ACKNOWLEDGEMENT

“For Nothing is impossible with GOD” - Luke 1:37. Without Jesus, I am nothing, it was He who began this work, walked along with me throughout the research work and enabled me to complete it successfully.

I would like to record my indebtedness and gratitude to beloved Uncle Dr. D.G.S Dhinakaran, Founder & Chancellor Emeritus, Karunya University, for his continuous prayers, blessings and words of encouragement.

It’s a great privilege to extend my deep sense of gratitude and sincere thanks to my beloved Chancellor Dr. Paul Dhinakaran, and also the founding family Dr. Stella Dhinakaran, Dr. Evangeline Paul Dhinakaran, Sam, Sharon and Sweety for their fervent prayers and encouragement. I would like to express my grateful thanks to the family for also sponsoring me in this regard.

I wish to extend my heartfelt gratitude to Dr. Paul P. Appasamy, Vice Chancellor, Karunya University and Dr. Anne Mary Fernandez, Registrar, Karunya University for all their encouragement and motivation to pursue this research work successfully.

I also owe my gratitude and sincere thanks to Dr. K. Anbumani, former Director, School of Computer Science and Engineering, Karunya University and Dr. B. Selvaraj, Director, School of Science and Humanities, Karunya University for all their persistent support, encouragement and valuable suggestions.

I am deeply indebted to my research supervisor Dr. Elijah Blessing R, Professor and Head, Department of Computer Science and Engineering, School of Computer Science and
Technology, Karunya University. It has been an honor for me to be his first Ph.D student. More than a supervisor, he has been a brother-in-Christ extending his moral and academic support throughout the research work. His profound knowledge, divine wisdom, timely advice, insightful criticism, patient encouragement and prayers strengthened me to carry out the research work enthusiastically, smoothly and successfully. Without his knowledge, patience and support, this thesis would not have taken up this form.

I owe my gratitude and profound thanks to the doctoral committee members for their valuable suggestions and guidance. I would like to greatly acknowledge with the deep sense of gratitude Dr. V. Saravanan, Professor, Former Head, Department of Computer Applications, Karunya School of Science and Humanities and Mrs. V. Vani, Associate Professor, Head i/c of Department of Computer Applications for their kind cooperation, motivation and support.

I would like to concede my special thanks to Dr. S. Deva Arul, Assistant Professor, Chikkanna Arts College, Tirupur for his encouragement and technical support during the research work.

I wish to express sincere gratitude to my fellow research scholars Mrs. Sujni Paul, Department of Computer Applications, Ms. J. Jebamalar Tamilselvi, Department of Computer Applications, Mr. J. Rajan, Department of Computer Applications and Mr. J. Immanuel John Raja, Assistant Professor, Computer Science and Engineering for their persistent support throughout the research work.

I would like to extend my thanks to all the faculty members and office assistants in the School of Computer Science and Technology and Department of Computer Applications for their continuous motivation, moral and technical support during the research work. My special
thanks go to Mrs. V. Thavavel, Assistant Professor, Department of Computer Applications for her valuable suggestions, moral support and encouragement.

I would like extend my special thanks to the faculty members of other departments who have helped a lot in various areas of the research work. I would like to acknowledge Dr. Olive Thambi, Assistant Professor, Department of English, Ms. A. Hepzibah Christinal, Assistant Professor, Department of Mathematics, Mrs. J. Michael Anna Spinneli, Assistant Professor, Department of Mathematics for their valuable suggestions, support and encouragement.

It’s a great privilege to express my profound gratitude, deep love and affection to my dear husband N. Anandan who has been with me always in all the difficulties that come across in my life. His love, patience, persistent encouragement, good understanding and prayers enabled me to complete the research work successfully.

Finally, I am highly indebted to my mother Mrs. Philip Mary, father Mr. John Francis, mother-in-law Mrs. Jeyabharathy, father-in-law Mr. Narayanan, sister Mrs. Janet Lourds Rani Gilbert, daughters Ms. A. Agnes Abhishekha, Ms. A. Joy Jemmima and the family members for their love, affection, sacrifices, encouragement, endurance and prayers all through my life.

[J. Sharmila]