Acknowledgment

With a deep sense of gratitude, I would like to acknowledge the support of all those people who have directly or indirectly been an integral part of my work.

I bow down to the lotus feet of Shreeji Bawa and pray that they continue showering their blessings on me. My faith and belief in them has helped me throughout this research period

It is a matter of privilege and pleasure to express my appreciation towards my guide Dr. Hetal Bhavsar, Assistant Professor, Department of Computer Science & Engineering, Faculty of Technology & Engineering, The Maharaja Sayajirao University of Baroda, Vadodara for her motivation and constant support throughout this work. Her critical and expert comments and innovative suggestions encouraged me to complete this work successfully. I am forever grateful for all that she has done.

I am grateful to Prof. Apurva Shah, Head of the Department of Computer Science & Engineering, Faculty of Technology & Engineering, The Maharaja Sayajirao University of Baroda, Vadodara for his constant motivation, support and cooperation. I thank Dr. Anjali Jivani, Associate Professor, Department of Computer Science & Engineering, The Maharaja Sayajirao University of Baroda, Vadodara for providing me valuable suggestions, constant support and any help that I needed at any time.

The judicious ideas of the Departmental Research Committee drove me in the right path towards the completion of this work. I acknowledge them all ardently.

I am heartily thankful to Dr. Prashant Mehta, Head, Department of Computer Application, Faculty of Science, The Maharaja Sayajirao University of Baroda,

Vadodara for his constant encouragement for my research.

My family has been the backbone for all that I have done in my life, especially my parents. I could never have completed this task without their unconditional love, affection and blessings. I thank my Sister, Brother-in-law, Brother, Bhabhi and my nephew Aarav and Aadvik for their love and encouragement.

Absolutely nothing would have been possible without the unvarying encouragement and consistent inspiration from my husband Sanket and my son Tathya. I express my heartfelt gratitude for bearing with me for the inconvenience during this period of my research work and for motivating me in this strenuous but enjoyable journey.

I must be grateful to my friend, Dr. Pratik Kanani, for giving technical tips during my research and helping me in publishing my work in renowned journals.

I am thankful to all my friends and well-wishers, whom I may have forgotten to mention explicitly here.

Bhoomi Shah