

ACKNOWLEDGEMENT

At this stage of accomplishment of the completion of my Ph.D. thesis, I would like to acknowledge my sincere gratitude and thanks to all the people who have directly or indirectly been an integral part of my research work.

First and foremost, I would like to thank my research guide, **Prof. (Dr.) Apurva M. Shah**, Head and Professor, Department of Computer Science & Engineering, Faculty of Technology & Engineering, and Director of Computer Centre, The Maharaja Sayajirao University of Baroda, for his motivation, technical guidance and constant support throughout this research work. His vision and direction always helped and encouraged me to complete this work successfully. The successful completion of this work would have been impossible without his continuous support and encouragement.

I also thank **Dr. Viral Kapadia**, Associate Professor, Department of Computer Science & Engineering, Faculty of Technology & Engineering, and Deputy Director of Computer Centre, The Maharaja Sayajirao University of Baroda, for always helping and guiding me during various phases of my research.

I want to thank all the teaching and non-teaching staff members of the Department of Computer Science & Engineering for their cooperation and assistance during this work. I am also grateful to **Dr. Anjali Jivani** and **Dr. Vishwas Raval** for their continuous support and cooperation.

I would also like to thank **Mr. Manish Shah** and **Ms. Meghana M. Shah**, Technical Assistant (Network), Computer Centre, The Maharaja Sayajirao University of Baroda, for helping me out with the technical support needed for the setup of the email server on which my whole research work is completed.

I would also like to thank **Dr. Ajitsinh Chudasama** for motivating and always encouraging me to complete my Ph.D. work. I am thankful to him for all his support and motivation throughout my life.

I am thankful to my parents, who have always motivated me to do good work for society and encouraged me to complete my research work. I owe a lot to my lovely wife, **Mrs. Ruchi Chauhan**, and my son, **Shivansh Chauhan**, as I could not give them enough time during my doctoral studies. This work would not have been possible without their generous and selfless support. My family has been the backbone for all that I have done till now in my life. Absolutely nothing would have been possible without the unvarying encouragement and consistent inspiration from my parents and my wife.

This work would not have been possible without the research works carried out by other researchers and authors. I am thankful to all of them whose research helped me carry out this work.

Finally, I thank my other colleagues in the department whose support and guidance helped me to move ahead. I am thankful to all my friends and well-wishers who directly or indirectly supported me throughout this research.