

**UNIVERSITI TEKNOLOGI MALAYSIA**

**FACULTY OF COMPUTING**

**INDUSTRIAL TRAINING REPORT**

**<Experiencing QA DevOps Work>**

By

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## **Abstract**

Every student before graduating they must undergo their industrial training. It is one of the required courses that student need to take for them to show the skills and knowledge that they had learned in university. As an undergraduate student from the Bachelor of Computer Science Bioinformatics, I went through industrial training for more the 20 weeks at Experian. Experian is a global firm company that provides data and technologies to customer all around the world. My organization supervisor Kae Ee is a manager that manage a small group of teams that is called Achelois and my school's supervisor is Dr Mohd Murtadha Mohamad which is a researcher at University Teknologi Malaysia (UTM). Throughout the internship, I've managed to adapt to the company and do various task such as my intern project which is the Release Readiness Dashboard, and side tasks from the Achelois Scrum Board. The Release Readiness dashboard was requested by a client to ease their workload with creation of an automatic dashboard that update the progress of their product. The scrum board was little task that has been given by my supervisor as well my colleges based on my knowledge level. Lastly, the report will conclude with all the achievement that I've received during this industrial training and my opinions related to this industrial training.

## **Acknowledgement**

First, I would like to express my gratitude towards my family for providing accommodation and transportation during my industrial training from 21 Aug 2023 to 9 Feb 2024. They had been supportive with my internship, and I am very glad to have them.

Next, I would also like to thank my organization supervisor, Kae Ee, who is the manager of Achelois which had help me to grow and improve my knowledge about the real-life world working environment. He has been very helpful and thoughtful during my internship and would help me understand more matter on a particular subject. Not only that, my colleges inside Achelois had been helpful with their knowledge which help me further in my intern project which is the Release Readiness Dashboard.

Finally, I would also like to thank to my school's supervisor, Dr Mohd Murtadha Mohd for giving me insights on how to do my logbooks and reports for my internship course. He also had come to see my company and its environment during the industrial visit. He was very glad that I've joined this company because Experian had many possibilities to improve my skills and knowledge.

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## **List of Abbreviations**

UTM – University Teknologi Malaysia

API – Application Programming Interface

QA – Quality Assurance

RAM – Random Access Memory

SSD – Solid State Drive

JSON – JavaScript Object Notation

IDE – Integrated Development Environment

EC2 – Amazon Elastic Compute Cloud

SSM – Amazon System Manager

MNC – Multinational Cooperation

## **List of Appendices**

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## 1.1 Organization Profile

Global firm Experian provides data and technologies to customers all around the world. It is recognized by Malaysian legislation as top credit agency, which Experian Information Services formerly known as RAM Credit Information. They have been in the company for 25 years and have a solid reputation for offering business and credit information.

Experian Malaysia provides a range of services to both private citizens and commercial clients, such as worldwide data services, monitoring, scoring, and online credit information. Experian Malaysia's Global Delivery Centre in Cyberjaya manages crucial functions including finance, analytics, IT, product development, and customer care. Experian Malaysia's Global Delivery Centre (GDC) currently houses over 20% of Experian's Workforce across four locations: Malaysia, Bulgaria, Chile, and Costa Rica which deliver both local and global projects.

One of the products of Experian that I've learned is Experian PowerCurve® which is a unified, component-based, automated decision engine that incorporates Experian's comprehensive data, strategy design, decision automation, and detailed monitoring and reporting to help users to understand data and make fast, efficient decisions that support user's strategic goals. PowerCurve is available as a cloud decision engine or as an integrated platform within your onsite system through their decision engine software.

PowerCurve as the engine, it also has its components which are PowerCurve Origination, Customer Management, and Collection. Imagine a system that helps a person to determine if they need a credit card. First, the product will study the person if he/she eligible for credit card or loan. Next, the system will create a behavior-based profile on each customer which then will offer products or services at the right time. Lastly, it also helps the customer process to increase their recoveries and reducing cost like a debt management.

## 1.2 Organization Chart

The current department that I am currently an intern is Global Quality Practice under ESS.

Global Quality Practice

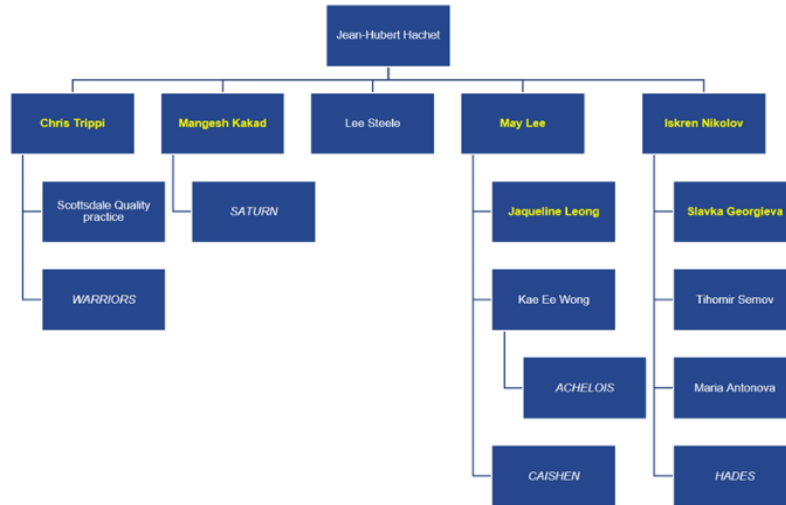


Figure 1.1 Organization Chart for Global Quality Practice

Under the Global Quality Practice, there are also teams that within the Quality Practice as below.

