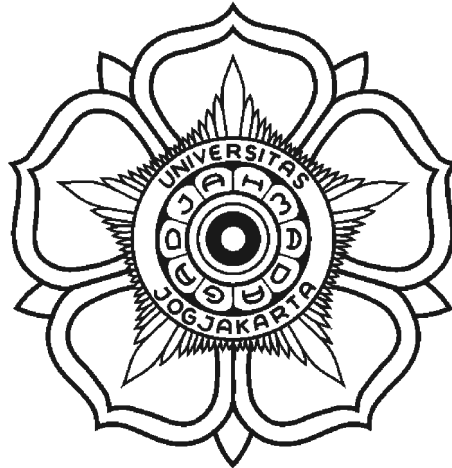


UNDERGRADUATE THESIS

**Vehicle Speed Estimation Using Combination of Convolution Neural
Network and ByteTrack Object Tracking**



Muhammad Rifki Apriananda Putra

21/477836/PA/20707

COMPUTER SCIENCE STUDY PROGRAM

DEPARTMENT OF COMPUTER SCIENCE AND ELECTRONIC

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

UNIVERSITY OF GADJAH MADA

YOGYAKARTA

2025

HALAMAN PENGESAHAN

SKRIPSI (RISET AKADEMIK)

VEHICLE SPEED ESTIMATION USING COMBINATION OF
CONVOLUTION NEURAL NETWORK AND BYTETRACK OBJECT
TRACKING (IUP)

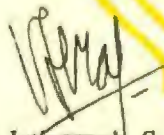
Telah dipersiapkan dan disusun oleh

Muhammad Rifki Apriananda Putra

21/477836/PA/20707

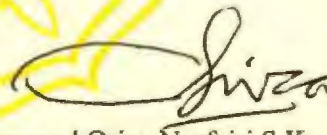
Telah dipertahankan di depan Tim Penguji
pada tanggal 04 Juni 2025

Susunan Tim Penguji



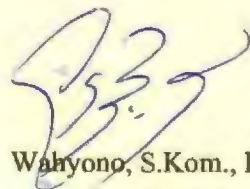
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Wahyono, S.Kom., Ph.D.

Pembimbing

Mengetahui,
Wakil Dekan FMIPA UGM
Bidang Pendidikan, Pengajaran
dan Kemahasiswaan



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