ACKNOWLEDGEMENT

At this moment of accomplishment first of all I wish to dedicate grateful thanks to my honourable guide Dr. K. Senthamarai Kannan, Professor, Department of Statistics, Manonmaniam Sundaranar University, Tirunelveli. This work would not have been possible without his guidance, support and encouragement. Under his guidance and support that he gave truly help the progression and smoothness of the internship program. I finished this work because of his valuable advice, constructive criticism and his extensive discussions around my work.

I register my profound gratitude to Dr. A. Rajarathinam, Professor and Head, Dr. A. Loganathan, Professor, Dr.P. Arumugam, Reader, and Dr. R. Sasikumar, Assistant Professor Department of Statistics, Manonmaniam Sundaranar University for their constant encouragement throughout this research period.

I would like to express my sincere thanks to Dr. V. Balamurugan, Professor, Department of Computer Science and Engineering, Sri Vidya College of Engineering and Technology, for his valuable suggestions and personal attention which have provided good and smooth basis for my Ph.D. tenure.

Dr. S. Sampath, Professor, Department of statistics, University of Madras, Chennai, Mr. K. Selvakumar, Assistant Professor, Department of Mathematics, Dr.D. Rajalakshmi, Lecturer, Department of Statistics, Manonmaniam Sundaranar University. Their contribution during this period is very great indeed. I wish to thank my friends G. Suresh, V. V College of Engineering and M. Manikandan, P. Muthukrishnan, S. Kalaiselvi, S. Suresh,
V. Deneshkumar, S. Gothai Nachiyar, K. Shalini, M. Saral, B. Vinoth, A. Jawahar Farook, A. Pradeepa, and S. Mari Chelvi, Research scholars, Department of Statistics, Manonmaniam Sundaranar University for their love, care, moral support, encouragement and their timely helping tendency to finish my work. Deserve special mention here for their constant support, motivation and help in the related work. I am also thankful all research scholars.

My Special thanks goes to A. Peter, Technical Assistant and P. Anantharaj, Office Staff for their voluntary assistance.

I take this opportunity to acknowledge my thanks to Rajiv Gandhi National Research Fellowship, Junior Research Fellowship and Senior Research Fellowship, the University Grant Commission, Government of India, New Delhi, for providing financial assistance in the category of Senior Research Fellowship which buttressed me to perform my work comfortably.

Last but not least, I would like to pay high regards to my Mom, Dad, brother and sisters for their sincere encouragement and inspiration throughout my research work and lifting me uphill this phase of life. I owe everything to them. Besides this, several people have knowingly and unknowingly helped me in the successful completion of this research work. I thank them all.