

Monash University Information Technology  
FIT3162 - Computer Science Project 2

## Team Management Report

Stream Processing Architecture using Apache Kafka for Analytics and  
Visualisation On A Dashboard

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June 2020

Team 1C

Supervisor: Dr. Vishnu Monn Baskaran

WORD COUNT: 1031

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# 1 Overall Team Experience

The team has already determined each member's role during Semester 1 and it is indicative of what each member has been focusing their efforts on for this project in FIT3162. This means that Khai Fung would be handling the project management stuff such as meeting scheduling and tasks allocation, Fernando and Yi Ping would take charge in coding the software architecture while Gin would be focused on testing the project implemented. Despite having predefined roles, involvement and responsibilities of each member was dynamic and every member performed beyond their duties by helping out as much as they can on the project throughout the semester. This ensured that all members are having a clear idea of the progress of the project from time to time.

The semester started out with COVID-19 pandemic and the Movement Control Order (MCO) enforced by the Malaysian Government. The team was able to meet twice in person on the early days of semester which proved the commitment of all members where everyone was present to discuss on the expectations for the project. However, the closure of campus threw a wrench into the project entirely by forcing the team to work independently at their homes. The effects of working in isolation were obvious at the first few weeks of the semester where everyone was not interested in working on the project by themselves. Progress of the project lagged behind and the team was only working the bare minimum during our weekly meetings of the project to meet the interim deadlines.

Despite so, quality of communication trumped quantity of communication. In every meeting, there was a relaxed environment where everyone was comfortable in voicing their opinions and provide good feedback on the work of each other and the project as a whole. There were plenty of disagreements between members but never bad blood between members. All arguments were accompanied by justifications which drove discussion and the understanding of the project from different viewpoints. The only regret that the team had was to have discussed more topics during each meetings instead of only focusing on one aspect of the project per week or per meeting.

On the technical aspect of the project, working at our homes have forced our hand to change significant requirements of the project where there would be not be a live camera setup with a cluster of computers to run as servers under a local network. The change from live IP cameras to video files was not as different conceptually but working on big data frameworks with virtual machines on home computers or laptops was painstaking as these machines cannot meet the minimum processing and memory demands of a fully functional and concurrent big data framework. On the flip side, this might have reduced the workload for the project but definitely restricted the potential outcomes and analysis of the project. As a side note, compatibility issues of frameworks that were determined during the project proposal stage specifically selected to work on the computers in the Monash Malaysia Data Science Labs were apparent to us when our home computers either could not meet the demands of all frameworks running together and the differences between operating in different platforms of Windows and Ubuntu Linux.

All in all, despite the shortcomings and obstacles faced, the project was able to meet its updated demands where it can work on both Windows and Ubuntu Linux, as well as on a range of computer specifications from low-end to high-end. This project would

have not been possible without the efforts of all members. Firstly, the team would like to acknowledge and thank the software developers, Yi Ping and Fernando, which the completion of the project would not have been possible if not for them working on the majority of the code. Yi Ping, working on the back-end coding of the project was the key driver of the final architectural design and the developer of the majority of the code base. At times, Yi Ping has shown signs of burning out with his lack of hunger on perfecting the project but being arguably the most overworked member in the team, he not only did not complain to the team but dutifully completed every task under his responsibility.

Next, Fernando, the front-end developer designed the dashboard and implemented all the charts and statistics on the dashboard. He was also the key author of all JavaDocs in the code, end user manual and the technical user manual showing clear understanding of the whole project and the code. Even though sometimes he likes to find the easy way out, it did not affect his work quality especially when it counted the most. Then, Gin, often quiet during meetings, always asks good questions that clears her conceptions on the project. She was the most proactive and reliable team member as took things to her own hands by completing her tasks on time and starting new tasks without waiting for any orders. She was instrumental to the completion of the project in both software testing report and the final report. Finally, Khai Fung would be seen as too bossy at times was the communication bridge between all members and the supervisor. Mostly acting as a mediator and helping out on tasks that requires help, he ensured everything was moving on time, meeting the project deadlines and the requirements agreed beforehand.

In conclusion, every team member contributed evenly on different aspects to ensure that the project was successfully completed on time. We faced plenty of obstacles with the MCO and other heavy assignments that haunts us constantly throughout the semester. Everyone showed they were committed in completing the project by allocating their times efficiently to ensure all individual's tasks are completed. There were complex features and ideas the team would be interested to explore and go in depth but time and resources did not allow. We hoped that we could have done a little more but the current outcomes are satisfactory and everyone enjoyed the experience of working with each other.