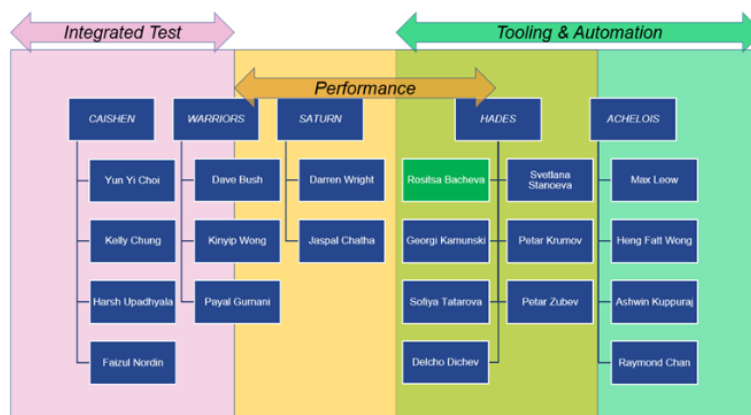


Figure 1.2 Teams within the Quality Practice

Currently our team consist of 4 people which are:

Table 1.1 Achelois Team

<b>Name</b>	<b>Position</b>
Wong, Kae Ee	QA Manager
Chan, Hong Tatt	Senior QA Engineer
Wong, Heng Fatt	Senior QA Engineer
Shahril Bin Saiful Bahri	Intern

As part of the team, my job is to understand the workflow of our currently handled projects/ or request based on our scrum board. Our team uses the Agile methodology which we will have a scrum meeting every 2 weeks to pick up certain tasks that are available in the backlog and we will follow the Agile workflow with daily stand-up meetings to report our progress and objectives of the day. We used Jira to set up our backlog and our scrum board which is handy to see progress of tasks.

As intern I've offered my part in taking some of the tasks that are manageable by me and work on projects that has been assigned to me such as creating a AAD Dashboard for a team to monitor their progress based on different websites into one which can reduce their time in searching the progress of their project. They also let me play around their repository so that I can learn about the product that they are working on such as automation which includes Packer, Terraform, Ansible and Jenkins. My team is ACHELOIS which our mission/ vision:

- Enable effective and efficient automated test.
- Enable every QA to automate test.
- Advocate good test automation principles and best practices.

My supervisor is Kae Ee Wong, which has been with Experian since 2010. Before becoming manager, he has been a QA Engineer 1, QA Engineer 2, And Senior QA Engineer. Under his supervision, he provides me details about their projects that they have been through such as Enable Ansible Test Automation and Jenkins Testing Automation.

## 1.3 Industrial Training Activities

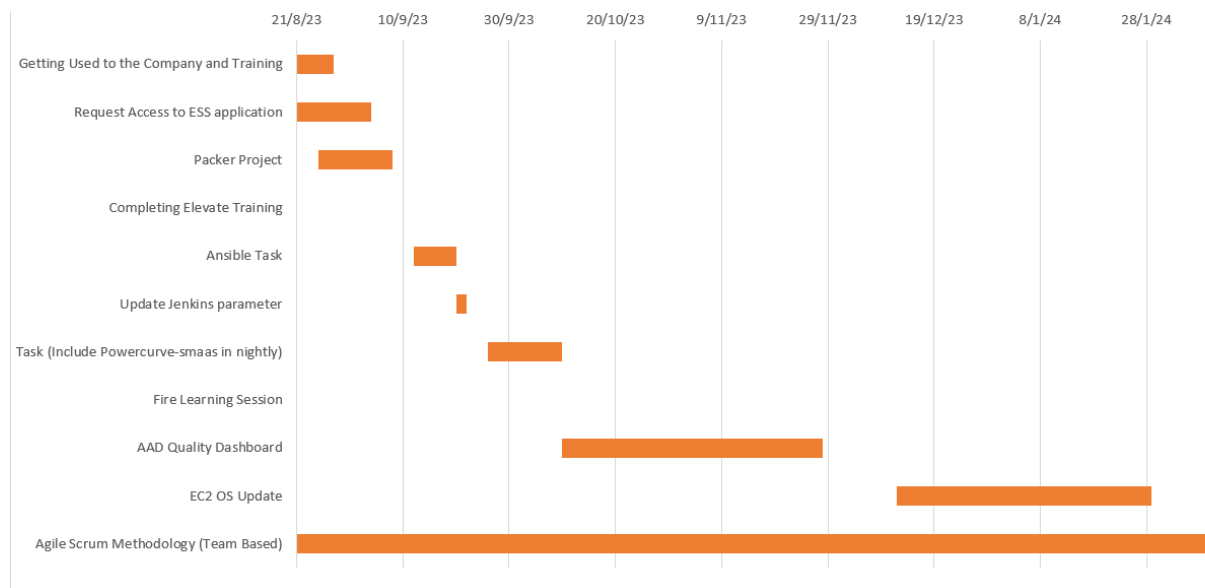


Figure 1.3 Gantt Chart

## **2 INDUSTRIAL TRAINING DETAILS**

### **2.1 Introduction**

Throughout this decade we can see many interesting technologies that are developed by programmers all around to reduce the manual work of human beings. This can be shown by the company Experian, which the normal work as QA, which is Quality Assurance, determine is the product/service meets its specified requirements. Albeit, manual testing, GUI testing, or any other types of testing, will require much more time to be able to spot a real bug could ruin the production at any time.

At Experian, they begun to use automated testing to reduce the workload of the normal manual testing. By having automated testing, QA will have more time in identifying the solution for the bug that they've encountered rather just spend more time in searching bugs and searching for fixes. It is also worth mentioning that Experian also have a lot of products that they need to maintain and new products that they will want to release in the future.

Thus, what these means is that while working under this company, what I've learned is its important to make our jobs much easier with just automation because it will save a lot of times for our life. More on this will be explained inside my work experience.

### **2.2 Objectives**

There will be a few of objectives that will follow my work experience while an intern in Experian.

- i. Time Efficiency:  
To make sure that we save more time and use more time on more dependent things.
- ii. Maintain Stability:  
To make sure that we can maintain the performance of the system or product with it crashing the production.
- iii. Gain Experience:  
To make sure that whatever I do in this company I will add it to my own experience and gain more from it.

## 2.3 Work Experience

There are two important things that I've experienced/ worked on as an intern in Experian. First is the intern project that has been assigned to me by my manager and second is the scrum board that we worked on as a team.

