

ACKNOWLEDGMENTS

This thesis is the culmination of considerable effort and the support of many individuals. I would like to express my sincere gratitude to the lecturers and staff of the School of Computing at Telkom University, whose expert guidance and encouragement were invaluable throughout my research. I also extend my heartfelt thanks to my fellow students for their collaborative spirit and constant support during challenging times. Each contribution, whether through insightful discussions, constructive feedback, or moral support, has played a significant role in the completion of this work.