## 2 Meeting Minutes

## Meeting Minutes

**Meeting no:** 1

**Date:** 11/3/2020

**Time:** 10:00 am

**Location:** Yi Ping's Home

**Attendees:** Lim Khai Fung, Ho Yi Ping

**Absent:** Chong Chiu Gin, Fernando Ng

**Chairperson:** Ho Yi Ping

**Minutes taker:** Lim Khai Fung

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Testing of initial setup of Kafka framework with IP camera	A	Yi Ping	N/A	The initial code base was tested with the IP Camera which works successfully
2	Changing and comparing the speed of sending JSON messages or byte arrays through Kafka	A	Yi Ping	N/A	There were no significant differences in the speed
3	Discussion on the next steps namely the purpose of our video processing and analytics	I	Khai Fung	N/A	Next steps on how to build the code is briefly discussed and agreed
4	Decision on a time to meet for further implementation and discussion	A	Khai Fung	14/3/2020	Contact the absentees on the outcome and the time of next meeting
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**Distribution List :** [ Please add if any other party would be interested in your meeting minutes. Ideally, the meeting minutes should be distributed within 2 days of the meeting. Each team member is responsible for reading and understanding the distributed minutes. If there is a need for clarification or correction, do contact the minute taker sooner than later. ]

- All team members

## Meeting Minutes

**Meeting no:** 2

**Date:** 16/3/2020

**Time:** 10:30 am

**Location:** Monash Malaysia Data Science Lab

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng, Dr Vishnu Monn

**Absent:** -

**Chairperson:** Lim Khai Fung

**Minutes taker:** Fernando Ng

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Setup of Monash Data Science Lab computer with basic code base and required software	A	Khai Fung	16/3/2020	There were problems with setting up OpenCV on local maven repository where it is not detected
2	Setup of IP camera on data science lab computer to ensure it can be read from the computer	A	Yi Ping	N/A	We were unable to access the router settings to determine the IP of the camera when it connects locally through LAN cable
3	Notification of supervisor (Dr. Vishnu) about the problem and solutions	I	Gin	16/3/2020	We were suggested to bring our own router to gain access and get IP of the camera
4	Find a tutorial and solution to solve the OpenCV	A	Yi Ping	20/3/2020	Find a consistent solution to the OpenCV loading and importing problem into Maven
5	Setup remote access (Teamviewer) to the computer in Data Science Lab	A	Fernando	16/3/2020	The Partner ID and password will be sent across all teammates
6	Decision on next meeting	I	Khai Fung	16/3/2020	
7					

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- All team members

## Meeting Minutes

**Meeting no:** 3

**Date:** 17/3/2020

**Time:** 10:00 am

**Location:** Monash Malaysia Data Science Lab

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Fernando Ng

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Setup of IP camera with our own router through the Monash Data Science Lab network	A	Yi Ping	17/3/2020	The router cannot be set up properly due to a firewall by the existing network. The router has no access to the Internet but the IP camera can be read.
2	Discussion on the possible fixes to the OpenCV installation settings	I	Fernando	N/A	A proper and elegant solution has not been decided to solve the problem.
3	Discussion on the possibility of a lockdown that restricts us to enter campus due to COVID-19	I	Gin	N/A	We have set up remote access through Teamviewer and Virtualbox to emulate an Ubuntu Linux operating system
4	Write down detailed instructions on how to setup the project on VirtualBox Ubuntu and Windows	A	Yi Ping	22/3/2020	This is to allow each member to continue work on the project at home with their own machines
5	Decision of the next meeting time and location	A	Khai Fung	18/3/2020	In consideration of the possibility of lockdown and moving back to hometown of team members
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- All team members

## Meeting Minutes

**Meeting no:** 4

**Date:** 25/3/2020

**Time:** 2:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Fernando Ng

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	A	Yi Ping	N/A	
2	Discussion of the hardcoded fix for the OpenCV dependency problem in Maven for new Ubuntu Linux installations	I	Fernando	N/A	A placeholder dependency is used to satisfy Maven Central Repository check but internally loads a local OpenCV
3	Discussion on how to operate correctly on each member's virtual machine	I	Yi Ping	N/A	Session to solve any problems on the installation of all software on virtual machine
4	Move all updated code base from individual code base and GitHub	A	Gin	28/3/2020	Update all correct paths for the Data Science Lab computer
5	Decision of the next meeting time and location	A	Khai Fung	26/3/2020	Decision of next Zoom Meeting and the time due to assignments
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- All team members

## Meeting Minutes

**Meeting no:** 5

**Date:** 2/4/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Gin

**Minutes taker:** Yi Ping

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	A	Yi Ping	N/A	
2	Find out on simple and possible machine learning algorithms to be used to process the video frames	A	Fernando	10/4/2020	A lot of existing libraries and algorithms are already provided in OpenCV.
3	Ask supervisor to change scope of project where we read from downloaded video files instead of IP cameras	A	Khai Fung	5/4/2020	This change is forced by the Movement Control Order where we have no access to IP cameras and a local network for the entire setup
4	Decision of the next meeting time and location	A	Khai Fung	3/4/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 6