### 2.3.1 Release Readiness Dashboard

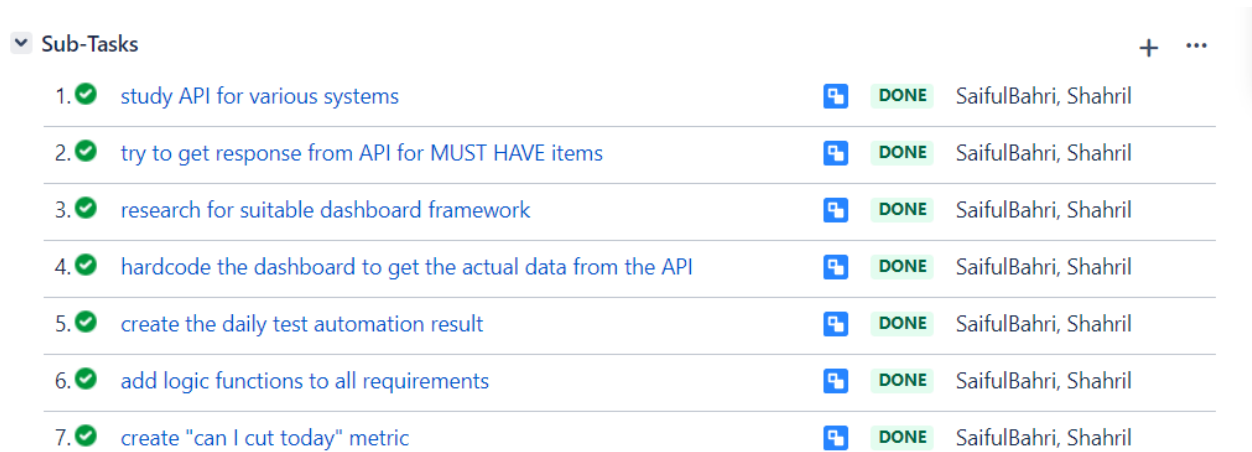
This project was assigned to me as an intern project which the objective of the project is to help the stakeholder/ team to save time, to show if their software meets all the quality gates criteria and learn about new framework to work on this project.

The backstory on how this become a project is where usually this team (Quality Lead) has been going through each day to update their own release readiness manually in their own confluence page. Confluence page you can call it as blog where we can put our documentation for our products. This team needed to go through 5 websites before eventually they can update the daily release readiness. An example of their release readiness dashboard. If all those metric meets all the quality gates criteria, then only the software can release/ cut for today.

Release Readiness			
Can I cut today? <b>NO</b>			
Date	Metrics	Blockers	Tickets
📅 17 Oct 2023	<div>EPIC</div> <div>QG BUGS</div> <div>VERACODE</div> <div>SONARQUBE</div> <div>DAILY AUTOMATION</div>	<ul style="list-style-type: none"><li>• Development in progress</li><li>• 5 medium veracode flaws which are kept open and will be fixed by end of development phase.</li><li>• Nightly automation having failures. On-going test script development.</li></ul>	

Figure 2.1 Client Release Readiness Dashboard

For my part, I was assigned to find a way to automate the current process that are being handled by the team. The clue that my manager gave me was using API to help me with those process. There were several tasks needed to go through before I could be able to start on this project which as below.



▼ Sub-Tasks	+ ...
1. ✓ study API for various systems	📌 DONE SaifulBahri, Shahril
2. ✓ try to get response from API for MUST HAVE items	📌 DONE SaifulBahri, Shahril
3. ✓ research for suitable dashboard framework	📌 DONE SaifulBahri, Shahril
4. ✓ hardcode the dashboard to get the actual data from the API	📌 DONE SaifulBahri, Shahril
5. ✓ create the daily test automation result	📌 DONE SaifulBahri, Shahril
6. ✓ add logic functions to all requirements	📌 DONE SaifulBahri, Shahril
7. ✓ create "can I cut today" metric	📌 DONE SaifulBahri, Shahril

Figure 2.2 Sub-Task For Release Readiness Dashboard

The steps that I've taken was crucial to make sure that I understand on the workflow to get and show the data needed to the stakeholder. While under this project, I've make sure to update the progress to my team and ask about their own opinion based on their experience.

The API's that I've used are REST API, SonarQube API, and Testrail API. Based on the diagram above, I must study for each of the API on how it works and get the response from the API. Then, finding a suitable framework for the dashboard was also a challenge because we have many types of frameworks to choose from. Then I found out React which is lightweight framework and easy to learn from the basic. After that all I had to do was create the application for the Release Readiness Dashboard using software and hardware that was given by the company.

This project was split into two phases which is the first phase was not using database and second phase was focused on making the dashboard to include database so that we can have history version. Below is the picture of the phases.

