## **1. APPROVAL PAGE**

Approval of the School of Computing of Telkom University.

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master Informatics

Date : February 2024

(Dr. Setyorini, S.T., M.T.)

Head of Master Informatics

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Informatics.

Date: 12 February 2024

Jutiz

(Kemas Rahmat Saleh Wiharja, Ph,D)

Supervisor

Examining Committee Members (first name belongs to the chairperson of the jury and the second name belongs to supervisor, the rest is in alphabetical order of first name).

Date of examination : 15 February 2024

(Dr. Ade Romadhony) (Chairperson of the jury)

(Yanti Rusmawati, Ph.D) (jury's member)

(Dr. Ir. Moch. Arif Bijaksana, M.Tech) (jury's member)