Production of a research work like this always involves many dedicated people doing their part behind the scenes. And I believe that the satisfaction and the scene of elevation that accompany the successful completion of any task would be incomplete, without the mention of people who are responsible for the completion of this research work.

First and foremost, express sincere gratitude to my research supervisor Dr. P. S. Hiremath for his continuous support, encouragement, and invaluable guidance throughout this research. He has been a great adviser and an unrelenting source of motivation and support throughout the course of my Ph.D. research work. I have learnt a lot from him as a researcher and also as a person par excellence and it will be a life long effort for me to inculcate his good qualities.

I thank Dr. B. V. Dhandra, Professor, Department of Computer Science, Gulbarga University, Gulbarga, Dr. Parashuram Bannigidad, Assistant professor, and Dr. G. G. Rajput, Associate professor, Department of Computer Science, Rani Chennamma University, Belagavi, for supporting me and giving me confidence during the course of my research work. Also, thank Dr. Ajit Danti, Professor, Department of Master of Computer Application, J.N.N., College of Engineering, Shimoga, Dr. Shivashankar, Associate Professor, Department of Computer Science, Karnataka University, Dharwad, Dr. Prabhakar, Assistant Professor, Department of Computer Science and MCA, Kuvempu University, Shimoga, Dr. Iranna Humnabad, System Analyst, Computer Center, Gulbarga University, Gulbarga, for their indispensable support and encouragement while carrying out my research work.

My special thanks are due to my research colleagues Sri. Srihari M. Joshi, Ms. Rohini A. Bhoosnormath for extending their help, friendly atmosphere and participating in the technical discussions during the work. I also extend my thanks to all the teaching and non-teaching staff of Department of P. G. Studies and Research in Computer Science, Gulbarga University, Gulbarga, for their kind cooperation and support.

I acknowledge with gratitude the financial support of University Grants Commission, New Delhi, for this research work under UGC-Major Research Project
Finally, I am indebted to my family, words cannot express how grateful I am to my parents and brother for all of their sacrifices and support that they have provided to me. Also, I thank all of my friends and relatives who supported me in my research work to strive towards my goal.

Manjunatha Hiremath