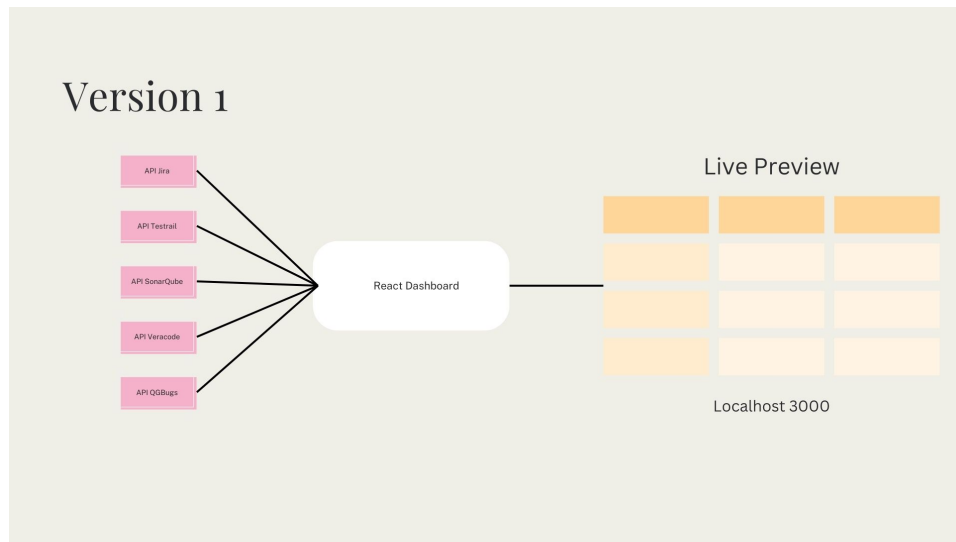


Figure 2.3 Outline Version 1

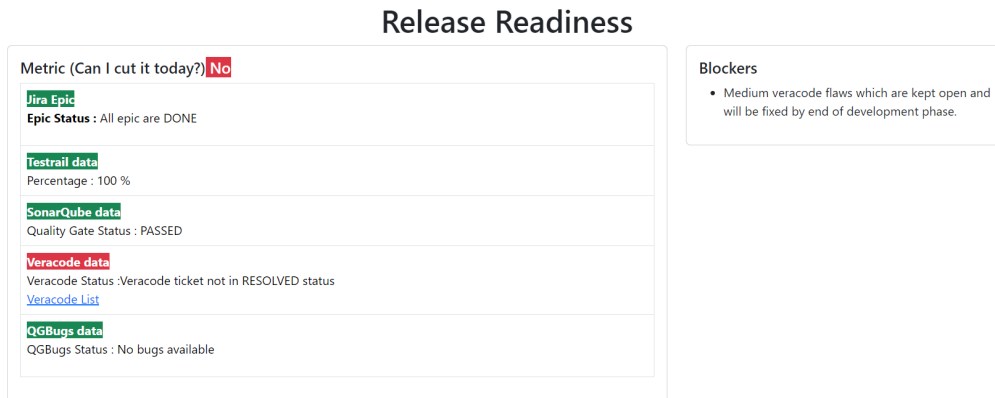


Figure 2.4 Demo Version 1

This is the first phase of the dashboard. The react dashboard will use Get towards all five metrics and present the output as a table. Currently all the data shown is in live preview, so whenever the window is refreshed, then the data will refresh as well.

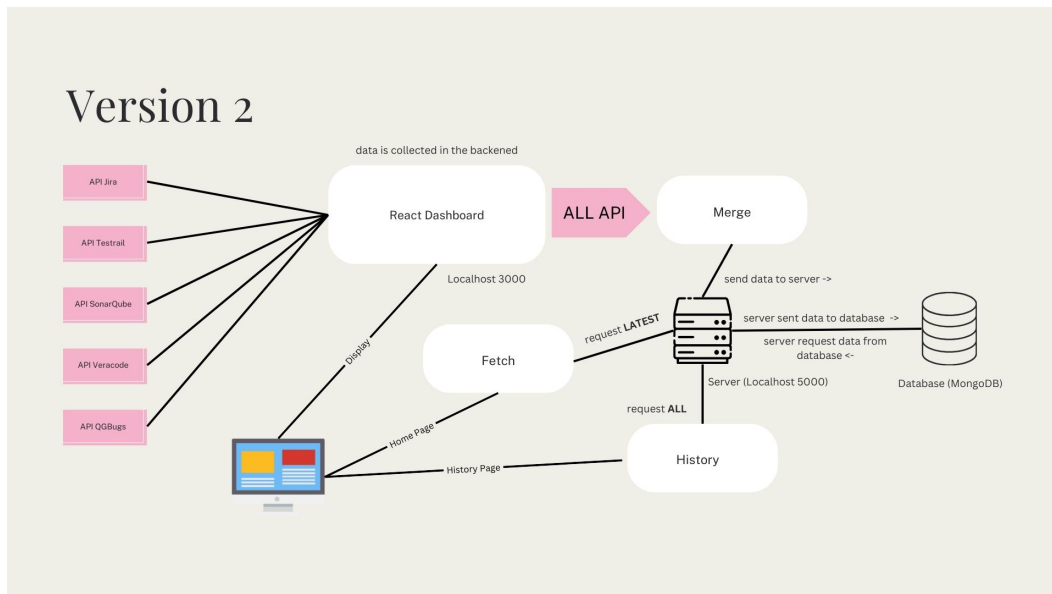


Figure 2.5 Outline Version 2

This is the second phase of the dashboard, as the previous version the react dashboard get the API's but this time this phase uses database which we use MongoDB, and we have our own server to send and receive data from the React Dashboard (front-end) and database (back-end).

There are a few functions that we develop in this phase which are describe as table below.

Table 2.1 Function's Release Readiness Dashboard

Function	Description
Merge	This will gather all API and combine it into a data which we will then send it to database.
Fetch	This function is to request latest data from the database. Fetch will be shown in the home page.
History	This function is to request all the data from the database. History will be shown in the history page.

For our server, we have a few calls that are used by the react dashboard to connect to the server.

Table 2.2 API Call for Server

API CALL	Description
../use	This API is called from Merge function to add new data into the database based on current date.
../update	This API is called from Merge function to update the latest data from the database based on current date.

../fetch	This API is called from History function to get all the data from the database.
../fetch/latest	This API is called from Fetch function to get only latest data from the database.

Below is the Release Readiness Dashboard phase 2.

