

DEDICATION

This thesis is compiled with the support of my supervisor, my family, also thanks to all who have helped, directed, and supported this work. I dedicate the work to my beloved parents Hasto Soebagia and Emi Sugiartini, my lovely sisters Adinda Luthfiah Nabilah and Adelia Putri Salsabila, and myself. I hope this research will motivate us to take a risk to achieve our dream. Finally, this thesis is dedicated to all informatics students in the world, and I hope it may provide valuable contributions in Computer Science.