**Date:** 8/4/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Gin

**Minutes taker:** Khai Fung

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Implement the machine learning algorithm we have decided into the project	A	Gin	10/4/2020	Gin has provided the algorithm that everyone has agreed on to use for the project which uses Haar Cascades to detect faces
3	Decision of the next meeting time and location	A	Khai Fung		Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 7

**Date:** 13/4/2020

**Time:** 1:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Yi Ping

**Minutes taker:** Fernando Ng

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Learn and implement Spring Boot as the User Interface and Dashboard to display the livestream and statistics	A	Yi Ping	26/4/2020	Everyone will learn Spring Boot and see if they can route the livestream to be displayed
3	Decision of the next meeting time and location	A	Khai Fung	15/4/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 8

**Date:** 23/4/2020

**Time:** 1:30 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Fernando Ng

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Discuss the feasibility of Spring Boot and what everyone have found so far	I	Fernando	N/A	Spring Boot have seen to be out of everyone's expertise. The hardest part is where it is unable to display the video frames as a video player on the dashboard
3	Find an alternative for Spring Boot for either a web browser dashboard or a GUI which can show the dashboard that we want	A	Fernando	30/4/2020	
4	Decision of the next meeting time and location	A	Khai Fung	25/4/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 9

**Date:** 22/4/2020

**Time:** 9:30 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Yi Ping

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Discuss the feasibility of Spring Boot and Java Swing (GUI). Both dashboards are compared.	I	Yi Ping	N/A	Java Swing has shown the possibility of an easier implementation of the dashboard
3	Preparation and recording of the interim presentation	A	Khai Fung	22/4/2020	The presentation scripts and slides are discussed and prepared. Everyone will record independently
4	Editing of all recorded videos into one video	A	Fernando	23/4/2020	
5	Decision of the next meeting time and location	A	Khai Fung	25/4/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 10

**Date:** 29/4/2020

**Time:** 3:30 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Yi Ping

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Discuss and implement assignors and partitioners for Kafka based on the keys of each input file	A	Yi Ping	N/A	A simple hashing algorithm is used to partition and assign each input into their respective separate partitions
3	Decision of the next meeting time and location	A	Khai Fung	30/4/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 11

**Date:** 6/5/2020

**Time:** 2:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Yi Ping

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Discuss and implement the frame archiving aspect of the project. (Including video writing onto HDFS and statistic writing onto Cassandra)	A	Yi Ping	13/5/2020	Some revisions to the architecture will need to be carried to quicken processing of frames
3	Decision of the next meeting time and location	A	Khai Fung	8/5/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 12

**Date:** 13/5/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Gin

**Minutes taker:** Khai Fung

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Decision on using Java Swing	I	Yi Ping	N/A	Java Swing has been agreed to be capable of producing a quick and user friendly dashboard
3	Implement the basic display of the dashboard when a video is playing with spaces for statistics	A	Fernando	18/5/2020	The dashboard is redesigned from the proposed design to suit Java Swing and user friendliness
4	Code review of the correctness of the architecture from input to dashboard	A	Gin	20/5/2020	This is to test the efficiency and the implementation of the code that fits the requirements originally in Spring Boot
5	Decision of the next meeting time and location	A	Khai Fung	15/5/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 13

**Date:** 19/5/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Fernando

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Fernando	N/A	
2	Implement the charts and statistics to be displayed onto the dashboard	A	Fernando	25/5/2020	JavaFreeCharts, SteelSeries gauges and other Java Swing elements are used to display all statistics
3	Test the output of the charts that matches the video statistics. Discuss what other statistics should be included in the dashboard	A	Fernando	25/5/2020	Performance factors such as FPS, latency and memory size should be included in the display
4	Decision of the next meeting time and location	A	Khai Fung	20/5/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 14

**Date:** 27/5/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Fernando	N/A	
2	Test the performance (FPS, latency) of various configurations of video input and processor nodes	A	Gin	28/5/2020	There was a significant increase of latency as the video file is being read
3	Split the architecture into different parts and test each part's latency to find the bottleneck	A	Yi Ping	28/5/2020	There was bottleneck where the brokers are unable to cope with the amount of data the video files are sending
4	Find out how to fix the bottleneck problem	A	Khai Fung	28/5/2020	A quick fix was to delay the sending of data from the video files to the Kafka producer but Kafka still needs to be performance tuned with various configurations of buffer sizes on the Kafka brokers
5	Discuss about the code demonstration, slides and the script, and record independently	A	Khai Fung	28/5/2020	The code demonstration will then be edited into a video by Fernando
6	Decision of the next meeting time and location	A	Khai Fung	28/5/2020	Decision of next Zoom Meeting and the time
7					