## Release Readiness Dashboard

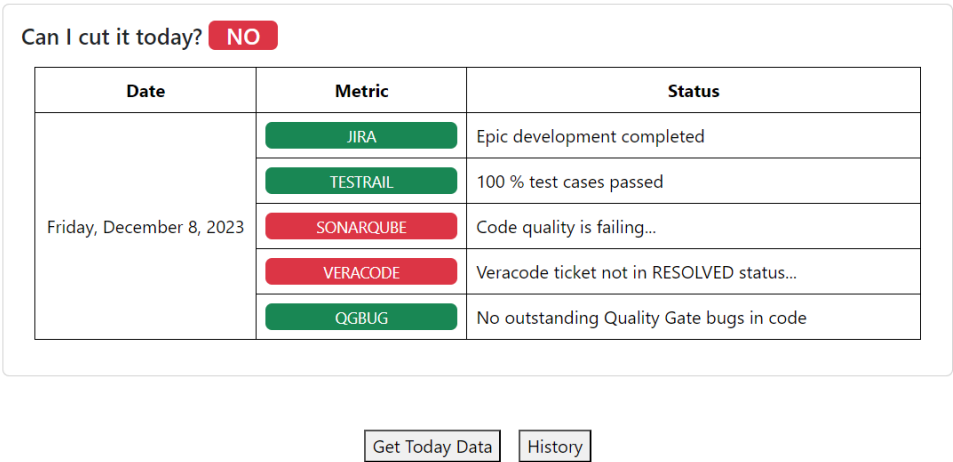


Figure 2.6 Demo Homepage of Release Readiness Dashboard

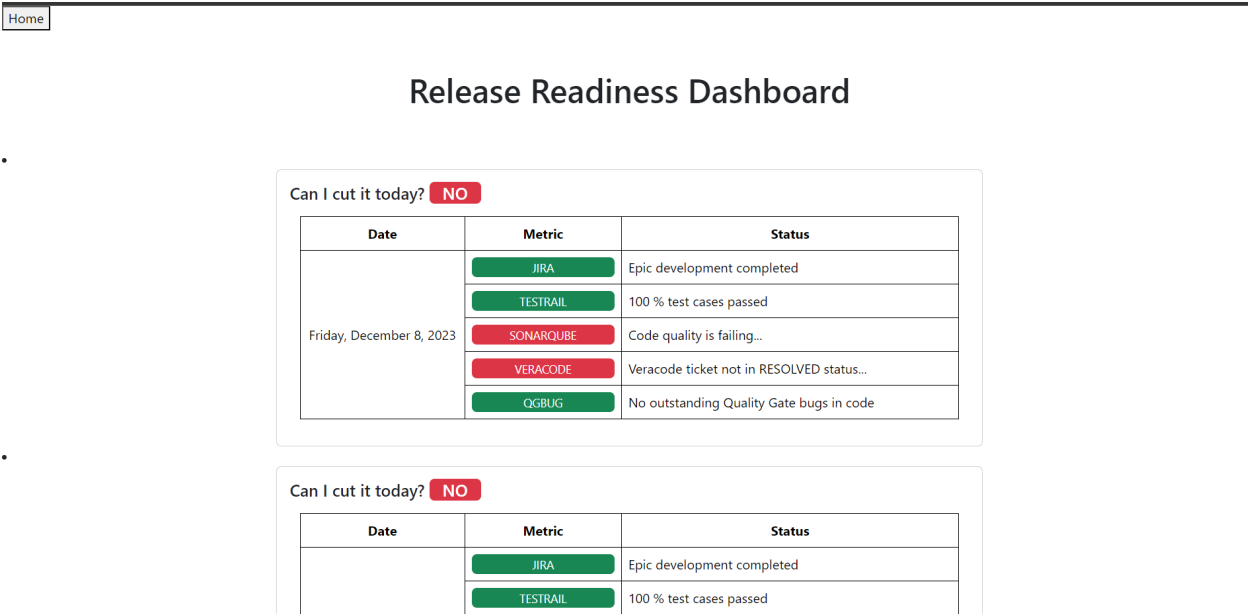


Figure 2.7 Demo History Page of Release Readiness Dashboard

### 2.3.1.1 Hardware and Software

#### Hardware

Table 2.3 List of Hardware for Release Readiness Dashboard

Item	Description
Laptop	Intel Core i7 (11gth) 32GB RAM 500 GB SSD
Mouse	Logitech M170 (Wireless)

## Software

Table 2.4 List of Software for Release Readiness dashboard

Item	Description
Confluence	Confluence is like blog where team can discuss and share their knowledge among the teams.
Jira	Jira is planning tool which follows the agile methodology of sprints which teams can plan out their task by the following sprints accordingly.
Bitbucket	Bitbucket is used for code hosting and collaboration tool for the teams. It is like GitHub, but not open source.
Postman API	Postman is used for building and using APIs.
Visual Studio Code	Visual Studio Code is an IDE which we used to code our project.
Node.js	Node.js is used to create server-side web application and required to build react application.
React	React is open-sourced library for front-end. It is used to create the Release Readiness Dashboard.
MongoDB Compass	MongoDB compass is used for our database management where we will use NoSQL format such as JSON.

### 2.3.1.2 Time Period of Release Readiness Dashboard

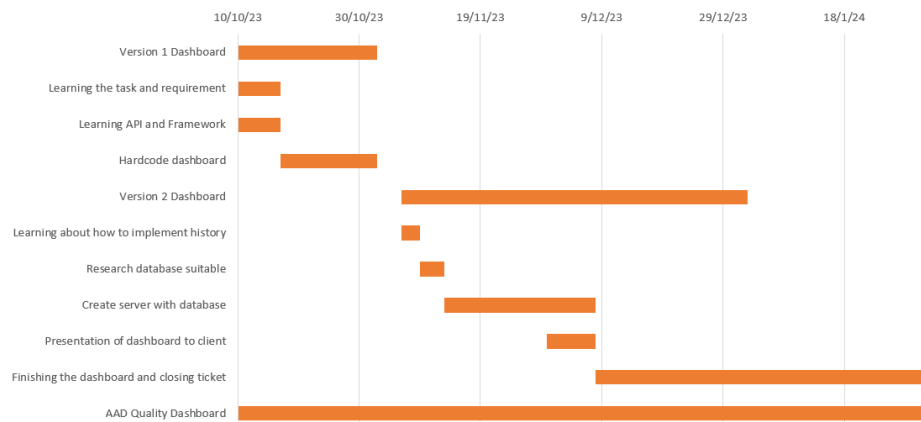


Figure 2.8 Gant Chart for Release Readiness Dashboard

### 2.3.2 Achelois Scrum Board

Another part that I was assigned in the Achelois team was tasks that exist in the Achelois Scrum Board. Scrum is an agile team collaboration framework which are widely used by the many companies. It follows a set of sprints that consist of 1 sprint for 2 weeks or 1 sprint for 4 weeks, which in these sprints they follow certain tasks that are needed to be solve. Scrum board consist of tickets that has been raised by other teams, or the bugs that we found inside the system.

