appreciate the opportunity that brought me to Ericsson. It's my first internship in the software field and I've learned so much from working here in the past few months. One of the key takeaways from this experience for me would be little details matter. I've practiced to be a more considerate developer, carefully choosing between the possible options when encountering a problem to ensure the most efficient outcome.

6.2.2 After the internship

Working in Theia is the first time I contribute to a big open-source project. It's something I have always wanted to do before. Furthermore, working in the project, I had the chance to observe and work on every aspect of software development. I have been implementing features in both front-end and back-end. I also learned to write unit test for the test suite of the project. Along with that, I learned and applied knowledge of CI-CD into a real-world application. That's something I value and wish I have the chance to do more in the future, after this internship.

An advice I would give other student for the same role is to ask questions, and don't be hesitate doing so. That's the only way interns can get familiar with the team and understand the project better.