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- All team members

## Meeting Minutes

**Meeting no:** 15

**Date:** 4/6/2020

**Time:** 3:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Chong Chiu Gin, Fernando Ng

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Fernando

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Do performance testing on various configurations of message buffer sizes, number of nodes and partitions	A	Yi Ping	6/6/2020	All results should be recorded and documented to be analysed
3	Get updates from supervisor (Dr. Vishnu) about the power outage and shutdown of the Monash Data Science Lab computer	I	Khai Fung	N/A	
4	Discuss and finalize the testing scope and testing parameters for the project	A	Gin	8/6/2020	The testing scope will be based on our code and the requirements that are to be included into the test report
5	Discuss about the team management report	A	Khai Fung	8/6/2020	Each member will need to help provide their overall team experience to be included into the team management report
6	Decision of the next meeting time and location	A	Khai Fung	5/6/2020	Decision of next Zoom Meeting and the time
7					

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- All team members

## Meeting Minutes

**Meeting no:** 16

**Date:** 6/6/2020

**Time:** 2:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Fernando Ng

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Fernando

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Final checking of codes with property file integration	A	Yi Ping	8/6/2020	
3	Write proper JavaDocs for the code	A	Fernando	8/6/2020	
4	Start the writing of end user manual and technical user manual	A	Fernando	10/6/2020	Write the code report as we go along
5	Decision of the next meeting time and location	A	Khai Fung	7/6/2020	Decision of next Zoom Meeting and the time
6					
7					

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- All team members

## Meeting Minutes

**Meeting no:** 17

**Date:** 9/6/2020

**Time:** 9:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Fernando Ng, Chong Chiu Gin

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Recap of the progress of the code so far	I	Yi Ping	N/A	
2	Review of performance of project	A	Yi Ping	11/6/2020	Several ways were identified to reduce latency and increase FPS and throughput
3	Review of the test results of code	A	Gin	10/6/2020	All automated testing was done and passed
4	Review of reports written so far	A	Khai Fung	12/6/2020	Content that have been written are checked to ensure consistency and relevance
5	Decision of the next meeting time and location	A	Khai Fung	10/6/2020	Decision of next Zoom Meeting and the time
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- All team members

## Meeting Minutes

**Meeting no:** 18

**Date:** 10/6/2020

**Time:** 9:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Fernando Ng, Chong Chiu Gin

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Fernando

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Review of performance of project	I	Yi Ping	N/A	Outcomes and results were recorded and made sense to justify the performance
2	Debate and justify the results and performance of various methods	A	Yi Ping	12/6/2020	All ways have their pros and cons in improving the project either on latency or throughput
3	Update performance and model evaluation test results	A	Gin	12/6/2020	
4	Review of reports written so far	A	Khai Fung	13/6/2020	Content that have been written are checked to ensure consistency and relevance
5	Decision of the next meeting time and location	A	Khai Fung	11/6/2020	Decision of next Zoom Meeting and the time
6					
7					

**Distribution List :** [ Please add if any other party would be interested in your meeting minutes. Ideally , the meeting minutes should be distributed within 2 days of the meeting. Each team member is responsible for reading and understanding the distributed minutes. If there is a need for clarification or correction, do contact the minute taker sooner than later. ]

- All team members

## Meeting Minutes

**Meeting no:** 19

**Date:** 12/6/2020

**Time:** 6:00 pm

**Location:** Online Zoom Meeting

**Attendees:** Lim Khai Fung, Ho Yi Ping, Fernando Ng, Chong Chiu Gin

**Absent:** -

**Chairperson:** Khai Fung

**Minutes taker:** Gin

Item No.	Item	Info ( I ) or Action Item ( A )	Person in charge ( PIC )	Due date	Comments
1	Review of reports	A	Khai Fung	14/6/2020	Spellchecking and Proof Reading
2	Presentation Planning and Recording	A	Khai Fung	12/6/2020	Make Presentation slides, record and edit presentation video
3	Decision of the project closure meeting	A	Khai Fung	13/6/2020	Decision of next Zoom Meeting and the time
4					
5					
6					
7					

**Distribution List :** [ Please add if any other party would be interested in your meeting minutes. Ideally , the meeting minutes should be distributed within 2 days of the meeting. Each team member is responsible for reading and understanding the distributed minutes. If there is a need for clarification or correction, do contact the minute taker sooner than later. ]

- All team members