My job was researching about what task to take on the current sprint and work on it. Every day, we will have daily stand up to keep up to date the progress of everyone in the sprint. For example, this is how the scrum board looks like. My first sprint started in sprint 90 which is where I started my first side task. Below are the tasks that was assigned to me based on my knowledge level.

- Ansible - ssh error when IP address is reused for performance pipeline
- (update jenkins parameter TEST\_FILTER\_OPTION\_DETAILS description)
- (Include powercurve-smaas to be triggered by nightly run)
- AAD Quality dashboard / Release Readiness Dashboard
- (EC2 OS Update)

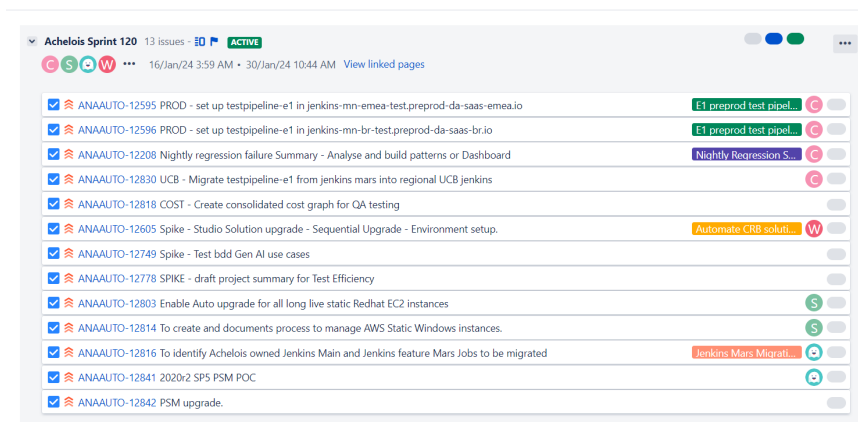


Figure 2.9 Preview of Achelois Scrum Board

**AAD Quality dashboard**

QUAL-9641

[Edit](#)
[Comment](#)
[Assign](#)
[More](#)
[Backlog](#)
[Selected for Development](#)
[Workflow](#)

**Details**

Type:	Support Request	Status:	<b>IN PROGRESS</b> (View Workflow)
Priority:	Normal	Resolution:	Unresolved
Affects Version/s:	None	Fix Version/s:	None
Component/s:	Dashboard		
Labels:	None		
Team Select:	Achelois		
Sprint:	Achelois Sprint 113, Achelois Sprint 114, Achelois Sprint 115, Achelois Sprint 116, Achelois Sprint 117, Achelois Sprint 118		
Release Notes:	▼		
Raised by - stream:	Engineering		

Figure 2.10 Example of Ticket inside Achelois Scrum Board

Each sprint will be update with new task or continue with current task for example, AAD Quality Dashboard that is currently my task. Since it still on going, then status is still in progress. If the task is completed just like in the scrum board it will cut ticket id. Since picking up some of the tickets require coding just like fixing bugs or adding new feature, then we will also need to use code repository website like Bitbucket.

### 2.3.2.1 Hardware and Software

#### Hardware

Table 2.5 List of Hardware For Achelois Scrum Board

Item	Description
Laptop	Intel Core i7 (11gth) 32GB RAM 500 GB SSD
Mouse	Logitech M170 (Wireless)

#### Software

Table 2.6 List of Software For Achelois Scrum Board

Item	Description
Confluence	Confluence is like blog where team can discuss and share their knowledge among the teams.
Jira	Jira is planning tool which follows the agile methodology of sprints which teams can plan out their task by the following sprints accordingly.
Bitbucket	Bitbucket is used for code hosting and collaboration tool for the teams. It is like GitHub, but not open source.

Jenkins	Jenkins is used to test out code development before merging it to the master branch
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## 2.4 Knowledge/ Practical Skills Used for Task

The tasks that I've mentioned above in the work experience relates to my courses that I've learned at University Teknologi Malaysia (UTM). Courses like Web Programming help me discover on how to make a workable website just like what I've done with the Release Readiness Dashboard. By applying the knowledge of HTML, CSS, JavaScript to my current framework React, I can create a simple webpage to show either the team are able to cut it today or not.

Also, all the courses that I've attended during my semester like AWS courses help me to understand some of the uses of the application during my internship. Some of it that I am familiar is EC2 which is an instance/ virtual machine that are used in my internship.

Another course worth mentioning is the Introduction to GitHub which deeply helped me understanding how branches work, managing pull request, merging, sorting merge issues helped me during the internship even though they used Bitbucket as their code repository, but the process still the same.

## 2.5 Conclusion

In conclusion, for this chapter I think I summarized my work experience well while being an intern in Experian. Especially on how a QA DevOps works other than normal QA. I can say that Experian is trying to push towards the automation side for most of the jobs so that they can focus on other things such as developing new software either from scratch or using the old template so that they can implement new things to the software. What I've learned in Experian is a eye opening experience towards the work culture and I am glad to be an intern inside this company.

**3.1 Introduction**

This chapter will cover all the skills that I've acquired during the industrial training in Experian. This chapter also include the comments that I've received about the company.

**3.2 Improvement of Skills**

During this internship period I've managed to improve my current skills that I had learned in university and add more to my skills based while attending the internship program. Many of the skills will be describe as problem solving, communication, and programming skills.

**3.2.1 Problem Solving Skills**

Problem solving skills are important aspect for this work because you will need to identify the problem first before you can execute the work. For example, in my main project I was needed to create a quality dashboard for the client to ease their workload. First thing I needed to do is to understand the problem from their own perspective. After that I've also asked for the client requirements for the dashboard so I can get their view on how the dashboard should look for their easiness. After identifying all the required aspects from the clients, then I can proceed with building the dashboard to solve their problem.

Moreover, from the side tasks that I've gotten from the scrum board are also a great benefit to me as I can improve my knowledge about certain topics such as bug fixing, code cleaning and adding features into the pipeline codes.

**3.2.2 Communication Skills**

Communications skills are great soft skills that are important in our life. During the internship my communication skills are improved tremendously because of the problems that I've faced during the internship such as when I am stuck at some problem, I managed to ask for some guidance from my seniors and managers to think out a way to solve this problem. One example is during my main task, I couldn't think a way to make the history page working in my dashboard.

During this discussion my seniors thought a way to store the data that inside the dashboard into a database so that we can call the items inside the database to make a history page. After this discussion, what I've planned was to find a suitable database and make the history page happen which turned out a great success because it was a good addition to dashboard. Furthermore, my project was selected to be presented in the product demo with the CEO's. So I was needed to present my dashboard in front of the CEO's and it was great because they were impressed my confidence and presentation.

My communication skills also improved during the daily discussions where I can learn more about the backend framework that they managed as a QA team. During these daily discussions I can see more thought process that they go through when executing a plan to manage tickets or big projects.

### **3.2.3 Programming Skills**

One of most anticipated skills that I've searching in a company is increasing my programming skills. Since the first day I had joined this company, I've managed to increase my programming skills which is a nice addition to my current skills of a programmer. During my university, I learned how to do coding such as C++, Java, Python, HTML, CSS, JavaScript and Laravel framework. I love learning more about languages even it is basic knowledge. During this internship while working on the main task which is dashboard, I have taken a risk to learn a new framework for this project only which is called the React framework. It is a front-end framework that are suitable to create websites because of the various amounts of libraries inside the framework. Although it will take some time to learn the framework, but I had fun with it, and it was a great asset to the foundation of the dashboard. Also learning the new database like MongoDB which is a No-SQL help me to discover the JSON language and apply it to the creation of history in my dashboard. Plus, I've learned about API before and applying it to the dashboard was such a bonus because I found out that API was good way to work around my dashboard.

Moreover, during the side tasks with the scrum board I can learn a bit more about AWS Cloud Services such as EC2, CloudWatch, System Manager Agent (SSM) and IAM Roles. I've learned AWS in the university as well but to applying it to some of the tasks inside the scrum board was a bonus for me to explore the possibilities with AWS. Also, great addition to this is automation code with Packer, Terraform and Ansible which help me to understand automation better.

### **3.3 Reference Materials**

All the references material that I've used during the internship comes from online tutorial from YouTube, Stack Overflow, and many more helpful websites for coding. The best thing about all these online materials that it is free and helpful when you just starting to learn about certain languages. I also get some help from my seniors because they are experienced in the field, and it has been an eye opener for me to understand more about the workflow.

### **3.4 Constructive Comments**

All my seniors and managers are always there to guide me during problems which is helpful for me. During all the discussions they are open minded to any suggestions which gives me a boost of confidence in executing the tasks. The tasks that are given to me also follows my level of understanding which is great when starting my internship here. Whenever I managed to accomplish something, they always give a good comment and help me to improve further during my learning sessions. That is why I think attending myself into Experian was a learning experience because of it working environment.

### **3.5 Conclusion**

Overall, this chapter tells a lot about Experian as a multinational corporation (MNC) because it is indeed a great internship experience which we can learn and have a great working environment because of its people.

**4.1 Introduction**

In this chapter, it will conclude the information of the industrial training by discussing overall achievements that I've achieved following with a section that describe the problems and suggestions that are related to this internship period.

**4.2 Overall Achievements**

During this internship period, it has greatly improved my knowledge about the working environment of the programming industry. As the skills I've mention in chapter 3, it has been improved because of my involvement during every discussion with my team which greatly improve my experience as a programmer.

In the early stages of internship period, I can learn more about the company and people around it. My managers are great help because of the task that they given was following my level of understanding. I am more familiarize with the agile's methodology following the weekly task given and daily standup meeting which make me less procrastinate.

Moreover, my main task which is the dashboard was a company's project that has been assigned to me. It was an easy project, and I am the first one to complete the dashboard for the client. When I finished the version 1 of the project, my client was very happy with the results and congratulate me to finishing the project. Then I work on the version 2 of the dashboard that include the history version which is a great help to the client as they can see through the previous versions of their work progress. My client was happy with this addition, and it can also become the next template for their other work. Furthermore, my project was selected for product demo to the CEOs of the company. I spent some time to practice my presentation skills with my colleges before the actual day. In the end, when it was my turn to present this dashboard to the CEO's they were satisfied and impressed in my confidence delivering the content of the dashboard.

Lastly, the side tasks that I've done was to make me understand how the process of a QA developer works. Aside from detecting bugs, they also work on simple task which is fixing the current bugs and creating automation scripts for use of the company. Based on what I've said the task was given on my level of understanding which in increase of task also mean increase level of

understanding. I've managed to understand the workflow of the project and understand why this task was necessary in the first place.

#### **4.3 Problems Surfaced**

Although there is some problem surfaced during my internship period, it is because my level of understanding was not so great in the beginning such as working on existing codes was a challenge because I couldn't understand the workflow. But with time I can grasp the knowledge understanding the existing code which help me in some of the tasks given. That was the only problem that I've encountered during the internship period.

Moreover, all the other problems can be solved by just surfing the internet for solutions or asking guidance from my seniors.

#### **4.4 Suggestions on Industrial Training**

In my opinion, Experian is a very suitable company for interns that want to carry out their internship training. This company offers many types of work capabilities as it is a MNC company meaning it involves not just people inside of Malaysia/APAC region but involve all around the world. This company also have its own intern project that they can choose which also involves with client so that you can interact with your clients to help you improve with your project development. This company offers hybrid working environment which means you can also work from home or be in the company which is helpful for someone who maybe has some errands in the day, and they couldn't come to the company. Even though if you work from home, you still have meetings that need to attend so that it proves that you are working from home. It is indeed an eye-opening situation and I hope many more company inside Malaysia adapt this kind of working environment. Thus, working in the company was a great and fun experience learning it is highly suggested if upcoming interns are going to carry out their industrial training here.

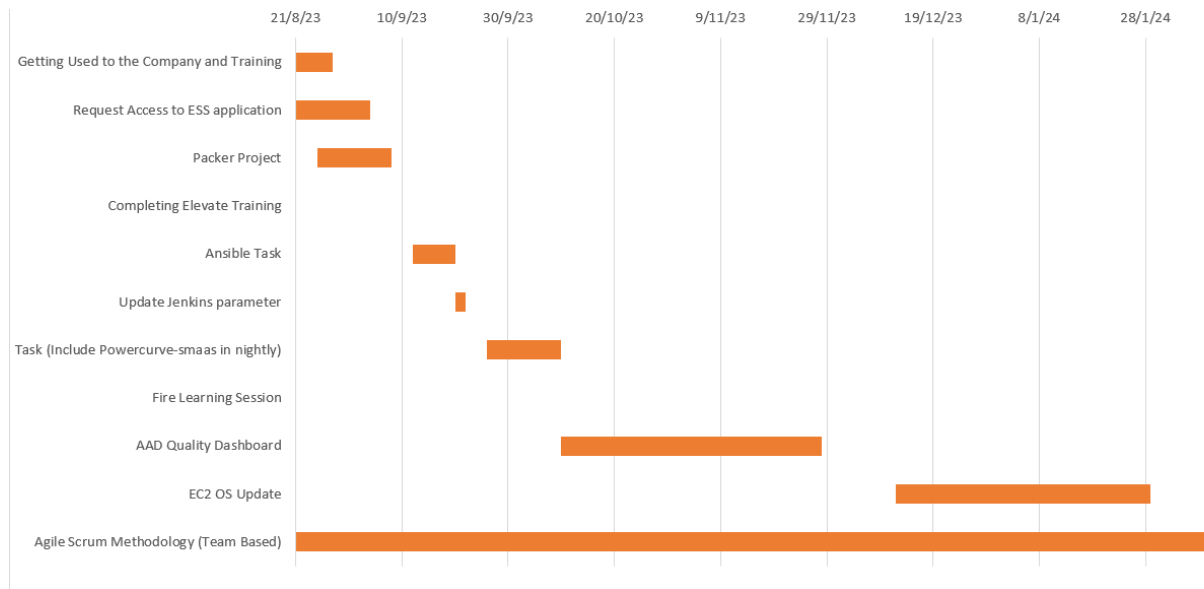
#### **4.5 Conclusion**

Overall, it is important for some undergraduate to go through their industrial training before they graduate. It is an important way from them to see the work life before going on in the industry itself before they graduate. Moreover, it can prepare themselves before applying to jobs itself because of the experience that they went through after finishing the industrial training. Although academic skills are important, they will also need to adapt to the working environment so that they can apply all the skills that they had learning the university prior to graduating. Thus, by attending the industrial training, they are no longer culture shock when they are starting their working journey.

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## Appendix A Industrial Training Gantt Chart



## Appendix B Industrial Training Achievement



**Sekretariat Latihan Industri**  
**Sekolah Komputeran,**  
**Universiti Teknologi Malaysia, 81310 SKUDAI, JOHOR**  
**Fax: 07-5565044 Tel: 07-5532008**

### INDUSTRIAL TRAINING ACHIEVEMENT

(This form must be filled by student and must be attached in the Industrial Training report)

Student's Name : SHAHRL BIN SAIFUL BAHRI

Organisation : Experian

No.	Task (List all tasks have been completed)	Month of Task Achieved				
		Month 1	Month 2	Month 3	Month 4	Month 5
1	Learning Packer and Packer Project	√				
2	Completed Company Training	√				
3	Ansible - ssh error when IP address is reused for performance pipeline		√			
4	Update jenkins parameter TEST_FILTER_OPTION_DETAILS description		√			
5	Include powercurve-smaas to be triggered by nightly run			√		
6	AAD Quality dashboard / Release Readiness Dashboard				√	
7	(EC2 OS Update)					√
8						

Deliverable/Training reflection (Outcomes that have been achieved)
<p>The main achievement is the creation of the Release Readiness Dashboard which satisfy the client and the CEOs of the company. From here I've learned many things from new framework, API, and database. Also, I've learned how to communicate with the client to fulfil their requirement.</p> <p>For all side task, I was able to complete them with the current knowledge skills that I've obtained while underdoing my internship in Experian. The more I've done the side task, the more familiar with the company protocol which helps me to become more confident when receiving more tasks in the future.</p> <p>Conclusion, the industrial training program at Experian opened my eyes in the working culture of a computer science student. Many experiences and practical skills are very useful in my future career.</p>

Student Signature: \_\_\_\_\_

Date: 30 January 2024

#### Approval

Organisation's Supervisor:

.....  
(Signature)

Faculty Supervisor :

.....  
(Signature)

Name: **Kae Ee Wong**  
Date: **30 January 2024**

Name: Mohd Murtadha Bin Mohamad  
Date: 30 Januari 2021

## Appendix C Industrial Training Checklist

### INDUSTRIAL TRAINING CHECKLISTS (PLACEMENT)

No.	Activities/Tasks	Tick (√)	Endorse by and date
1.	Report Duty To The Organization Approved by faculty	√	
2.	E-mail Report Duty Verification (BLI-1D) to faculty supervisor.	√	
3.	Upload Report Duty Verification (BLI-1D) in e-learning for course code SCS*4114.	√	
4.	Contact faculty supervisor to inform the job scope and organization information	√	
5.	Fill in organization supervisor information survey in ITS		
6.	<i>Update of Industrial Training site (address). Inform faculty supervisor and JKL, if any changes.</i>	√	
7.	Updating Industrial Training Logbook online – daily basis	√	
8.	Ensure that organization supervisor able to login to ITS successfully (Organization supervisor get ITS userid and password).		
9.	Faculty Supervisor Visit. Date:	√	
10.	Industrial Training Presentation.	√	
11.	Performance evaluation by organisation supervisor. Online or submission BLI-2B during supervisor visit.	√	
12.	Submission of Industrial Training Logbook.	√	
13.	Submission of Industrial Training Report with checklist and achievement form as Appendix.	√	
14.	Fill in Industrial Training Performance Evaluation by student (BLI-1E) in ITS.		
15.	End Industrial Training	√	

*Note:*

*1. Italic activities are optional depending on student situation.*

**IMPORTANT: This checklist must be put as attachment in the industrial training report.**